The JOURNAL of AGRICULTURE

AND HORTICULTURE

Volume 33 — March 1st 1930 — Number 9

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—or thoroughpin, but you can clean them off promptly and thoroughly with Absorbine—and work your horse during the treatment. This powerful antiseptic liniment does not blister or remove the hair. $2.50—at your druggists or general merchant's. Booklet free. 79 W. F. Young, Inc., Lyman Bldg., Montreal

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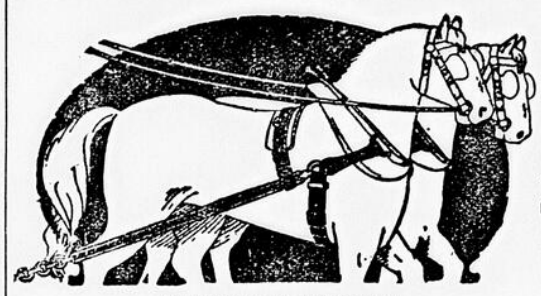
Reduces Inflammation

FOR YOUR YEAR'S WORK GET THIS HANDY SET



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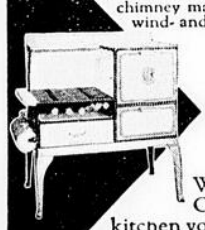

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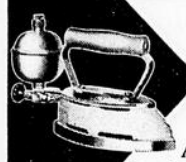

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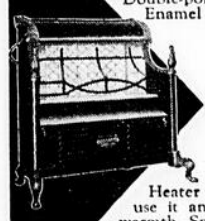

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"My Essex the Challenger is a wonder—but, man, this is a revelation."

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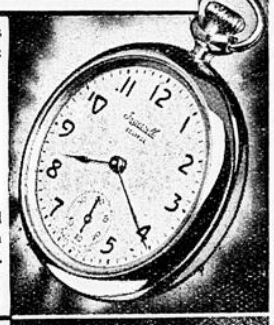

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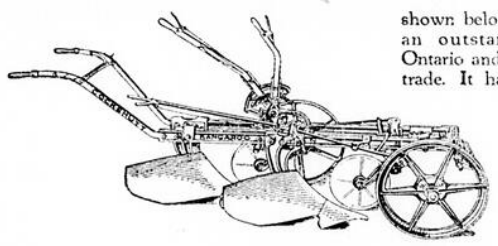

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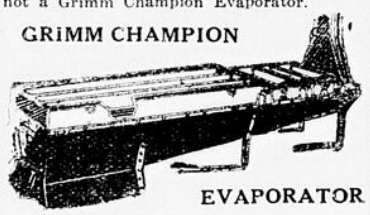

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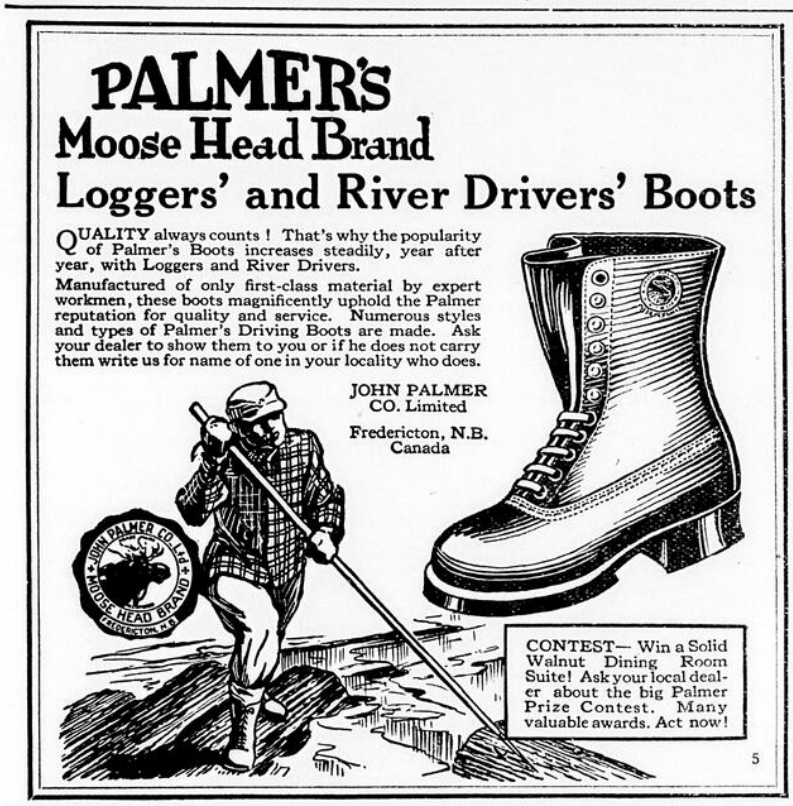

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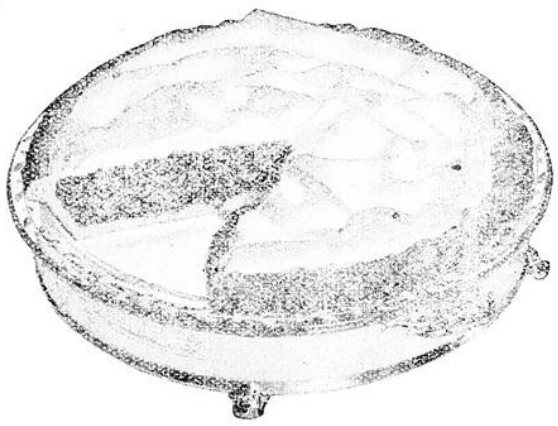
These better Raisins *-are the simplest recipe for better raisin pie!*

The Sun-Maid girl identifies high quality food products the world over.



Send for a new book of delightful recipes, entitled "New Interest in Simple Menus." It is free, and you will find it full of fascinating suggestions. The pie shown here was made from one of the recipes. Mail a note or card to: Sun-Maid Raisin Growers Association, Fresno, California.

JUST as it takes the best ingredients to make a tender, flaky crust, so—for delicious raisin pies—you must be sure to use only the tastiest, juiciest raisins.

Only Sun-Maids will do!

Sun-Maid raisins are dried from the finest California grapes, and prepared by exclusive processes which set them quite apart from ordinary raisins.

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Only the best grapes are selected for Sun-Maid raisins. They are graded severely for quality, processed and packed in the finest and largest raisin plant in the world, where kitchen cleanliness is the standard.

These finer raisins are cooperatively grown, packed and sold exclusively by thousands of California vineyardists. Together they market their best raisins under the famous Sun-Maid girl trade mark. It stands as their pledge to you that only the best quality, most carefully selected and processed raisins will be packed under this brand.

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Kingston, 269 Princess St.
Kitchener, 12-14 Young St.
London, 122 Dundas St.
North Bay, 26 Main St., E.
Ottawa, 106 Bank St.
Oshawa, 46 King St.
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Sault Ste. Marie, 358 Queen St.
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Levis, 82 Cote du Passage
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Quebec, 223 St. John St.
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St. Johns, 133 Richelieu St.
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Thetford Mines, 345 Notre Dame St.
Three Rivers, 102 Des Forges St.
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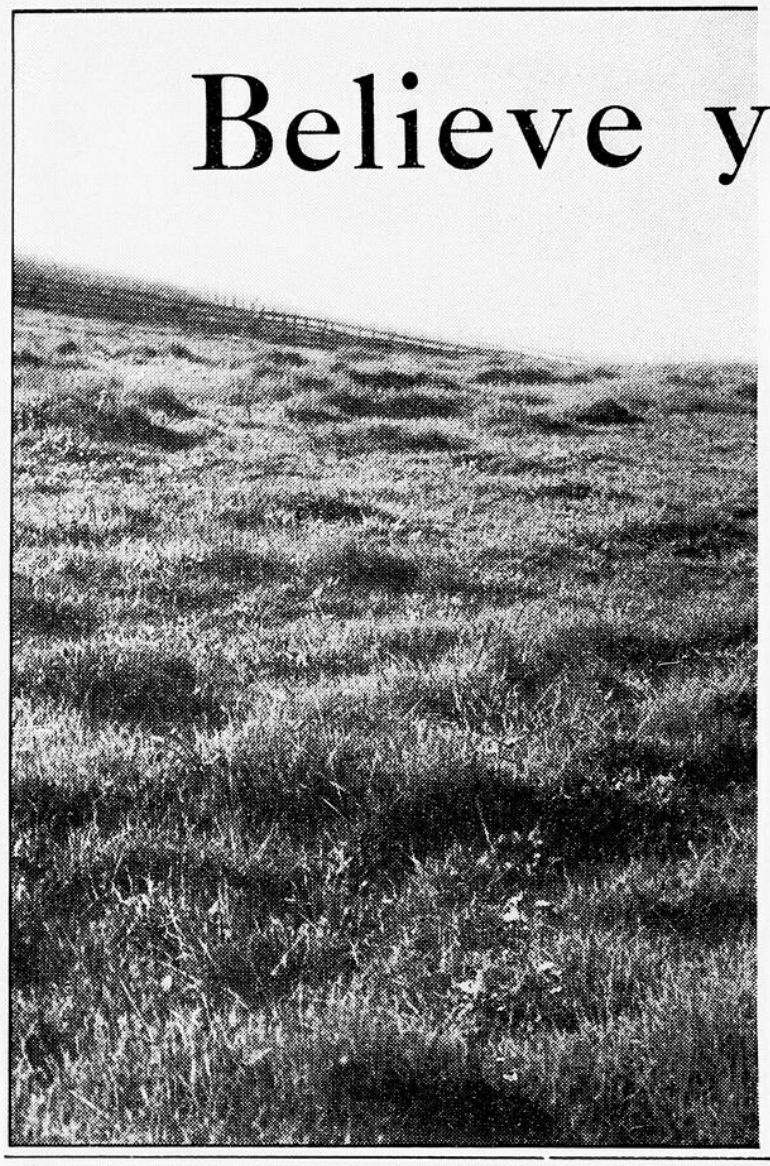
5B

THE FEDERAL DEPARTMENT OF AGRICULTURE

OTTAWA

DR. W. R. MOTHERWELL . . . . Minister
DR. J. H. GRISDALE . . . Deputy Minister



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All matters relating to the reading columns must be addressed to S. R. N. Hodgins, Editor, Macdonald College P.O., P. Q.

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EDITORIAL COMMENT

F. H. GRINDLEY PASSES

Professional agriculture has suffered a real loss in the passing of Frederick Hugh Grindley, general secretary of the Canadian Society of Technical Agriculturists and editor of Scientific Agriculture. Born at Massawippi, in this province, and graduated with the first class to go out from Macdonald College, 'Fred', as he was affectionately known to hundreds of agricultural workers throughout Canada, spent some years in the Fruit Division at Ottawa, rising to the post of assistant Dominion fruit commissioner. Upon the organization of the new society for technical workers in Canadian agriculture in 1920, Fred became its first secretary, and when, a year later, the society founded its own periodical for the publication of the results of the research problems, etc., conducted by its members, he added to his duties that of editor of the new venture—and both of these he has carried on with the most marked success since that time.

Possessed of an unique combination of qualities, including those of an organizer, of an editor, of a business man and of a diplomat, Fred was personally responsible in no small measure for the rapid and secure growth of this society that has done so much already to bring together the agricultural workers of Canada, to eliminate overlapping of governmental and college activities in agricultural research and extension work, and to enlarge the influence and enhance the dignity of the profession generally. To his active imagination and sound common sense are due many of best features of the work of the society, and to his genial humour and capacity for making friends may be ascribed not only the coherence of the many groups of workers that make up the membership of the society but also the feeling of good fellowship that has characterized the meetings of the organizations. Fred leaves behind him hundreds who will mourn him, but none who can quite take his place.

A 'TOWNSHIPS' GUIDE BOOK

To those who know and love that section of the Eastern Townships represented by Sherbrooke and Stanstead counties, 'The Trail of the Broad Highway', an illustrated book of 122 pages, published by Bertha Weston Price and Maude Gage Pellerin, two regular contributors to our columns, will be of especial interest. Chattily descriptive, rich in historical information of the more intimate sort, and filled with gossip of the farms, villages and people of the district, this book is more than a guide book—it is a repositary of much local lore that merits a place between the covers of such a book, so that it may be preserved for those coming after us.

Divided into five parts, the first four deal, respectively, with the Derby Line-Sherbrooke highway and the country served, the Norton Mills-Sherbrooke highway, the beautiful country lying between these and the old Boston and Maine railway line and its villages, while in the fifth are set forth the outstanding attractions of the four seasons in the Townships.

This, in our opinion, is a most praise-worthy type of work for writers in this province. In almost every section of Quebec are vast stores of local history and legend awaiting the pen of the patient and sympathetic writer. They constitute a precious heritage, yet one that is likely to be lost in all too many districts unless chroniclers be found—for the passing down of traditions from father to son by word of mouth is dying out. We should like to see the lead of these writers followed by many others throughout the length and breadth of the province; for nothing is so interesting to those living within a district as the local history and traditions of that district, yet nothing is in greater danger of being irretrievably lost to us.

MORE POULTRY FOR QUEBEC

One of the features of the new programme for Quebec agriculture as drawn up by the Honourable Mr. Perron is the encouragement of poultry raising throughout the province in general, and in those districts adjacent to the large city markets in particular. A study of the market situation shows that vast numbers of eggs are imported annually to meet the requirements of Montreal and our other urban consuming centres—eggs that might be produced in this province, and with financial benefit not only to the individual producers but also to the province as a whole.

Poultry production on a moderate scale is not a difficult or hazardous undertaking, and figures compiled in the operation of the various demonstration farms scattered throughout the province show the possibilities of considerably augmenting the annual income on the average farm through the inclusion of a small flock of hens in the farm scheme.

With these facts in mind, the Minister has inaugurated a campaign for more poultry on the farms of Quebec. "One hundred hens on every farm" is the slogan; and in the year to come real assistance will be given to many sections through the advice and encouragement of a number of poultry promoters now being appointed to carry on the necessary educational work in the various sections of the province.

This is the time of year to plan for next fall's laying flock. We recommend our readers to give serious thought to the poultry possibilities of their farm schemes before the spring season passes.

QUEBEC'S AGRICULTURAL POLICY

(*Montreal Gazette Editorial, Feb. 17, 1930*)

It is quite consistent with the Hon. J. L. Perron's characteristic aggressiveness and punctuality that, directly the decks of the Legislative Assembly are cleared of the budget debate and other argumentative matters incidental to the early days of the session are out of the way, he should come forward with legislative proposals vital to the carrying out of a reinforced and progressive agricultural policy. It was on the 24th of April last that Mr. Perron succeeded to the agricultural portfolio, and by the middle of the following June he had completed a comprehensive scheme of departmental reorganization with a view to increased efficiency. For purposes of administration he regrouped the province into twenty-three districts, distinct from county divisions, each of them being particularly adapted to some particular branch of production by reason of soil and climatic conditions. The Minister's aim was, and continues to be, the bringing about of a greater measure of co-operation between the provincial Government and the farmer, and, as he sees it, this can be done through direct associations, which, in turn, will work through local organizations established on a parochial basis. The

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NOTICE TO SUBSCRIBERS

Subscribers and members of agricultural societies, of farmers' clubs and of the Provincial Dairymen's Association, who do not regularly receive either the English or the French Journal of Agriculture and Horticulture are requested to address their complaints to the Secretaries of their respective Societies, who will transmit them to the Secretary of the Council of Agriculture at Quebec.

legislation which the Minister of Agriculture is expected to introduce into the Assembly this week promises to develop the constructive ideas expressed in his initial administrative programme, which, as far it has been worked out, has justified itself and inspired the farmers of the province with every confidence in the legislative measures that Mr. Perron will submit for approval as a means to improve and make more profitable the agricultural industry throughout the province.

Full details of the legislative programme have not yet been issued, but Mr. Perron has worked so openly, and has expressed himself so frankly in giving effect to his organizing skill, that the general lines of his projected legislation are so apparent that all who run may read. Although the Legislature has adopted the provisions of the Federal Rural Credits Act that local farmers may seek to enjoy any benefits that are possible, experience seems to have shown that the merits of the Dominion law are more apparent than real. It is asserted that the rate of interest on farm lands and the conditions of repayment are too burdensome to assure the advantages which proponents of the measure declared would be available to the agriculturist. Mr. Perron now proposes to adopt what will constitute for all practical purposes a provincial rural credits system, limiting advances agreed upon to a clearly defined purpose. This purpose for the time being will be that of raising improved grades of cattle in the province. Money, it is proposed, shall be loaned to the farmers through their district agricultural societies and affiliated parochial associations, and under conditions which will not create any difficult problems as to interest payments, nor will it necessitate any mortgage on the farm. The Minister of Agriculture aims to see produced herds that will give a production of five or six thousand pounds of milk per cow. Actual production is said to be little more than three thousand pounds per cow, and as raising the production to 5,000 or 6,000 would mean an additional revenue of some fifty million dollars a year for the Quebec farmers, it is immediately manifest that the objective is one worth striving for.

Mr. Perron, who is a practical farmer as well as a successful lawyer, has always said that he has no fears of United States tariff barriers. Even if the United States closes its doors entirely against Canadian dairy products, he points out, there always will be cheese to be exported to Great Britain and butter to replace that now coming from New Zealand, and in the forecast of Mr. Perron's sessional programme there is evidence of his determination to fortify the acknowledged skill of the Quebec farmers with means to greater production of agricultural goods, and of a quality that will readily find favorable markets, in spite of the barrier of an inflated American tariff. To that end, added facilities are given for co-operative action between the farmers themselves, with their interests duly safeguarded.

As a contributory measure of agricultural assistance, the Hon. Mr. Perron contemplates a liberation of lands from seigniorial rights, where they exist. The idea appears to be that a municipality shall be given powers to provide money whereby the farm tenant may pay off the capital sum calculated to be due to the seignior, thereby liberating forever his farm lands from liability for seigniorial fees. Repayments of the capital sum loaned through the municipalities will be spread over a number of years, the amount at no time to be larger than the seigniorial rents now paid annually. The text of the measure will be awaited with keen interest, and as, in ministerial hands, it will take the character of a Government measure, its adoption is a foregone conclusion. Mr. Perron has predicted that in five years Quebec can be made a banner agricultural province of the world. He is taking steps towards the fulfilment of his prediction. If he obtains co-operation in the right spirit the goal that he has set should not be beyond accomplishment.

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Mammoth Clover No. 1 Rosalie Canadian	26.50	"	"
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Japanese Millet No. 1	9.00	"	"
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THE EFFECT OF PRODUCE GRADING

By Dr. J. H. Grisdale, Deputy Minister of Agriculture, Ottawa.

CANADA'S principal agricultural products are wheat and coarse grains, hay or forage crops, fruits (apples principally), potatoes and other vegetables, beef, mutton, wool, bacon, butter, cheese, eggs, poultry, honey and many other articles of relatively minor importance. Canada's possibilities of producing all of these or any one of these are practically unlimited. The actual limiting factors are the number of people who decide to go in for any particular line and the market outlet for the article produced. But not only is Canada blessed with tremendous possibilities as to quantities of these food products that may be turned out—she is equally blessed in that her soil and climatic conditions seem to be extraordinarily well suited to the production of the very best quality of the various articles mentioned. As proof of this one need only cite Canadian wheat, the best in the world, Canadian cheese, the best that goes onto the British market, Canadian bacon, than which none better is known, Canadian apples, unequalled for appearance, quality and flavor, and so on down the line.

This is true today, but it has not always been so. It is true, too, as already stated, that soil and climate are factors making for this preeminence in quality, but no matter how favorable climate and soil, superiority in quality cannot be achieved without human producing energy properly directed.

For many years Canadian farmers were satisfied to go on producing as best they could without any special concerted effort looking to the improvement of their products. Gradually, however, the Canadian farmer began to appreciate the fact that hit or miss methods and uncertainty in quality in his products were not likely to raise the price of his products nor help him hold his old customers, let alone get new ones. He began to realize that something must be done, and the grading of our agricultural products began to be thought of. It was readily admitted by producer and consumer alike that were all our products equal to the best of them then we might easily sell all we could produce and do so at a considerably better price relatively than was at that time the case. To bring up the quality of goods produced by the careless farmer it seemed reasonable to suppose that the most effective and the most rational way was to pay for the article on the basis of its relative quality, the highest price for the best article, and not a flat price for any and every quality as was very commonly done some years ago.

Who does not recall the days when the country store keeper paid all farmers the same price for their butter, though some of it was very palatable and much more of it barely fit for axle grease? Which of us beyond childhood age does not remember when an egg was an egg when he bought it, whether it was laid yesterday or last June and whether it was a real delicacy or a highly scented disgusting mess when the shell was cracked. It seemed reasonable, then, to think that if the farmer who produced good butter was paid, say, forty cents a pound and he who put up a bad article was paid only twenty cents a pound then soon there would be something doing in the way of improvement in certain dairies. It seemed only right, too, that the person who put fresh new laid eggs on the market should be better paid, much better paid, than he who saved his eggs in times of heavy production and put them on the market in time of scarcity, high smelling or half hatched, as was often done.

It was felt, too, that this same principle should maintain right down the line.

It should be stated that this principle was really accepted or put into practice many years ago so far as wheat and grains were concerned but it was not until comparatively recently that any one seemed to think it might and should be applied to other products.

The first article other than cereals to receive serious attention was eggs. Action looking to the improvement of our eggs by this means dates back to about 1918. The struggle has been long and the task difficult, but the results have justified the effort. Where, as already suggested, eggs were anything but a dependable article of diet twelve or fifteen years ago, today Canadian eggs of the higher grades are looked upon as quite safe to offer any one for breakfast and need not be broken before coming on the table. The results of this improvement are astonishing. Canadian egg production has more than doubled in a little over a decade. Canadian eggs have made a name for themselves in quality, and consumption of eggs in Canada has increased enormously. Each person in Canada used to eat about fifteen or sixteen dozen eggs in the year; now each person eats over thirty dozen in the same time. When one takes into consideration, then, the increased population of the Dominion and the immense tourist traffic from the South one can understand what has happened to our export trade in this article. It has practically disappeared. This is regrettable from one standpoint—we need the export trade—but it is highly satisfactory from another—it shows what quality in any article does. Local sales increase immensely With a good reputation at home and abroad and a people more interested in poultry and better capable of handling them, we should, it seems to me, soon be able to export eggs once more. Resumption of export business should not and would not affect prices for our higher grades at least.

Probably the next most striking example of what grading will do is what has happened to Canadian Bacon. Some thirty years ago some people in Canada decided that Canada's only chance of doing much to build up a good swine industry was to go in for the production of Wiltshire bacon. For this article there was a good market in England, while for pork such as was then being produced in this country the foreign and even the domestic market was very uncertain. After a long struggle, a fairly high percentage of hogs suitable for conversion into this product began to come on the market. Quality was very uncertain, however, and prices even more unstable. Our reputation abroad may be best indicated by the statement that Canadian bacon was commonly quoted at from six to eight dollars a hundredweight less than the Danish article. After much effort and endless discussion our present system of hog grading (approximately) was gotten under way. Today Canadian bacon not unfrequently commands as high a price as the Danish and occasionally higher, while the spread is never more than a dollar or so per cwt. in favour of the Danish, and this in spite of the fact that our exports have fallen off to such an extent that the supply is very uncertain and therefore prices which result from demand are perforce falling off. The British consumer likes what he is used to, and so if not assured of a steady supply of the Canadian article takes the next best, Danish, which is always available equal to the demand.

Here again, as in the case of eggs, improvement of quality has led to increased domestic demand with the result indicated; there is less and less being left for export to Great Britain, although production has, generally speaking, been gradually increasing. The market in Britain is there. It is ours for the supplying. It seems too bad that we should lose it, especially as our product still continues to improve, our possibilities for production are practically unlimited and returns to the producer are now and practically always have been fairly profitable.

Another very striking example of what grading will do is seen in its effect on our common Canadian cheese. In the fall of 1922, when I happened to be in England, I could not help but be chagrined to note the poor reputation, shall I say "enjoyed", by our Canadian cheese as against the New Zealand article. All of us interested in the Dairy Industry felt that something must be done. Something was done: a law was passed authorizing the grading of cheese and butter and, after considerable discussion among the interests concerned, regulations were passed and grading of cheese and butter for export went into effect in 1923. The effect has been quite all that was hoped for in improving the quality of our produce and in improving the reputation of our cheese at least on the British market. So far as butter is concerned it has not affected our foreign trade, for we sell but little abroad.

Our cheese in 1922 and for some time previously had been selling from one to two cents a pound less than the New Zealand product. The situation changed almost immediately, and now Canadian cheese uniformly sells at a higher figure than the New Zealand. Here are the premiums year by year for the past five seasons. In 1925, .52 cents per lb.; in 1926, .56 cents per lb.; in 1927, 1.48 cents per lb.; in 1928, 1.12 cents per lb.; and in 1929, 2.01 cents per lb.

Grading did it. The makers did better because they knew their product was to be graded; when they made a poor article every one concerned knew about it and the maker got busy and did better. He had to or lose his job.

Another article that has been graded for some time now is apples. Unfortunately for the producer, this article, while graded, is commercially inspected for trueness to grade only in those provinces where the growers as a whole ask for it. This is the case in British Columbia, Ontario and Quebec. Nova Scotia, one of our principal apple producing provinces, has not yet asked to come under the commercial inspection scheme. Here again the effect of grading under inspection in establishing a reputation and improving the quality of the output has been quite remarkable. Apples from British Columbia and Ontario now are commonly accepted on the British or American markets for what they purport to be, and are found to be such. The effects on prices are good. Apples from Nova Scotia, however, where grading under inspection is not in effect, are looked upon

A group of two year old Percheron stallions at Arnoldwold Farms, Grenville, Que.

with suspicion and sell on sample, or on local inspection, very much to the disadvantage of the growers in that province. The inference seems obvious: get your apples inspected for trueness to grade.

Many other articles are graded, and results have been uniformly encouraging. Some of these are, potatoes, turnips, wool, and poultry.

The product most recently to come in for attention is beef. Two grades have been established, Choice and Good. A red stripe down the side of beef from hock to neck means Choice, a blue line means Good. We are hopeful that much good may result from the putting of this system into effect. Just what will happen, however, remains to be seen, since the policy is but just getting under way.

I think I have now said enough to indicate quite clearly and emphatically that grading is having a wonderful effect on the quality of our food products and is aiding materially in the marketing of them.

It has shown for one thing that Canada can produce the very best class of eggs, bacon, wheat, cheese, butter, apples and so on down or up the long line.

What we want now is more of these products. We have quality; we need quantity, and we need continuity or regularity of output.

Which Sow Shall We Pick?

By E. W. Crampton, Asst. Prof. of Animal Husb., Macdonald College.

FOR several years there have been, through the United States, hog feeding competitions of one kind or another instituted to stimulate interest in better feeding and management of pigs in the district concerned. Perhaps the best known of these schemes are the "Ton Litter Contests", about which notes are to be found periodically in the farm press.

These competitions, however, have been largely if not entirely aimed at feeding problems, and while it is accepted that feeding is a very important factor in the raising of livestock, its prerequisite is breeding, for the best of feeding schemes will come to naught if breeding, which after all gives us our stock to feed—determines the kind of material out of which we must fashion our select hog—be neglected.

If the breeding has already been set right, then, of course, emphasis on feeding is quite in order. But in most cases met with in Eastern Canada, it would seem from results that as yet there is room and urgent need for improvement both in the breeding and in the feeding of our hogs. The wide gap between the best and the poorest—between the selects and the average run of market hogs—is evidence in itself that much can be done along both lines.

Nor can these two problems be attacked separately when both need attention, for the proof of the breeding lies in the end result—select bacon hogs—which can be attained only by proper feeding. We may think of this case in terms of the carpenter, for instance, who wishes to build a table of certain design. Oak is the material specified for the job.

Now, if he doesn't get oak to start with, the best tools he can obtain and all his skill in using them will not produce an oak table. But, on the other hand, give him oak but let him use poor or unsatisfactory tools or be himself unskilled in carpentry, and the oak with which he started will never be turned into the perfect table sought.

The feedstuffs are the tools the feeder uses. His skill as a feeder is expressed through his practice. The raw material out of which he is to build his select hog is the product of breeding. Give him poor material, and he will not be able to build to final specifications regardless of his skill and tools. He may, however, spoil perfect material through poor feeds or through improper use of them.

BREEDING FUNDAMENTAL

That breeding is fundamental to bacon hog production has been clearly illustrated in a case in the Macdonald College swine Herd. Two sows, littermates, were involved in the trial. One was bred to one herd boar, and one to another. From the two litters resulting, five pigs were chosen before weaning from each, and at weaning time each of these ten pigs was put into a small pen by himself, where he was confined until he reached market weight. The remaining pigs from these two litters were put together into one larger pen for feeding. The feeds used for all pigs were the same in composition, and the practice as nearly alike for all as it could be made.

After the first few weeks of feeding, there was a noticeable difference in the length of these pigs. The gains, however, in all pens were just about the same, and the feed consumption was very similar.

At market weight there was a very decided difference between the pigs of the different litters, but great similarity between those within each litter. In one litter, the pigs were especially long and stretchy—ideal selects—while those of the other litter were short and thick .

Had we been interested in producing weight—as in the "Ton Litter Competitions"—we would have been primarily interested in the fact that these pigs went to market at about 225 lbs. on about 600 lbs. of meal feed each. (Pigs received no feed other than meal and water.)

What the Ontario Bacon Litter Competition Tells

1. That six months is long enough to "build" a select bacon hog.
2. That rapid growth won't spoil a pig that is of the right type to start with.
3. That large litters are no hindrance to a high percentage of selects.
4. That it is possible to raise large and still uniformly good litters.
5. That a little extra thought and care in the feeding of our pigs may be expected to have a decidedly beneficial effect on the quality of our market hogs.

Satisfactory as was the feeding record, we were much more interested in the fundamental difference in type of pig produced by the sows and boars in question. This, together with other evidence from similar instances, led us to dispose of both the sire and dam of the short pigs and to select our replacement gilts from the other breeding.

Without this feeding test, it would have been difficult to have properly chosen between these two sows. They were very similar and of acceptable type. The one never did produce stretchy pigs; her sister has proven an especially valuable breeder.

The existence of this same situation throughout the country has been known for a long time to those interested in promoting the "bacon hog" in Canada.

THE ONTARIO BACON LITTER COMPETITION

To spot the good breeding stock, however, was not so easy, but a start was made last year in Ontario in what was known as the Ontario Bacon Litter Competition.

Any Ontario farmer was at liberty to enter a litter of pigs in this test, provided it was farrowed during the first two weeks of March. Prize money, put up jointly by the Dominion and Provincial Departments of Agriculture, was competed for on the basis of the number of pigs in the litter and their age at market weight, uniformity of the pigs within the litter and the percentage of the litter grading "select".

The results of this undertaking are now known—at least the results of the first year's feeding. The final result will not, of course, be known for another year or two, since from these litters it is hoped to select stock of superior breeding worth, the testing of which will take some time yet.

BACON IN SIX MONTHS

However, from the results of the first sorting, as it were, there are some very interesting suggestions. First, though perhaps not of greatest importance, it is interesting to note the time required to produce a market hog. Taking the first ten litters of each district—that is, the ten prize winners—the average age of the litters was 184 days, or just about six months. The youngest litter of these fifty was 154 days, and the oldest, 197 days.

Many feeders have in the past argued that, while a hog might be brought to market weight in six months all right, to push him that fast meant a short thick hog and not a "select". Taking those litters (twelve in all) in which 80% or more of the pigs graded select, the average age at market weight was 184 days, with one litter being 154 days old and the oldest 197 days. Against this group let us look at the ages of the nine litters in which less than 30% of the pigs graded "select". Here we find an average age of 183 days, with a range from 169 to 194 days.

This does not look like good data to support the idea that a select bacon hog has got to grow slowly, does it ? As a matter of fact, it points to the conclusion that if you have the right kind of pig to start with, you may feed it as fast as you please without much fear of hurting your chances of getting the premium for select hogs.

RATE OF GAINS

I can almost hear some one saying, "Yes, that's all very well, but how heavy were the selects as compared with the others ?" In other words, there is a rather wide range between maximum weights for select hogs, and maybe the select hogs produced in 184 days were lighter in weight—had made slower gains per day — than their less fortunate competitors. This can also be answered with the data collected, and there is, or would seem to be something in the claim, for the figures tell us that the average daily gain made by the litters grading 80% or more of selects was 1.17 pounds, while that of these having less than 30% selects was 1.25 pounds. This on the basis of 190 day old pigs means that the latter group would average about 14 pounds heavier per pig.

This, of course, does not alter the fact that select pigs can be grown in six months. It may mean, however, that in order to get the slow doers of the litter up to weight, the better ones were allowed to get over weight. And this, if it were the case in some instances, serves to illustrate the importance of uniformity within the litter.

LARGE OR SMALL LITTERS

Then we meet the old argument that a sow can't be expected to raise a big litter and have them all selects. Well maybe not, but size of litter didn't seem to cut much ice in this test. The litters in which there were 80% or more of selects averaged 11.5 pigs to the litter, while those in which less than 30% were selects averaged 10.8 pigs per litter. In the first group, there was one litter of sixteen and one of nine pigs. In the second group, there was one litter of fourteen and two of nine pigs. Since we know that size of litter is an hereditary characteristic, then we should be able to pick sows to produce large litters; and if they also can be selected to produce the right type of pig, then we are getting somewhere. At any rate, the sows with the big litters were not at a disadvantage in the competition.

It is perhaps unfortunate that there is not complete data available on the feeding practices followed by those raising these litters, but it is safe to assume that each and every litter was fed to the best of the feeder's ability; and in the light of results obtained with these litters, it is a pretty safe guess that had the pigs not in this competition been fed and cared for as well as those that were on test, there would have been more than one surprised "hog grader" in the Province of Ontario last fall.

Better breeding can do much toward raising the percentage of "selects". Combine with better breeding, better feeding, and the results will not only be surprising but gratifying to the feeder.

Roots Valuable for Dairy Cows

ROOTS fed in moderate quantities to dairy cows may be used with advantage as a substitute for part of the meal ration. At the Ste. Anne de la Pocatière Experimental Station, Quebec, operated by the Department of Agriculture at Ottawa, two lots of six cows each were used in an experiment; one lot received turnips and the other beets. The feeding experiment included three successive priods for each lot. In the first and third periods, the cows received hay, and a half-ration of meal, plus roots. In the second period, they received hay and meal only.

In this experiment turnips and beets had a feeding value of $6.25 and $6.41 per ton respectively. This valuation was arrived at on the basis of the meal ration saved by their use. The roots had cost $2.77 per ton for growing. In the opinion of the Superintendent of the Station, as expressed in his report for 1928, it would be a good practice for dairy farmers to grow roots on a larger scale than is usual on dairy farms in the district, particularly in view of the fact that corn for silage purposes is not a very dependable crop.

A Short Story—An Old Industry

(Bertha Weston Price)

IT is March, 1730. Forest brooks race madly down the hillsides; the sunshine filters through delicate tracery of maple and birch branches and casts soft grey shadows on the snow. There is a vibration in the air, for the South Wind is whispering. "It is Spring!" It is felt in the bodies and limbs of maples and birches, in the pulsating bodies of the little wild things of the wood, for through them all runs the thrill of a new life, after winter's long sleep—Spring.

The dark-skinned woman working over the fire is impatient. She has little to offer her man when he returns for his meal. She strikes her hatchet into a noble maple tree nearby, and the sap gushes out; it is sweet to her taste!

That was the beginning—so far as we can tell —of the maple sugar industry, which has made Canada world famous.

It is March, 1830. The snow still lies deep in the woods, but men are going about among the maple trees. It is sap-time and there is much work to be done. Some of those early Scotch settlers did not find things just as they were represented to them before sailing for the new Canada. They had understood that if they wanted maple sugar all that was needed was to go into the woods, bore holes in the maple trees, stick in a wooden spout, hang a bucket under it, then stand and wait for it to fill with sap. This was to boiled down into thick syrup or sugar. When they had what sap they needed their duty was to put a plug in the hole. Rather a pipe dream, that; or at least one that went up in smoke. But those hardy pioneers plodded on, and today their heritage to us is a worthwhile spring industry.

In 1851 Mr. Joel Parker, a pioneer settler in Hatley (1827), sent maple sugar from his camp to the London Exhibition, which was held in Crystal Palace. He won a handsome bronze medal, without doubt the only medal of its kind in Canada today. It is now in the possession of Mr. Leon Parker, of Maple Lawn Farm, Hatley, a grandson of Joel Parker, and will pass into the possession of Lindsay, his eldest son, fourth in line.

On one side of the medal is plainly inscribed the well-remembered features of H. R. H. Prince Albert, "President of the Royal Commission," and on the opposite side is the globe with laurel leaf and dove, and the words: "Exhibition of the works of Industry of all Nations, 1851." The medal was kindly loaned the writer and it went to Sherbrooke to have its picture taken.

In a historic record we find that when the house belonging to a prominent farmer of the Township of Eaton was burned in 1861, there were bountiful supplies. "The house was full of most everything that a farmer could raise, or a farmer's wife and daughters make, such as maple sugar of which there were two or more tons." To those who buy maple sugar by the pound that seems a "big hunk o' sugar"!

How many of us can remember the delectable buckwheat pancakes and maple syrup—the original kind! We can have them today, but—"somehow they don't taste quite the same" is a remark often heard. Tastes change, perhaps, with the centuries.

March, 1930. The snow lies deep in the woodlands; the men are busy in the sugar grove, and the housewife is busy also, for sugaring time brings extra labour to every one of the household. It is a big industry for a short time.

Statistics show us that the average annual production is 22,000,000 pounds of syrup and sugar (in 1929 it was 32,000,000).

Maple sugar is a natural resource. People praise the wines of France, the cheese of Switzerland, the fruits of California! Then let us sing of the maple tree that will forever provide us material for that healthful sweet, maple sugar, if the trees are spared to us and to our posterity.

1. "Goin' to the sugaring' off". 2. A 'wee drap" en route to the sugar camp. 3. Making "La tire" (making maple sugar on snow). 4 and 5. Medal won for exhibit of maple sugar at 1851 Exhibition, London, by Joel Parker.

Some Farm Manure Weights

W. C. H.

IT is sometimes difficult to estimate just how much manure is being applied per acre. The following figures may assist any farmer to calculate the amount of manure he is using on his land. Fresh horse manure with straw bedding weighs as it comes from the stable approximately 20 to 25 pounds per cubic foot. Cow manure is much heavier; it runs usually from 35 to 40 pounds per cubic foot. If fresh manure is being applied, the cubical contents of the wagon spreader should be obtained and the weight of a load of manure determined. An acre of land is approximately 70 paces (210 feet) square. If the load contains 1½ tons of manure and the rate of application is 12 tons per acre, it will require 8 loads to cover the measured acre area.

A cubic foot of compact rotted manure (horse and cow mixed) in a pile weighs about 60 pounds. To estimate the number of tons in a pile of such manure multiply the height, width and length in feet together and multiply the result by 60 and divide by 2,000, and a fairly accurate knowledge of the number of tons of manure in the pile, will be obtained.

The approximate production of manure by farm animals plus bedding for 7 months and 12 months periods per 1,000 pounds of live weight is as follows:

	Annual Production	Production Seven Months
Horse	12.1 tons	7.1 tons
Cow	14.6 "	8.5 "
Sheep	9.6 "	5.6 "
Pig	18.2 "	10.6 "

When all the losses due to handling, fermentation, leaching, etc., are considered, only 50 to 70 per cent, depending on whether good or bad methods of handling are employed, of the above amounts are actually available for field application. These figures may be of interest to those farmers who have manure to apply to their land.

The Handling of Farm Manure

By W. C. Hopper, Div. of Field Husb., Ottawa.

MOST farmers in Eastern Canada realize, at least to some extent, the value of farm manure. It need scarcely be pointed out that this farm by-product is the most important of all the fertilizers which may be used by farmers and that the preserving of every ounce of solid and liquid manure is an actual saving in dollars and cents.

Tight floors and gutters and sufficient bedding are, of course, the first requirements in the saving of the liquid manure so rich in nitrogen and potash. Straw is without doubt the best absorbent, although in its absence dried peat, muck and shavings are sometimes used with very good sucess. While on very light soils shavings are not desirable, for most soils growing farm crops shavings are really not very objectionable.

If manure contains many live weed seeds it would seem advisable to pile it and allow it to heat well before applying. Thorough heating for at least a month should practically kill all weed seeds. An experiment conducted some years ago at Maryland Experiment Station substantiates this opinion. In order that the outside of the pile be thoroughly heated, the manure should be turned after the inside has been well heated.

The greatest losses from a pile of manure exposed to the weather are those caused by the leaching away of soluble plant food. To overcome this, a watertight concrete manure pit with sides 2 feet or so in height would be a profitable investment if much manure is to be piled. The pit should be made away from the eaves of any building. The pile of manure should be dished in the centre to catch the rain (to retard too rapid heating) and the sides made as perpendicular as possible.

In dry weather the manure, if possible, should be kept moist to prevent destructive fermentation. Each addition of manure should be packed in place, the fresh on and above the older. This allows the gases from the well-rotted manure to pervade the fresher and looser portions, which quickly establishes conditions for desirable fermentation.

Covered manure pits are used by some progressive farmers and the cattle are allowed to tramp over the manure to compact it. When convenient, and where the manure is free from weed seeds, it is believed desirable to draw it directly from the stable and spread on the fields in order to retain all its desirable components. If, however, the land is rolling, or the soil is sandy and leachy, there may be a grave danger of loss of plant food in the spring from manure applied during the winter.

The practice of leaving manure in small piles in the field for a long time has been condemned by Professor Lyon, a leading American authority on soils and soil fertility; he states, "Placing fresh manure in small heaps in the field to be spread later is, in the first place, poor economy of labour. Moreover, it encourages loss by decay, while at the same time the soluble portions of the pile escape into the soil immediately underneath. There is thus a poor distribution of the essential elements of the dung, and when the manure is finally spread, an over-feeding of plants at one point and an under-feeding at another results. A low efficiency of the manure is thus realized. This method of handling manure is not to be recommended."

From the results of many experiments if would appear that except in special cases the application of manure when other work is not pressing is probably of greater importance than time of application. For grain crops, fall and winter manuring is not desirable as the manure holds frost and moisture and delays seeding.

It has been amply demonstrated by experiments at the Central Experimental Farm at Ottawa that light to medium dressings of manure have been more profitable than large amounts, because the smaller amounts have been more fully utilized by growing crops. The use of a manure spreader provides an even distribution of small amounts of manure. A spreader is particularly desirable when applying manure to meadows, but the purchase of a manure spreader may not be economical unless a fairly large area is to be manured. If manure is applied by hand in fall or winter, the meadows

should be harrowed in the spring.

Other experiments conducted at Ottawa in the comparison of the returns from unmanured and manured land show that in a four-year rotation of mangels, oats, clover and timothy, the average gross value of farm manure, based on the increased crop secured, was nearly four dollars per ton, while the net value, after deducting the cost of applying the manure and handling the increased crops, was about two dollars per ton.

In some cases it may be found to be a profitable practice to add 20 to 30 pounds of superphosphate (also called acid phosphate) to each ton of manure. This fertilizer may be added to the pile or to the spreader. Some farmers apply, instead, a dressing of 200 to 300 pounds of superphosphate before seeding the cereal or cash crop of the rotation. The latter method of using superphosphate may prove the more profitable one. The supplementing of manure with superphosphate by the methods suggested should be particularly useful on soils lacking in fertility. In the building up of badly run-down soils the addition of phosphorus in the form of superphosphate to either the manure or directly to the soil before seeding or planting cultivated or cereal crops has given beneficial results; besides, almost all the soils in Eastern Canada are deficient in phosphorus.

Factors in Soil Management

III : ORGANIC MATTER

By E. A. Lods, Asst. Prof. of Agronomy, Macdonald College.

ORGANIC matter, as has been stated in the preceding articles of this series, is an essential part of soils, playing an active part in the three main aspects of the soil — the physical, the chemical and the biological. That the soil is something more than so much pulverized rock is largely because of organic matter. Its origin, nature, and its functions in relation to soil productivity are therefore vital in considering factors influencing soil management.

Organic matter, as considered in the study of soils, is plant and animal tissue in various stages of decomposition. It is frequently referred to as humus. It must not be assumed that organic matter is a single substance; it is, as originally stated, plant and animal tissue in varying stages of decomposition, and therefore is a mixture of a number of substances. It is in the fairly advanced stages of decomposition that it is referred to as humus, when, probably, it has the greatest beneficial influence upon the soil.

Influence on Tilth.

The physical condition of the soil is materially influenced by organic matter. Clay soils are in a good physical condition when they are in a granular or crumblike structure. This condition is much more easily obtained when the soil is rich in organic matter. Under such conditions the soil is more open and much more easily worked. The cementing nature of some of its compounds as well as some of the other characteristics of organic matter tend to make sandy soils tighter. We find, therefore, that both the clay and sand-like soils are improved in tilth through the influence of organic matter.

The improvement in structure results in a greater ease in establishing a good seed-bed. In one case the soil is more easily worked and naturally falls into a crumblike structure, while in the other case, that of sands, the improved character of the soil results in the possibility of making a fairly firm seed bed even following very intensive cultivation.

Organic matter, through its influence on the physical condition of the soil, has, particularly on clay soil, marked influence on aeration of the soil. Many of the beneficial chemical and bacterial changes in the soil are dependent upon a supply of oxygen as obtained from the air. A soil of open structure makes possible a good supply of air as well as good ventilation.

Influence on Moisture Control.

The moisture relationship of soil is influenced by organic matter. The organic matter itself has a very high water absorptive power; this can well be illustrated by the case of muck soils, many of which will absorb water to several times their dry weight. In itself, this characteristic helps to increase the water-holding capacity of the soil; that is, the soil can hold a larger amount of water without becoming "wet" from a field management point of view. In addition, organic matter dries out but comparatively slowly. We find, therefore, that organic matter itself directly influences the moisture supply of the soil, first, because it can absorb a large amount of water, and secondly, because it loses this water but slowly.

This characteristic of organic matter when conveyed to the sandy soil is of very marked importance. The more sandy a soil the smaller is the water holding capacity and the lower the power to retain the water. As a result, crops on such soils frequently suffer from drought. Organic matter very materially improves these soils in relation to drought conditions. It is common knowledge that the sandy soils will give more uniform production through moist and dry seasons when they are well manured.

The clay-like soils also are markedly benefitted in relation to moisture control through the influence of organic matter. Clay has a greater power for retaining water than has sand. With fine clays, however, it requires but little water to make the soil very sticky and to tend to fill up the spaces between the soil particles to the exclusion of the air. Upon drying, such soils tend to be hard, and to crack. The improved granular condition of clay soils referred to in a previous paragraph very definitely influences the water absorption capacity of the soil. Through the granular condition there is improvement of air space in the soil, making it possible for more water to be absorbed without rendering the soil soggy. It is found that moisture moves more easily through the soil mass in the case of well-granulated clay than in the case of a soil in poor physical condition, and that upon drying such a soil shows less tendency to shrink and to crack. Briefly, then, we find that with clayey as well as with sandy soils there is an improvement of moisture conditions attributable to the influence of organic matter.

Influence on Supply of Plant Nutrients.

The supply and the condition of plant food also is associated with organic matter. Since organic matter is derived largely from plant tissue, it contains those nutrients needed by the plant. A considerable proportion of these nutrients fairly quickly become available to the plant. In considering organic matter as such with reference to plant nutrients, attention is given almost wholly to the question of nitrogen. This plant nutrient is stored in the soil mostly in organic forms. During changes, other forms of nitrogen are evolved, one of which is the very soluble form as found in nitrates. This is the condition in which it is taken up by most plants. Since nitrogen in this condition is very easily leached, it is usually lost if not used by the crop or some of the soil bacteria. Briefly, the organic matter content is an indication of the nitrogen content of the soil. When organic matter is brought to the soil from outside, as in the case of the use of barnyard manure, other plant nutrients such as phosphorus and potash are considered. As previously stated, however, from a plant nutrient viewpoint, the organic content of the soil is associated principally with nitrogen. It forms the reserve of this very important and very expensive plant nutrient.

Without organic matter there would be no soil bacteria. Without the soil bacteria and some associated organisms there would be no organic matter in the sense we have considered, for there would be no decomposition of plant and animal tissue. Organic matter and the soil bacteria are so closely associated that one is dependent upon the other. Associated with the relationship of these two factors in the soil is that of the supply and condition of nitrogen. In the next article of this series we shall discuss the relationship of soil bacteria to the soil productively and the problems of soil management.

The Supply of Organic Matter.

The amount of organic matter in the soil is influenced by the fertility of the soil, by manurial practices and by the cropping systems followed. Fertile soils on which good crop growth takes place receive considerable organic matter from crop residues such as extensive root systems and heavy sods which are plowed under. Barnyard manure is an important source of organic matter and therefore influences the supply of that soil constituent. The amount of barnyard manure is itself dependent upon the fertility of the soil as well as upon both the feeding and manure conservation practices followed on the farm. Those conditions which influence the supply of manure on the farm influence also the supply of organic matter in the soil. Cropping practices, such as systematic rotations, the growing of deep-rooted crops and of bulky crops also are important factors. The fairly short rotation involving frequent manuring and plowing under of a heavy sod is found to help maintain a good supply of organic matter in the soil. The use of clovers is also valuable, not only because these crops have extensive root systems, but also because, through adding nitrogen to the soil, they stimulate the growth of subsequent crops. A method of directly increasing the organic matter is the use of green manures.

Briefly, the supply of organic matter in the soil is influenced by those practices on the farm which increase the plant growth and which increase the supply of barnyard manure.

Winners at Lennoxville Short Course

IN spite of bad weather, the ninth annual short course in agriculture and household science at Lennoxville, held in January, was a real success. Over fifty boys took part in the various judging classes, while the girls in attendance numbered twenty-one. During the three days of the course a large number of interesting lectures and demonstrations were given by professors from Macdonald College, officials from the Lennoxville Experimental Farm, Central Experimental Farm, C. N. R. Agricultural Department, Women's Institutes, etc.

The following were the winners in the various competitions staged for the boys and girls in attendance at the course :

Judging Heavy Horses

1. Gordon Conner, 2. Francis Paige, 3. Geo. Butler, 4. Albert Starkey, 5. Newton Bennett, 6. Jos. Turcotte, 7. Ronald Hinchliff.

Judging Dairy Cattle

1. Ralph McRae, 2. Alden Clark, 3. C. Van Loon, 4. John Daniels, 5. Malcolm Dillon, 6. Kenneth McRae, 7. Wellington Paige, 8. Alymer Bradley.

Judging Sheep

1. Robert Woodside, 2. Malcolm Dillon, 3. Carl Corey, 4. Gordon Conner, 5. C. Van Loon, 6. Geo. Butler, 7. Jos. Turcotte, 8. Newton Bennett.

Judging Swine

1. Geo. Butler, 2. Gordon Young, 3. C. Van Loon, 4. Robert Woodside, 5. Newton Bennett, 6. Wellington Paige, 7. Cyril Winget.

Judging Poultry

1. Malcolm Dillon, 2. Jos. Turcotte, 3. Wellington Paige, 4. Carl Corey, 5. Clif Brown, 6. C. Van Loon, 7. Robert Robinson.

Judging Oats

1. C. Van Loon, 2. Geo. Butler, 3. Gordon Conner, 4. Ashley Trussler, 5. Cyril Winget, 6. Robert Woodside, 7. Kenneth McRae.

Judging Potatoes

1. Ray Fearon, 2. Cyril Winget, 3. Wellington Paige, 4. Ronald Hinchliff, 5. John Daniels, 6. Thornton Cleveland, 7. Aylmer Bradley.

Judging Tea Biscuits

1. Jean Pearton, 2. Lenora Titcomb, 3. Alice Dundin, 4. Doris Ray, 5. Elsie Gilby, 6. Marjorie Benton, 7. Muriel Allison.

Judging Cake

1. Alice Dundin, 2. Jean Pearton, 3. Norma Labonté, 4. Doris Ray, 5. Lenora Titcomb, 6. Muriel Allison, 7. Bernice Beattie.

General Proficiency in Cookery

1. Alice Dundin, 2. Jean Pearton, 3. Doris Ray, 4. Iola Beaulieu, 5. Muriel Allison, 6. Lenora Titcomb, 7. Marjorie Benton.

Highest Proficiency, Boys under 18 yrs.

1. Malcolm Dillon, 2. Carl Corey, 3. Wellington Paige, 4. Ashley Bradley, 5. Hugh Woodward.

Highest Proficiency. Young men 18 yrs. to 25 yrs.

1. C. Van Loon, 2. Geo. Butler, 3. Clif Brown, 4. Newton Bennett, 5. Gordon Conner.

Public Speaking Contest

1. Gordon Conner, 2. Newton Bennett, 3. Miss A. McBain & C. Van Loon.

Mrs. Forbe's cup presented to the boy with the highest aggregate, won by C. Van Loon.

Trip to the Royal Winter Fair, financed by the Sherbrooke Rotary Club, expenses not to exceed $50.00, won by C. Van Loon.

PROFIT IN QUALITY PRODUCTS

An Address Delivered at the recent Annual Meeting of the Quebec Pomological Society, by Dr. J. E. Lattimer, Dept. of Agric. Economics, Macdonald College.

THERE is considerable evidence to support the claim that there are two methods of prying profits from the business of farming even during the slight recession of prosperity which we are now experiencing.

The word *prying* is chosen deliberately. Profits are not at present forced upon those in the business of farming. They must be pried out. Other industries face a somewhat similar situation in this respect. Those industries which persistently oppose reorganization are particularly hard hit. It is customary to fear change, whereas the greater danger appears to be that conditions may not change rapidly enough.

The two methods of securing profits from farming are—

1. Mass production of staple products.
2. Supplying a quality article for a special price.

The first of these methods entails a degree of efficiency that need fear no competition, together with drastic *pruning* of the overhead. This has been discussed in detail on former occasions and we will not elaborate on this point at the present time. At any rate, there is a limit to what may be accomplished by increased efficiency. A noted advocate of increased efficiency, whom it would be out of place to mention by name to this audience but who has achieved world fame as a purveyor of motors cars, has pushed this method of securing profits perhaps as far as possible. Indeed it has been recorded that one of his employees recently had a vision that this individual was being carried on his farewell tour by six of his trusted employees, and upon this trip he sat up in his means of conveyance with the remark—"Why do you not put a roller under the conveyance? Then you might lay off five men".

It is the possibility of securing a profit from the second method, namely, the purveying of a superior quality product for a special price, which is the subject of our present discussion.

Reference to the present recession in business is by no means intended to reflect gloom at this particular time. The question has been sometimes heard—What influence would the collapse of the stock market have on general business? That question is obviously placing the cart before the horse. It is the business of the speculator and of the exchanges to reflect and discount future business conditions. It would appear that a more reasonable presentation of the problem would be—How accurately has the speculator and the exchanges discounted prospective conditions?

The assumption that the exchanges affect business is an assumption that the tail wags the dog. Possibly if we watch only the tail and have no eyes for the dog, it may appear as though the tail were supplying the motive power. And if the tail becomes too large in proportion to the size of the dog, perhaps the tail may acquire too much influence. But this condition does not continue long. Already the recent technical readjustment in the stock market has released capital, time and effort, which may be devoted to more fundamental affairs.

The recent readjustment simply revealed that the prosperity of the past few years could not continue indefinitely. Reaction was in some quarters expected and unheeded warnings repeated. Fortunately, speculation was confined largely to the exchanges while commodities escaped. The slight recession of business has, however, not occurred without some influence on the price of some goods.

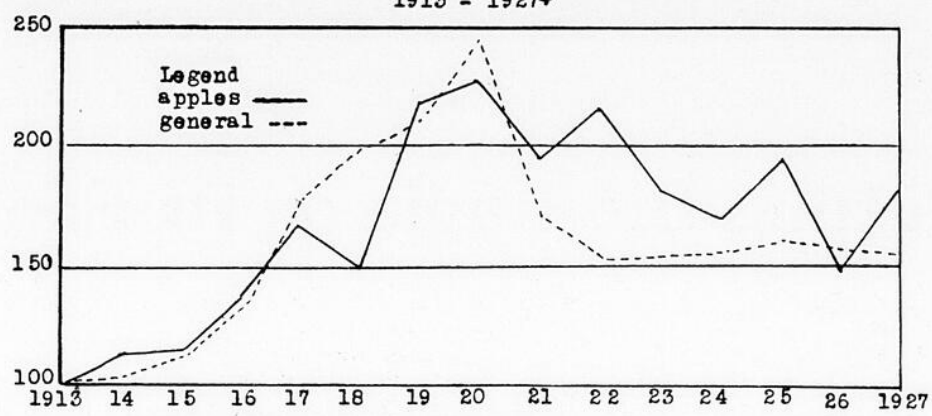
The prices of farm products has suffered less than some other goods. Apples, though not entirely escaping the readjustment, and though lower in price than during recent years, still occupy a comparatively favourable position in regard to price when compared with other farm products.

This is perhaps such a controversial subject that it may be necessary to quote my authority for this claim. The most recent report from the Bureau of Statistics on prices, that of December 1929, reports—

	1926 = 100
Canadian farm products	104.0
Fruits..	123.1
Fruits, fresh domestic..	158.2
Fruits, fresh foreign..	101.9

These index numbers are calculated from the base of 1926. Fruits, fresh domestic, is the nearest classification which occurs to me to represent the price of apples and, while apples perhaps do not comprise a very great proportion of this group, yet this is fair evidence that the apple occupies a favourable position in regard to price in comparison with other farm products.

WHOLESALE PRICES APPLES AND ALL COMMODITIES
1913 - 1927*



* Data from Dom. Bur. Statistics
Prices and Price Indices 1927, pp.34 and 52.

From 1926 to the present is, however, too short a period to afford much information on this point. A more interesting picture may be obtained if a longer period is considered. The same authority, the Dominion Bureau of Statistics, presents the following wholesale prices for No. 1 Spies at Toronto since 1913, which were as follows :

1913	$4.34	per bbl.	1920	$9.86	per bbl.
1914	4.90	" "	1921	8.62	" "
1915	4.96	" "	1922	9.29	" "
1916	5.90	" "	1923	7.89	" "
1917	7.36	" "	1924	7.28	" "
1918	6.44	" "	1925	8.58	" "
1919	9.50	" "	1926	6.45	" "
			1927	7.84	" "

This record of actual prices is more accurate than the index numbers for the reason that the apple price was low in 1926, the year that is taken as a base for the present series of index numbers. Apples are somewhat handicapped at the start in any comparison of the present index number.

By comparison of the price of apples with the price of all commodities since 1913, however, it may be noted that in the fourteen years from 1913 to 1927, there were only four years during which the price of apples was below that of the general list. Those years are 1917, 1918, 1920 and 1926. This is made clear by the accompanying chart.

It has appeared necessary to present some record of prices at this time, as there appears to be considerable complaint about the present low price of apples. In a recent issue, Jan. 4th. to be explicit, of the Canadian Countryman, illustrating an article entitled "What is Wrong with Apple Industry?" you may have noted a photograph under which is written—"Many growers at the present time long for the good old days when there was real money in apple growing."

It appears to be very easy to allude to the good old days after we have safely struggled through them. The golden age of farming generally exists in the somewhat hazy past. It is unfortunate that our statistics are not as reliable prior to 1913, as it might be illuminating to examine more closely the good old days in regard to prices.

Information on some prices other than apples is to hand, and this may be of interest. From the Montreal Gazette of January 2nd, 1930, in the column devoted to the passing years, we find the following from the happenings of twenty-five years ago—

25 years ago.		*Jan. 1, 1930*	
Turkeys	14 to 16¢ per lb.	Selected turkeys	36 to 45¢ per lb.
		A's	33 — 42 " "
Chickens	8½ — 11 " "	Selected chickens	30 — 36 " "
Ducks	10 — 12 " "	A's	38 — 34 " "
Geese	10 — 12 " "	Milk fed "	34 — 40 " "
	Eggs		
Fresh eggs	23 — 23½ " doz.	Fresh specials	72 " doz.
		" extras	70 " "
Storage "	16½ — 17½ " "	" firsts	60 " "
		" pullet extras	55 " "
Limed "	19 " "	Storage extras	50 " "
		" firsts	47 " "
		" seconds	44 " "

We are fully aware of the fact that the price level is vastly different from that of twenty-five years since. The general price level is, according to the Dominion Bureau of Statistics, one and a half times higher than in 1905, while the prices quoted here are slightly more than double. That, however, is not the chief purpose of this comparison. It is apparent that if you compare the lowest price of the present market with the prices of a quarter of a century ago, there is not a very great difference. *The gains are more noticeable in the higher grades.*

There are two ways of making money in farming—one, the mass production of a staple product, and the other the providing of a superior article for a special price.

We are not particularly well suited to secure the advantages of the first method. The topography of a great part of the province which is now farmed makes this impossible. Many of our farms, on acount of the nature of the country, are not adapted to the organization of large scale production which is necessary to secure a profit from some lines of farm production. Located near the centre of population—a condition which promises not only to continue but to improve in this respect—the better method of capitalizing our advantages would appear to be the second method, namely, the providing of a quality product for a special price.

In these days, when it is becoming quite universal to dump goods at a low price in distant markets while levying higher tribute locally, this is important.

How have special prices been obtained for superior products? By rigorous grading. It is just as important to make certain that consumers do not secure an inferior product as to see that they secure a superior article—if you wish to increase consumption. There are other examples besides poultry and eggs which show how a special product may secure a special price. It is claimed that the difference between the cost of production of 'certified milk' and 'A grade milk' is very slight, yet certified milk commands a much higher price. In this case a guarantee or a trade name commands a price. This is the trend in many lines. The grading of beef is now being inaugurated. It is to be hoped that this works an improvement in the quality of the product. At present we order beef with hope and often consume it with despair. What an increase in consumption exists potentially if and when an order for beef may be placed with confidence !

At a time when prices are unsatisfactory, it is frequently pointed out that superior quality products are not suffering. One might easily convince oneself that there is little wrong with the price of apples if we confined our attention to MacIntosh

No. 1's. Superior quality is usually greatly emphasized when prices are low. This, however, does not always turn the trick. By a peculiar freak of weather, one might almost say a peculiar freak of fortune, the wheat growers of western Canada have accomplished this very thing so frequently recommended. In 1929 they garnered a crop that was a record breaker in regard to quality. And yet their problems are not entirely solved, as we hear that the wheat is of such superior quality and therefore so valuable that few countries appear disposed to purchase it at what is considered a satisfactory price. In any line of farm products, however, it is to be expected that culls will come. It is necessary that these culls should be salvaged without destroying the demand for better stuff. It is more important that culls should not be allowed to masquerade in the place of better goods.

The growers of this district are fortunate in the varieties grown—much more fortunate in this respect than many other localities. The advantage of a potential market has also been noted. To these advantages must also be added more careful grading and the more satisfactory disposition of culls if you are going to reap the advantages which your situation warrants.

Putting the Apple on its Feet

By Prof. T. G. Bunting, Dept. of Hort., Macdonald College.

WITH the arrival of March and the lengthening of the days, one should begin to think of and map out the plans that are to be put into effect if the on-coming season is to give promise of our best hopes and aspirations for the future. Considering specifically for a moment the horticultural situation, not alone in Quebec, but in all of Canada, as it exists today, there is much to be thankful for. Yet an analysis of the situation from the standpoint of, first, the fruit and vegetable production returns in Canada, second, our exports of these home grown products, and third, the imports of those products that are directly competing with our own (to say nothing of the very large and rapidly increasing importations of many kinds of fruits and vegetables which cannot be produced here, or only during our normal growing season, but which directly supply a large quantity of the produce that goes into our daily diet) reveals a situation which, if not alarming, leads one to believe that the hopes and expectations have been far from fulfilled.

A few weeks ago, in mid-February, I visited several dozen or more produce stores in Montreal, and my attention was attracted to the very large quantities of oranges and grapefruits on display. This fruit all appeared to be very fine, carefully graded and attractively displayed; but where were the apples? Apples were available; but unfortunately most of them were not conspicuously displayed, probably because the appearance and quality were none too inviting. At that time over 500,000 barrels of Nova Scotia apples and some 200,000 barrels from other provinces were being held in Canadian storage, while Government reports showed the weekly arrival of scores of carloads of tropical fruits. For the seven weeks' period ending February 14th, 340 carloads of tropical fruits arrived in Montreal and 346 carloads in Toronto. The last issue of the "Canadian Fruit and Vegetable Market Bulletin," dated February 14th, stated under Montreal, in referring to the apple market, that "supplies were heavy, demand slow, market dull." During the previous week, 70 carloads of tropical fruits and 14 carloads of other fruits arrived; yet no mention of the prices or the movements of these was made because they were moving freely and selling at high prices.

During this season, while over 725,000 barrels of Canadian apples were waiting for an outlet, one of the leading chain store groups, with hundreds of attractive retail stores scattered wide and far, was extensively advertising its products, including mention in prominent space of oranges and grapefruit and other imported fresh fruits of foreign countries as well as of canned and preserved fruits. Down at the lower corner of the advertisement in smaller type was the statement "Apples—Stark, cooking, 25¢ per six qt. basket" —the only reference to Canadian fruits with one exception, namely a brand of canned fruit.

Margaret Currie's column in one of Montreal's largest daily newspapers is usually devoted to "sob stuff, matrimonial advice, love, sickness, etc.," but recently on two occasions all this was dropped and the two headings were "Citrus Fruits" and "Orange Recipes", under which there were interesting descriptions of what health authorities had to say about them and recipes concerning these fruits. I wonder if this information, good and valuable as it may have been, was not inspired by interested parties?

The increase in value of the orange imports into Canada has been over 39% during the four year period 1925 to 1928, or nearly 10% per year. This import value of $9,940,781 for the year 1928 represents only about 60% of the value when passed on to the consumer. The "Canada Year Book", 1929, gives a statement of the estimated value of the commercial apple crop in Canada for the period 1923 to 1927, showing a decrease from 1923 of $20,920,593 to $10,411,035 in 1927, or a total of $15,358,325 for the five year period.

The reader may ask, "What has this to do with the Canadian fruit grower or the consumer?" I shall answer this as follows :

1. Even with an increasing population in Canada, the fruit growers are not holding their own in production. The only fruit that has shown any notable increase in acreage and production is the grape, which is confined very largely to the Niagara District of Ontario, and the reason for *this* increase is bound up with the prohibitionary laws and the demands for wines.

2. There is a greatly increased importation, and consequently consumption, of oranges, grapefruits, bananas and even other fruits.

3. In fresh fruits only, Canada's imports, including a yearly average of nearly 200,000 barrels of apples, have grown steadily from a value of $17,355,179 in 1923 to $24,859,503 in 1928, an increase of 44% in six years.

4. The per capita consumption of foods cannot greatly increase. There may be some elasticity in the human diet for proteins, carbohydrates, fats and vitamins. The only direct outlet for increased consumption will, then, be the export markets and an increasing population. Canada's export market for apples has fallen yearly from 1,653,206 barrels valued at $7,271,683 in 1924, to 934,389 barrels valued at $4,243,786 in 1928, a decrease of nearly 45% in quantity and 42% in value, and in spite of an increasing and prosperous population her fruit production is declining.

5. I might also venture to add that what appears to be a strong foreward movement in the importation of fruit into Canada is more than offset by the falling off of the fruit production in Canada, and that Canadians are consuming a higher percentage, and much greater variety, of fruits in their diets than ever before.

The imported fruit comes in under trade names, is carefully graded and packed in medium to small-sized packages. Much of it is wrapped and, with attractive packages, the fruit, which is usually of the highest quality, is offered to the public in such a manner that once the customer tries some he becomes a regular consumer of the imported fruit.

Now I may be asked as to the quality, grades, packages and varieties of Canadian fruits, which do not seem to be quite holding their own on our markets, and about which we hear many laments from the producers as to unsatisfactory marketing conditions and poor returns. There are excellent grading laws and also a large force of Dominion and provincial inspectors of various kinds, and fruit growers used to pride themselves on Canadian fruits; yet there seems much that requires to be, and should be, done if Canadian fruit growing and marketing is to be put on a basis commensurate with its importance, so that the Canadian consumer will know that the Canadian fruit is as good in respect to varieties, quality, grading and marketing as the best of the imported fruits.

In summarizing the above brief report concerning the situation of fruit growing in Canada, the necessity of improving conditions in the following ways is suggested.

1. The elimination of many varieties now found on the markets, including the poor-quality, low-grade and unproductive varieties.

2. The general adoption of better methods in the production of good quality varieties when established on land suitable and soil favorable for their culture.

3. The extension of plantings, of a few of the best and highest quality varieties, sufficient to cover the respective seasons of these fruits.

4. The adoption of better and more thorough methods of orchard practice (including pruning, thinning, spraying, grading, packing) and in handling and marketing the fruit.

5. The inauguration of a national and consistent policy of advertising Canadian products, with the growers providing a fair share of the cost of such a campaign.

The solution of the problem imported versus home grown fruits lies not in eliminating the imported fruits—for most of it is fine and of excellent quality and well put up—but rather the application and adoption of the best known and most approved methods to fruit production and marketing in Canada so that this industry, which has not held its own during recent years, will again reach the stage of a high class and profitable industry with little fear from imported fruits even under no tariff or a very low one.

The Dignity of Agriculture

W. C. Hopper

IN peace as well as in war the farmer is vitally essential. In the world war, as in the countless struggles which preceded it, farms and fields, flocks and herds, and not men and rifles, ultimately determined the issues. In the growth of great cities and in the development of industry the leaders have been largely recruited from the soil rather than from sidewalks.

The great poets, writers and thinkers were products of the land. As home builders, church builders, nation builders, the farmers as a class have been supreme.

A farmer must have brawn to perform the strenuous work—farming is essentially a man's job. A farmer must have brains to plan and manage his capital and equipment and to market his finished product—the farmer is truly a business man.

The farmer, too, is a scientist, for his knowledge of soils, of crops and of feeding animals has, to a large extent, been gained by systematic observation, experiment and reasoning.

The farmer is also an artist. No painter more truly sees in his mind's eye his finished picture than does the farmer, visualizing a waving field of golden grain long before the seed is sown.

Springing from a race of rugged pioneers, with a life partner with untarnished nature, bowing the knee to none save One, giving to sons and daughters a rounded physical, mental and moral development, working under the sun and clouds within the sound of the birds and the music of the trees, the Canadian farmer is a fundamental in the life of the nation, producing the life-giving bread and butter. Surely no occupation could be nobler, more worth while than farming; surely there is a dignity about agriculture which raises it above all other callings in spite of the fact that the hours are sometimes long, the work hard and the pay oftimes poor.

Nineteen hundred years ago Horace said, "Happy the man in busy schemes unskilled, who, living simply like our sires of old, tills the few acres which his father tilled, vexed by no thought of usury or gold."

Sometimes we hear of the failures in farming, but the failures in business life are four times as many in proportion to the numbers engaged.

To be an accomplished musician, a great novelist, a proficient teacher, a successful business man or a master farmer requires hard work. Anyone who rides through life without work with mind or hands is a social parasite, for he is a burden on the backs of struggling souls. There is no disgrace about hard work; it is a badge of honor and good sense.

A farmer deals with intensely interesting things —animals, living plants, the soil. He is not confined to crowded noisy offices, sunless factories, hot, dusty streets or stuffy houses. He works in the open, feels the spring of the soil, smells the subtle tonic odors of freshly-turned sod and of new-mown hay, tastes the products of his soil, fresh, crisp and sweet. Cool, fragrant, stainless breezes float through his home; no artificial lights hide the luminous silver of the moonlight; no cold, soulless buildings obscure the glories of the sun and sky. In the quiet and peace of the country fashioned by the Creator and not by man, in the close contact with nature, is the place where great souls are born, where great masterpieces are written and painted, where, if only the farmers' returns were a little larger, life would be almost ideal.

A farmer in Canada is engaged not only in the most vital industry, but he is a worker in the largest by far of the industries of the Dominion. No other Canadian enterprise compares with agriculture in the number of men employed, in the capital invested or in the annual revenue which is returned to the national treasury. It should be a source of pride to every farmer to feel that he is engaged in the biggest and noblest business on earth.

When we look at the rich architecture of our Dominion Parliament buildings, at the matchless beauty of a Turner sunset or at such scientific achievements as the telephone and radio, we are convinced that the master architects, painters and scientists did not measure their lives by the dollar yardstick, but it was an inward, irresistable urge to make a real and lasting contribution to the world that prompted their endeavors. Far nobler desires than simply making money inspired their efforts. It must be a source of great satisfaction and peace to know, when the evening of life approaches, that one has done his best, that service to humanity has been put ahead of personal gain. Most of us with our comparatively few talents, may savour this satisfaction and joy of achievement in company with the great men of the world, if we strive to emulate their example in our smaller sphere. It is the kind of inspiration that puts achievement first and it is those noble desires which puts service above money-gathering which make Master Farmers, and which gives genuine dignity to agriculture.

Recent Pollination Studies in Quebec

Charles A. Eaves, Central Experimental Farm, Ottawa.

THE strategic position which Quebec holds as regards supplying the home markets of the Dominion with fruit has led to a great expansion of the fruit growing areas. More farmers are specializing in orcharding each year, particularly apple production, and thus the time has come for thorough investigations into all branches of the industry in order that the Quebec apple may meet all competition.

One phase of this development was begun in the spring of 1929, namely, pollination experiments, through the joint co-operation of the Federal and Provincial Divisions of Horticulture, sanctioned by the respective Departments of Agriculture. The work will be carried on over a five-year period so as to obtain average results, and for this purpose a laboratory was built by the Provincial government in the orchard belonging to Mr. A. Buzzell, Abbotsford; in it was carried out such work as stripping the pollen from the male parent, making germination tests of pollen prior to application and all work in connection with records of results. Also it was felt that all operations should be centralized as much as possible so that a maximum amount of cross-pollination could be done in the all-too-brief blossoming period.

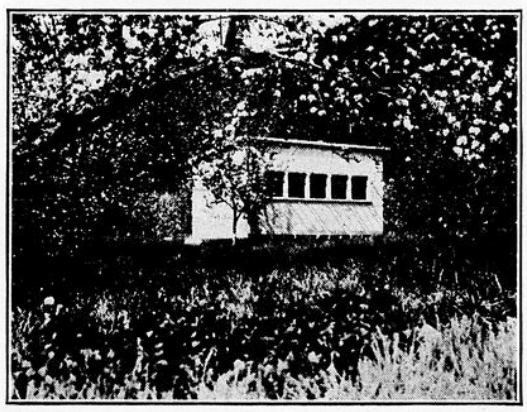
Pollination Methods :

The methods adopted were similar to those used by most investigators, although a short resumé may be of interest.

Blossom was collected from the desired varieties which were to be used as male parents, before the petals were open, brought into the laboratory and the pollen stripped from the stamens. Immature pollen was then ripened in a temperature range of 80° to 85° F., and tested at intervals. This was done by putting the pollen grains in a culture medium of 10% sugar solution and 1% gelatin. They were then examined under the microscope where, if the pollen is viable, the so-called pollen tubes may be seen which fertilize the ovules of the female parent. In the meantime the clusters of the female parent were covered with bags, preventing access of foreign pollen to the pistil. To pollinate, the bags were removed and the pollen smeared over the pistil, to which it sticks if the latter is receptive, after which the bags were replaced and a tag attached bearing the date and name of varieties concerned and number of flowers in the cluster.

Blooming Dates :

In view of the importance of knowing the blooming dates of varieties, growers in Abbotsford, Rougemont, St. Hilaire, Chateauguay and Hemmingford very kindly consented to furnish us with this information and also to report on the weather in the respective localities; in addition we distributed a number of thermographs and obtained thereby temperature variations in each district during blossom time. By correlating this data the progress of the projects under way will be facilitated, besides being invaluable to the grower.



Laboratory for pollination studies built by the Provincial Dept. of Agric., in orchard of A. Buzzell, Abbotsford.

At Abbotsford, in Mr. Buzzell's orchard, the Fameuse bloom was open two days before all other varieties. On May 24th a few central blooms were open, pollen liberated early on the 26th, but it was not until the 28th full bloom occurred. This progress was very slow in comparison with other varieties. Wealthy commenced to bloom on the 26th, 75% of the laterals were open on the 28th and full bloom was recorded on the 29th. Duchess central bloom began to open on the 25th, 75% of the laterals open on the 26th and almost full bloom on the 28th. Russet had a few central bloom open on the 26th and full bloom on the 28th. McIntosh was considerably later than the aforementioned varieties, only commencing to bloom on the 27th, but it developed very rapidly to full bloom on May 29th.

Chateauguay showed slightly different results, the bloom opening in the following order: Duchess, Melba, Fameuse, Wealthy, McIntosh, Joyce, Lobo and Pedro commencing on the 25th and continuing until the 31st. Mt. Johnson recorded slower progress, although a day earlier than other sections in some varieties.

Rougemont gave the following varieties in order of blooming: Fameuse, Duchess, Golden Russet, Wealthy, Melba, McIntosh, Transparent and Lobo. All came into bloom within a period of three days; the first five named bloomed almost simultaneously. We received much the same results from St. Hilaire and Hemmingford.

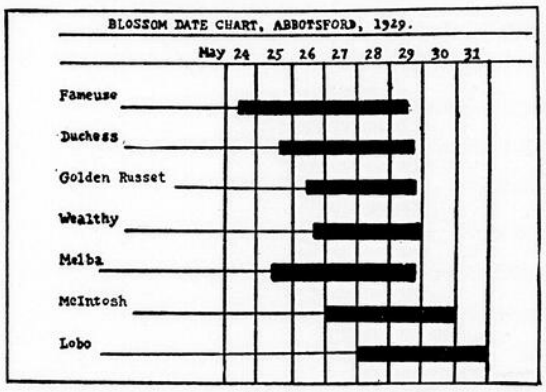


Fig. 1

Diagram I gives the length of the blooming periods of each of the standard varieties under observation. From this it will be noticed that all of them overlap sufficiently to act as cross pollinators, except Lobo, which could only be used as a pollinator for McIntosh and Wealthy. It should be mentioned that there were only two trees of the Lobo variety to work with, and the results are not, therefore, conclusive. In the Buzzell orchard, Fameuse had some central bloom open two days before the pollen of any other varieties was liberated, resulting in a loss on the crop, and this would indicate that this variety is too early to be a really effective pollinator for McIntosh.

The blooming period was exceptionally short, due chiefly to the remarkably high temperature range. Minimum temperature was recorded on the 24th with 44° F., in the Buzzell orchard. From that date it rose and between the 28th and 31st no recording was made below 70° F., a maximum of 92° being reached. Notwithstanding the short blooming period, brought about by high temperatures, the crop was relatively good.

Productivity of Pollen :

With respect to the productivity of pollen, Duchess proved to be excellent, liberating dense clouds of good pollen. Wealthy, Melba and Golden Russet were quite good, but Fameuse and McIntosh were relatively poor.

Pollination Studies :

(1) Compatibility tests, (2) Length of receptivity, (3) Pollen tube growth. I shall only discuss the first, namely, compatibility tests, as the results of the other projects have no significance as yet.

In the past, some growers have made the mistake of planting solid blocks of one variety which was more or less self-sterile; in other words the pollen of the flower failed to fertilize the ovules of the same flower or flowers of the same variety, with subsequent failure in setting of fruit. The orchardist requires at least a commercial set, i. e., 20-25 apples on a limb 1"-1¼" diameter. Moreover it is necessary to plant standard commercial varieties which will produce sufficient pollen with high germinability and whose blooming dates coincide with one another. The compatibility tests have been projectel with a view to solving these questions. The varieties used for this purpose were Fameuse, McIntosh, Melba, Duchess, Wealthy, Golden Russet and both Lobo and Astrachan as male parents only. The pollen of each variety was tested in the laboratory for germinability before being used for pollination. Only the best was retained and applied in the manner previously described. As soon as the danger of counter pollination was over, the bags were torn open. Immediately following the "June drop" of little apples (caused primarily by improper fertilization), the record of set was noted, and finally a count just previous to harvesting.

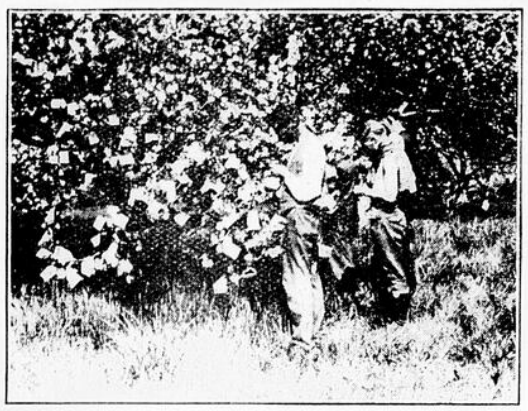
Referring to Diagram 2, Fameuse showed very good results, although the harvest count suffered owing to a severe windstorm which occurred at that time. McIntosh exhibits a fairly good set with Fameuse, Lobo and Melba as males, but Duchess, Wealthy and Golden Russet were poor. The pollen used, however, was not tested (we being pressed for time), and the open pollination count was lower than any other. Melba has promise both as a male and female parent. Duchess proved to be very good with all varieties. Wealthy secured a fairly good set, with the exception of Golden Russet; similarly Golden Russet, excepting Fameuse as male parent.

It is clearly seen, therefore, that incompatibility is apparently non-existant, although it must be borne in mind that there is a wide variation in the degree of compatibility. The percentage set was slightly higher with artificially pollinated clusters than with open pollination.

FEMALE

MALE / Varieties	Fameuse % Set	Fameuse % Harvest	McIntosh % Set	McIntosh % Harvest	Melba % Set	Melba % Harvest	Duchess % Set	Duchess % Harvest	Wealthy % Set	Wealthy % Harvest	Russet % Set	Russet % Harvest
Duchess	27.7	17.3	4.0	2.6	13.5	9.3	7.5	0	13.8	4.6	18.2	6.6
Wealthy	10.7	5.9	6.4	4.2	20.0	11.4	11.6	6.2	8.0	3.2	17.0	3.4
Russet	16.6	7.8	4.3	3.4	12.1	7.8	20.8	13.3	4.1	1.9	6.9	2.4
Fameuse	0.0	0.0	10.4	7.1	12.4	7.8	13.7	9.4	14.9	9.45	14.1	1.9
McIntosh	18.1	5.7	3.8	1.6	9.8	6.2	31.2	22.5	13.0	2.8	13.2	5.4
Melba	21.5	8.2	13.0	2.6								
Lobo	-	-	11.5	7.0	-	-	-	-	15.8	7.0	-	-
Astrachan	-	-	-	-	24.4	19.5	-	-	-	-	-	-
Selfed	0.0	0.0	-	-	3.2	0.0	0.4	0.0	-	-	-	-
Open Pollination	19.6	10.7	9.0	5.4	17.1	9.1	16.1	6.7	13.7	6.2	13.0	5.4
Bags Unopened	0.0	0.0	0.0	0.0	-	-	1.1	0.0	0.0	0.0	0.0	0.0

Fig. 2



At work.

Self Sterility :

The study of self sterility was taken up in conjunction with the tests for compatibility, in order to have a basis for comparison. Three methods were used for selfing each variety.

(1) Leaving bags unopened. It was thought that the wind by shaking the bag would cause the transference of pollen in the cluster; only Duchess, however, showed any signs of self-fertility, with only a slight set.

(2) Transferring pollen from the stamens to the pistil of the same flower with the finger. Negative results were obtained in all cases. Objections to this method lie in the fact that the pistil reaches the receptive stage before pollen is liberated.

(3) Pollinating with pollen ripened in the laboratory. This way of selfing demonstrated that none of the varieties, save Fameuse, was wholly self-sterile. McIntosh had a small set, while Duchess, Wealthy and Golden Russet were fairly good. Nevertheless, it will be remarked that the percentage harvested was considerably lower than that of set, and no variety shows a percentage approaching that necessary for a commercial crop.

Taking into account that this extension work was only inaugurated last summer and the brevity of the blossoming period, the amount of data and subsidiary information accumulated has been very encouraging.

N. B. It must be fully understood that whatever the information we have obtained during the past year, it is purely indicative and will assume no definite proportions until it is felt that all phenomenal results have been accounted for over a period of years.

Agreement between the Federal and Provincial Departments of Agriculture re Tuberculination Tests

IN accordance with the Honourable Mr. Perron's programme, an agreement has been reached so that the Federal Department of Agriculture, starting January 1st 1930, will exclusively make all tuberculin tests.

In all the provinces of the Dominion, except one, the official tuberculination tests are made according to the Federal rules and laws, by the Veterinarians of the Federal Department of Agriculture.

Up to date the farmers of the Province of Quebec have not taken full advantage of the offers of the Federal authorities; it is for this reason that the Quebec Department of Agriculture, during the past few years, had placed at their disposal a certain number of veterinarians, in order to make free of charge the required tests. Unfortunatly the owners of herds have not always followed the conditions, therefore this system of tests has not always given the expected results. To improve these conditions, we are forced to adopt the rules of the Federal Department of Agriculture, for the provincial authorities to organize in our province the tests system which prevails in all the other provinces, and by which system the Federal Government is willing to help our cattle breeders.

The Honourable Mr. Perron has therefore decided that, starting January 1st, 1930, his Department will stop making tuberculination tests. The Honourable Minister of Agriculture at Ottawa has been advised of this decision, in order that necessary measures will be taken to answer all demands from the Province of Quebec.

As already stated, on January 1st, 1930, all the owners of herds outside the counties included in 'restricted areas', will have to address their requests to Ottawa; they will be in a position to have their herds accredited, if they have the required number of purebreds, or to place their grades under the supervision of the Federal Veterinarians, provided that a purebred bull is at the head of each herd.

All the counties south-west of St. Francis river, 16 counties in all or parts of counties, also the Island of Montreal, Jesus Island, the Vaudreuil and Soulanges counties are already under the supervision of the Federal authorities. These counties have been established as accredited zones; all herds, without exception have been tested or will be in the near future. The whole district is quarantined; any animal which enters into the district must first be tested. This territory comprises about 25% of all the cattle in the Province.

The Montreal Poultry Exhibition

By W. A. Maw, Asst. Prof. of Poultry, Macdonald College.

THE poultry exhibition staged by the Provincial Poultry Association in the Montreal Stadium, February third to eighth, was an unprecedented success. The results have assured the poultry public, as well as the city and provincial authorities, that Montreal is a logical centre in which to hold a large poultry show. The success of the show was largely due to the untiring efforts and efficiency of the exhibition manager, A. A. Lapointe, and the secretary, E. T. Jeffrey.

The exhibition committee were as follows : President—Georges Bouchard; Vice-president and Manager—A. A. Lapointe; Secretary—E. T. Jeffrey; Directors—W. A. Maw, Bruno Wilson, Albert Chevalier, Jos. D. Barbeau, J. D. Lang; Superintendent of Show—Lucien Crevier.

The exhibition room of the second floor of the Stadium allowed for excellent staging of the coops, resulting in a well lighted room with ample space for single cooping in practically all classes.

Over 2,600 individual fowl, pigeons and rabbits were on exhibition. The condition of the stock in general was considered excellent and the quality good. The classes of the more popular breeds such as the Barred Plymouth Rocks, Single Comb Rhode Island Reds and Single comb White Leghorns were very gratifying and were well filled with high quality stock. Approximately 10 percent of the entire entries were Barred Plymouth Rocks and Rhode Island Reds. The Barred Rock cockerel class numbered 40 individuals. Turkeys, ducks, and geese, were also present in good numbers, while the pigeon classes were well filled with quality stock. The rabbit classes commanded much attention, as the large classes of excellent specimens of the more popular varieties showed quite strikingly the growing interest taken in fur farming and meat production. An excellent commercial exhibit of rabbit fur and meat was put on by the Quebec Association of Rabbit Breeders.

The commercial exhibits representing the manufacturers of poultry feeds, equipment, and supplies, as well as that of A. Sprave, commercial poultryman, were an outstanding feature in the show. All exhibits were neatly displayed.

An outstanding feature of the publicity campaign for the show was the broadcasting of talks by members of the exhibition committee, in both French and English, weekly for four weeks previous to the show. These talks were made possible by the co-operation of CKAC La Presse, and CFCF Marconi at Montreal.

An official opening of the show took place on Tuesday, February 4, at which representatives of the city of Montreal and the province took part.

An official closing took place on Saturday night and was well attended by the public. Georges Bouchard, M. P., president of the exhibition, and A. A. Lapointe, president of the Quebec Provincial Poultry Association, were joint chairman at the closing ceremonies, and with them were Hon. Mr. Perron, Hon. Henry Myles, M.L.C., Ald. Tancrede Fortin representing His Worship the Mayor of Montreal, Dr. Hermas Deslauriers, M. P. for St. Mary Division, Dr. A. T. Charron, assistant deputy minister of agriculture, Ottawa; Ald. Jos. Mercure, Ald. Dr. Damase Genereux, Notary J. C. Hebert, Montmagny, Albert Chevalier, president of the Rabbit Breeders' Association of the Province of Quebec; S. J. Chagnon, of the Department of Agriculture, E. T. Jeffrey, secretary of the association, Prof. W. A. Maw, Macdonald College, and C. J. Wright, Sherbrooke.

After offering congratulations to producers of poultry products and the representatives of the different Governments present on the platform, Mr. Bouchard declared that the exhibition had been successful to the point far beyond what the promoters anticipated, "With this experience in our mind," he said, "we look forward to a much larger one next year. Montreal has responded splendidly."

Mr. A. A. Lapointe, in speaking of the organization of the exhibition, said, "This show was made possible, first, by the co-operation of the poultry breeders, the provincial and federal Departments of Agriculture, second, with the help of the population of Montreal which took such a keen interest in the enterprise.

"An exhibition of this kind must give particular consideration to breeds of general and commercial utility, but a thought must also be given to the fanciers, whose efforts are most useful in the work of improvement."

Turning to the Hon. J. L. Perron, the president-elect said that it was not the proper time to place requests of the association before him, but the officers will do so in due course. "As far as we are concerned," Mr. Lapointe said, "we have made a great effort, devoting our time to what everybody agrees is a successful exhibition. Congratulations are due to the breeders, to the officers of the federal and provincial Departments of Agriculture, as well as to the officers of the Association. This is a permanent institution, and we expect to do much better next year."

Hon. J. L. Perron, Minister of Agriculture, who visited the collection of exhibits, was emphatic in his praise for the promoters, as well as the owners of the birds. "I have visited similar exhibitors in New York, Philadelphia and other large cities, but I have not seen a larger number of finer exhibits," he declared.

"You made no mistake in choosing Montreal for this event. The Metropolis is the greatest market for eggs and poultry in Canada. In acquainting the consumers with your goods, you induce them to buy. After all, why should we have to go outside the boundaries of the province for our supplies ? Why not produce all poultry products at home ? This 'Quebec poultry awakening' is a good omen, and I hope the day is not far away when you will be able to supply the market demand, and even have a surplus for export," the Minister said.

"Mention has been made of my programme of co-operation. As a matter of fact, the farmer must get better acquainted with co-operative methods and must also obtain the support and good will of all the members of his family to achieve real success.

"The officials of the Department of Agriculture are at your entire disposal to get the best possible results, the highest quality and the greatest possible returns. Poultry breeders, you ask our help, but in return help us with all your energy to establish co-operation."

To Mr. Albert Chevalier, president of the Rabbit Breeders, Mr. Perron offered words of congratulation, because in a few years they had demonstrated that this branch of the organization could be successful.

Dr. A. T. Charron, representing the Federal Minister of Agriculture, declared the exhibition a wonderful one and assured the promoters that they could always turn to Ottawa for encouragement. Two federal acts had been passed to help those engaged in the poultry industry—grading and inspection of eggs and fowls to bring the producers the highest possible return on their goods.

Hon. Henry Myles, past president of the Poultry Association, was well pleased with the show and predicted that next year two floors of the Stadium would be necessary to accommodate the many more exhibits from all over the province and the outside.

Mr. Bouchard made a direct appeal to all those present, and the much larger audience his words would reach through the press, to take an interest in poultry raising. He asked the residents of the cities to encourage the farmers so that they could make a good living out of farm products.

Forty cups were distributed to the winners, the majority of whom were Quebec breeders. It is hoped that the success of this show will prove valuable in convincing the agricultural public, as well as the civic authorities of Montreal, that a successful agricultural exhibition can be and should be held in Montreal.

The Little Village and Its Environs

(By Bertha Weston Price)

The Town and City beckon us,—
We travel far, we roam at will;
But something always calls us back
To the Little Village 'neath the hill.

THEY tell us that the city is calling our youth, that the urban and rural populations are "out of balance" so to speak; and we know that both are true. Yet if we follow closely the trend of the times, we will find evidence of a growing desire for country life. City people long for the country; there is undeniable proof of that, as there is that youth ambitiously longs for town or city.

We see the city stretching out its arms to the country, absorbing it, and we also see the country absorbing the city; electric power, radio, telephone, social, religious and educational societies—yes, even unto 'bridge"—belong alike to town and country. Commuting is becoming more common every year because people want to live in the country, where they may have comfort, seclusion, freedom, but fate decrees that they earn their wages in the city. Time and money forbid many the privilege of commuting daily, but many country homes are brightened by sons and daughters returning to the "sheltering roof" for week-ends, while these same home-comers are again buoyed up for the next week's activities.

There's a charm about a country home, whether it be on farm or in village, that cannot be found in a city residence. That "something" calls us back, brings rest to tired nerves and aching hearts—yes, we may well be thankful for our country homes. May they exist forever !

"How do you manage to endure life when you are snowed up?" asked a visitor from the South of a village resident. It is a wonder she didn't ask where they kept their igloos during the summer !

In contrast to this remark is a bit of conversation overheard at a country railway station. Two 'teen age girls were standing on the platform from which the city girl would take train home after a happy winter holiday with her chum. The country girl said, a note of apology in her voice: "It's awfully dull here". The city girl interrupted : "Dull ! Well, its much duller in Montreal." Imagine that !

The secret was this: The city girl loved outdoor life; the white snow, the blazing log in the fireplace, the country atmosphere. There was amusement in the city, but what she wanted was that "something" which we can always find—if we search for it.

There is a rush and turmoil in the city that belongs there, but Longfellow has said "even cities have graves", and that may apply to loneliness as well as to burial places. In a bit of verse entitled "Prayer of a Lonely Woman in the City" we find: 'All day, O God, I have looked at the multitude and no eye met mine in understanding... I am hungry for friendship, starved for human cheer'... and, further on—'Keep me warm and human...' which applies to each and all of us.

There is cheer in the country, warmth, colour, beauty; the birds and trees and flowers teach us that. There are, too, the petty jealousies, narrow ideas, discouragements, here as well as there, but it is safe to say that there is no more sordidness per capita in the country than there is in town or city.

"Somethin' doin' ev'ry minute", was the reply of an aged man sitting by the stove in the village store when asked "How's times?" If the visitor from the South could have heard that! Farm and village life are much the same, and today both are closely linked with the city. Daily farm work covers longer hours than factory work, but in some seasons there are off-hours on the farm that a factory worker never has—if he loafs he loses his wage. An energetic and ambitious farmer finds "somethin' doin' ev'ry minute"; his is not routine work with machinery—it is like housework, a dozen jobs in one.

Rural mail drivers carry on farm work; farmers haul lumber, pulp and cordwood, and often go

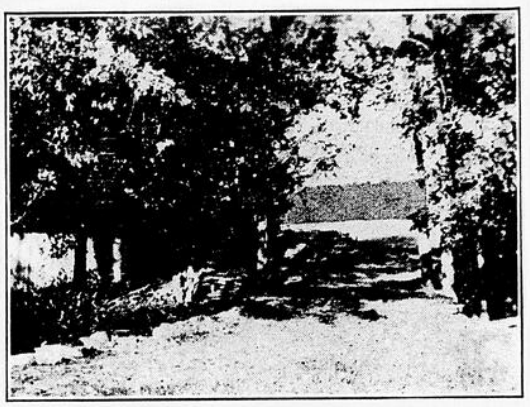
MASSAWIPPI VIEWS : 1. Mr. Talcott St. Dizier, of Massawippi, and his horse, Chester Axworthy, of whom he is justly proud. At a recent Old Glory sale in New York 27 half-brothers and half-sisters of this horse (sired by Guy Axworthy) fetched an average price of $1,725 each. 2. "The little village 'neath the hill". 3. The Union Meeting House, Massawippi Village, built in 1860. Service have been held in this church by Baptists (Free Will), Anglicans, Methodists, Universalists, Presbyterians, in the old days each minister having a certain Sunday. 4. One of the few roadside watering places seen today. 5. We "roll our own". 6. "Century cottage" is as famous for its fruit gardens, strawberries, raspberries, currants, etc., as for its age. 7. The pigeon's breakfast.

out on day's labour. One farmer near the Little Village has three hundred cords of pulpwood to haul to the railway station before winter roads break up. The man who rolls the roads is a farmer; so is the man who goes to the "old meeting-house" to build fires for the Sunday service. There is the woodlot, the sugar place, road work, then the rush of spring planting, haying, harvesting, and getting ready for winter—surely something doing !

In many country homes on farm or in village, work is increased largely during summer and autumn through the "tourist industry" for which our country is becoming noted. Larger gardens are planted, rooms are prepared, and enticing signs are put out—tourists watch eagerly for them—and the family exchequer is increased through handiwork done in the home. Rugs, knitting, embroidery, jams and jellies—how much these are prized by city purchasers; again that "something" that makes these purchases different from any others.

There is the village sawmill where lumber, drawn from many outlying districts, is prepared for building purposes. Comes a sunny day in spring when village folk pay a visit to the mill and bask "en masse" on the logs. The smell of spruce and pine and cedar fills the air and makes one wish it were nearer dinner-time. The buzz of the saw seems to say 'somethin' doin'—'

Across the way we see "Chester Axworthy' having his morning airing. "Aint he proud?" some



A glimpse of the Maple Sugar Place.

one asks. Indeed he is, and he may be so, for he is Guy Axworthy's son, and his record of racing days was 2.16¼ to trot.

As for recreation, education, and so forth, rural communities are awakening to the need of improvement and progress in rural life. The Farmers' Clubs, Women's Institutes, and social groups form an integral part of municipal activity. There are the same problems to be solved—health, social welfare, beautifying the place, and keeping pace with the times as to autos, radios, fashions, etc.

The Victory Bells at Ottawa tell us, in the country, when it is noon—as in the city. Operatic stars delight us; messages flash over telephone wires; and daily papers keep us in touch with the wide world. What is there to lose through living in the country ?

A word may be said for amateur plays and musical entertainments provided by talent in rural communities; they are, generally speaking, second to none; often there is more reality, more soul, put into such by country people, and today our magazines and newspapers have many pages that are written by country folk, who vie with their city brothers and sisters in their efforts to please the reading public in both town and country.

We hear a great deal about "central heat" in town. In the country each "lord of his castle" has to keep the home fires burning. Rural residents often "house up" for the colder months to simplify the heating problem. Front entrances are closed, and we "go 'round the side". There is a friendly intimacy in going to one's neighbour's kitchen door that warms the heart. A broom stands invitingly by the door—the kitchen floor is spotless—and when one enters! The inner man revels in savoury smells of home-baked breads, steaming vegetables, soups, doughnuts, pies—pies, were there ever such pies as are made in a country kitchen? These remembrances cling long after the visit is over. "There's something about a farm house kitchen,

Or a home in a village small—"
And may it live on forever !

Changing Conditions Bring New Requirements

Our "Future Farmers" Must be Trained to Enable Them to Meet New Problems

By L. H. Hamilton, M.S., Field Representative, Macdonald College.

ONE cannot spend much time in rural communities without becoming impressed with the changed and changing attitudes, with the new ideas and philosophies of rural people and the very evident pinch of hard times. This does not apply to any one section. It would seem to be present throughout Eastern Canada and, if one might judge from reports, throughout the Dominion. The ever-increasing surplus of land and the lowering of land values, the deterioration of farm buildings and equipment in many districts, the surplus production in many lines with its depressing effect on prices, and the great fight with Nature in carrying out any agriculture endeavor have brought about many definite changes in attitude and practice. These, along with an ever-increasing levy for taxation for schools, roads, etc., are, no doubt, in large measure responsible for such unrest as does exist, for the cityward movement of farm boys and for the growing divergence in standards of living and opportunity.

This applies not only to farmers but to all rural and urban people who have not benefited by the introduction into their midst of some power plant or chain store or manufacturing industry.

A great many people are busily engaged in the study of rural problems, in the formulating of schemes and plans designed to help the farming community, and there is little doubt that great good has resulted. It is, however, possible that such effort can be partially wasted unless other things and events coordinate to fulfill its purpose. At this season of the year when we are filled with new enthusiasm and somewhat inspired by the expressed confidence of our industrial and political leaders, it is perhaps well to define our case or at least analyze our position, so that we may go forward with greater and more complete confidence.

Every student of the times recognises that in the industrial evolution going on changes are taking place which vitally affect our agricultural life. The relative number of farms and farmers is decreasing. The size and efficiency of these farms are increasing: this, due in large measure to the introduction of machinery and scarcity of labor. The crops grown, the live stock kept and the practice followed have changed considerably.

It is not uncommon to call on farmers in our best dairy district of Quebec and find that only ten or fifteen acres of land are put into crop and this with the idea of renewing the pasture and providing a few oats for the horses during the busiest season. Even the long established practice of providing silage is being questioned and in some cases dispensed with.

In a few districts of fair proportions also, the general farm practice is being changed over to the production of fruit; and at greater distances from the markets other changes are in progress.

What will happen, what changes will take place and what can be done are questions of timely importance.

One of the results of the recent dispute over milk prices was a survey to determine the cost of production. The findings have not so far been published and when distributed will, no doubt, provide some food for thought. The actual cost will, in all probability, assume secondary importance to the system of cheapest production, the size of unit, the marketing costs and returns of these farms for labor and investment of capital. They will be disappointing to some but enlightening to others and, we hope, of sufficient importance to justify further research in other districts and with other types of farming.

The new policy of the Quebec Department of Agriculture to initiate a better marketing system of farm products and the plan of "Zoning" the province for the production of crops will be of inestimable value. It is time that wasteful effort be abolished and such changes put into effect as will provide opportunity for all. For too long a time people have been working against the elements trying to produce something not adapted to their soil, climate or other conditions. Under our new organization, they will be shown how to change their practice and where their effort should be expended. Not only have these people been producing in most cases at a loss but because of their organization and capital have in most cases been producing a product of such poor quality that they have caused a loss to those who were organized to produce profitably. It has always been the small surplus which causes stagnation and lowering of prices. Under the newer system farmers will have the opportunity to specialize and with some hope of fair returns.

One question which is always present with all classes of people is that of adjusting oneself to changed conditions. The farmer of to-day will not be the farmer of to-morrow. Those who by force of circumstance are obliged to change to a new system will require new training and new knowledge to meet their changed problems and enforced restrictions. Some few prospective farmers will have the means and opportunity of attending an agriculture college; the remainder will have to depend upon such reading as they are able to do and upon what they are told. The Canadian Society of Technical Agriculturalists have recognized the difficulty of getting new information into the hands of those in the field and have established a committee to provide suggestions along this line. Their report when it is presented will be of the greatest interest, but meanwhile it would seem some steps might be taken.

One suggestion which comes to mind is that of the correspondence course for farm boys. Whether we believe in the agriculture field or not, there can be no question of the value in other fields as judged by the number who have taken advantage of them.

Such a course would necessarily need to be elementary, but to any one who has surveyed the field, the need cannot be denied. As a result of a more or less thorough survey in this field during the past two years, it is possible to classify farm boys under four headings: First, those who have a fairly good primary education and who have the desire and means of attending school or college; second, those who have the necessary fundamental training but who because of the other members of their family or inclination or for any other reason are not interested in farming or attending college, and who because of lack of contact or further education or their situation are more or less obliged to remain at home; third, those who have the necessary fundamental schooling to attend college but who have not sufficient means to take a course of training away from home; and, fourth, those who have neither the necessary training to benefit by a college course nor the means to take it if they had.

From this classification and with our present organizations it would seem fairly easy to provide something of real value. Most farm boys have considerable time during the winter months to study and read, but, like most boys, they occupy themselves in other ways unless the necessary stimulus is provided. Much has been said about the good work done, and it has all been true; but there is more which could be done with quite as good results. We are still a long way behind our American friends in work of this kind.

It would seem that a course designed to teach such subjects as English grammar, composition, letter-writing, etc., elementary economics and arithmetic, with an agricultural background to include such subjects as affect dairy farming and fruit farming would seem to fit the needs of many. Not only would the student learn to write and do business properly, but he would be taught to think and would receive the latest and most reliable information in his chosen field. Such work could and should be done in co-operation with our agronomes. It would seem to fit in well with such short courses as they provide. It would be a valuable supplement in our boys and girls club work, and assist in further organization on any basis whatever. It would develop the boy and make for contentment and happiness.

There is no set formula which makes for success in any endeavor. We must first study, then study our opportunity. One of our great opportunities is the development of our "Future Farmers".

We are all blind until we see,
That in the human plan
Nothing is worth the making, if
It does not make the man.

Annual Flowers to Brighten the Home

By A. H. Walker, Instructor in Floriculture, Macdonald College.

WHILE Hardy Herbaceous Perennials should form the bases of all flower borders, nevertheless it is the experience of most people that unless one has an extensive collection the border lacks color at intervals during the season. This is where the Annual comes in useful, as it is a continuous bloomer.

This class of plants, therefore, should be incorporated in the hardy flower border to add to the color effect, and especially to take care of what would otherwise be a dull spot on account of some perennial having passed out of flower or of those which are naturally late in flowering.

As perennial borders are planted in an informal manner, the same system must be followed when introducing annuals, in order to preserve the natural effect. Set plants in irregular clumps of three, five or more, depending on the dimensions of the border, using one color in each clump. The type of annuals best adapted to combine with perennials should be more or less loose and airy in habit for the taller growers, and loose and spreading for the dwarf sorts.

The use of annuals need not necessarily be confined to acting as fillers in the perennial border. A very effective and attractive border of annuals may be obtained by means of patchwork planting. Divide the border into triangles, diamonds or other design, making each section large enough to give an effect, using one type of plant and one color only in each group.

For this style of planting, dwarf and semi-dwarf varieties are more suitable, for, while this is a modified form of formal planting, it is nevertheless desirous that each section should stand out clearly from its neighbours. In this style of planting, care should be taken to avoid using colors near each other which do not blend, as red and pink, purple and lavender. Other effects which may be created through the use of annuals is to use such dwarf plants as Sweet Alyssum Lobelia, Phlox Drummondi and Verbenas to form a foundation in which Gladioli in formal groups or single specimens at regular intervals may be planted.

Annual climbers should also have a place in every garden, particularly against the walls and pillars of a wooden or stuccoed house, along fences, outhouses, etc. These grow rapidly, attaining a length of 10 feet or more in the season.

Sweet peas should be included in every garden and need not necessarily be grown in rows, although this is the most practical method in growing for cut flowers. A more artistic system is to grow them in circular clumps, using one color only to each. Although this plant demands better growing conditions than can be obtained in the perennial border, where space is limited and decorative effect is of more importance, there is no reason why they should be excluded. Place clumps far enough apart and more or less toward the back of the border.

Having outlined briefly the uses to which the annual is so admirably adapted, a few hints on the methods in raising the plants is in order. There are a number of species such as Alyssum, Nasturtiums, Balsams, etc., which on account of their rapid growth and early flowering habit do equally well, and often much better, if sown direct to the open ground. There are also a number which are naturally late flowering, such as Late Asters, Zinnias and Cosmos; these are better raised where they are to flower. All annuals, as a matter of fact, can be raised in this way, but many of them take some time to come into flower so that part of their usefulness is lost; hence the necessity of taking other means in raising the plants. To those who are fortunate enough in having a small greenhouse, this work is simplified, as plants of a proper size can be obtained by sowing each at a proper date, which information is given at the close of this article.

Other means are as follows:—*Use of Hotbed.* While professional men use two sets of hotbeds, one in which to raise the seedlings and another in which to transplant seedlings, this entails too much work for the average farmer. The procedure in his case is to use one hotbed, sowing the seeds thinly in rows 4" apart. If seedlings are too thick, thin out to 2" or 3" apart according to size or density of foliage. Six weeks is sufficient time from sowing to planting season; therefore, the hotbed should be in shape for sowing around April 15th.

The procedure in making a hotbed is as follows:—Fresh stable manure is the material required. Three weeks prior to sowing, sufficient of this material should be piled up to start fermentation and turned twice a week to ensure even heating throughout, after which hotbed should be made.

As the average farmer is not equipped with standard hotbed frames, he may make use of double windows, which can be done without at that time of year, and make up a frame with rough boards to suit the windows. Whatever the dimensions of such frames, always make the hotbed 3 feet longer and wider so that the plants near the outside of the frame will have as much heat as other parts. Spread manure evenly to a depth of 6"; tramp this down firmly, repeating the process until there is a firm mass of from 12" to 14". Place on frame and plunge a soil thermometer in the manure. In a few days the temperature will commence to rise. Every day thereafter take the reading, until the maximum has been reached and the bed has cooled down to 75 degrees. The soil to a depth of 4" can now be placed on. The most suitable soil for this purpose is sandy loam; pack this firmly and sow seeds in comparatively shallow drills. After seeds have been sown and covered, give a thorough watering with a can supplied with a fine spray. After the seedlings appear, ventilate the frame carefully to prevent overheating and excess humidity, being careful, however, to avoid cold draughts. As the seedlings gain strength and days are warm, remove windows for some hours, replacing when necessary. Towards the end of May the frame should be open night and day, whenever possible, to inure plants to outdoor conditions.

Another way in which the hotbed may be used, is to first sow the seeds in boxes in the house or stable, keeping the boxes close to the windows after germination has taken place, in order to raise sturdy plants. When these are large enough they can then be transplanted to a hotbed, made up later than the foregoing one.

Many people have fairly satisfactory results by both sowing and transplanting to boxes in the house or stable, and hardening these off in cold frames before finally planting them outdoors.

If one has not the time or facilities for handling these in the manner outlined, then sow direct to where they are to flower. Depending on locality, this can be done the 1st or 2nd week in May. Pulverize the surface soil finely a few inches deep and firm this down thoroughly. The most expeditious and economical way to sow is to make a depression with the finger at desired intervals, dropping a few seeds in each; cover with fine soil firming this thoroughly over the seed. When seedlings are a fair size, thin out, leaving only the strongest plant.

Sweet Peas. This plant requires special treatment if best results are to be obtained. First of all, a well drained soil is necessary, as the roots go deeply. The fact that they go deeply also means they require a deeply cultivated soil. The process is as follows, taking a row as an example:—In the fall, preferably, the piece of ground (which should be 2½ feet wide) should be dug two spadings deep, always keeping the top spading uppermost; in the process incorporate a good supply of well rotted manure with each layer. As best results are obtained from early sowing, the soil should be prepared as soon as it is dry enough to be workable.

Pulverize the surface to a depth of 4"; tramp this down firmly and rake to an even surface. Open a V shaped drill 2½ to 3" and sow seeds 1" apart; cover with soil and firm thoroughly. When seedling are a fair size, thin out to 2" or 3" apart. Stake with birch or similar branches, as this material forms a better support than anything else, and is more in harmony with other landscape features. To ensure a lengthy flowering period, either pick flowers regularly or pick off stems immediately flowers have dropped; in this way the formation of seed is prevented.

LISTS OF ANNUALS FOR VARIOUS PURPOSES

Herbaceous Border:—

Branching Asters, Medium and tall Antirrhinums, Cosmos Coreopsis, Centaurea, Gaillardia, Marguerite Carnation, Nicotiana, Phlox Drummondi, Scabious, Salpiglosis, Verbenas.

Annual Patchwork Border :—

Dwarf and semi-dwarf Aster.

Dwarf and semi-dwarf Antirrhinums, Balsams, Calendulas, Dianthus, french Marigolds, Tagetes, Phlox Drummondi, Petunias, Stocks, Verbenas, Dwarf Zinnia.

Annual Climbers :—

Climbing Nasturtiums, Canary Bird Vine, Humulus Variegata (Hop), Cobea scandens, Cardinal climber, Morning Glory.

Dates of sowing for those having greenhouse facilities.

Alyssum	March 10th.	Aster	April 1st.
Antirrhinum	March 1st.	Coreopsis	April 10th.
Celosia	March 20th.	Cosmos	April 20th.
Diathus	March 15th.	Centaurea	April 1st.
Phlox Drummondi	March 20th.	Marigold	April 15th.
Salpiglosis	March 28th.	Nasturtium	April 25th.
Scabious	March 28th.	Nicotiana	April 1st.
Verbena	March 15th.	Zinnia	April 20th.
Gaillardia	March 15th.		
Marguerite Carnation	March 1st.		
Petunia	March 20th.		
Stocks	March 25th.		
Salvia	March 1st.		

In March

The sun falls warm: the southern winds awake :
The air seethes upwards with a steamy shiver :
Each dip of the road is now a crystal lake,
And every rut a little dancing river.

Through great soft clouds that sunder overhead
The deep sky breaks as pearly blue as summer :
Out of a cleft beside the river's bed
Flaps the black crow, the first demure newcomer.

The last seared drifts are eating fast away
With glassy tinkle into glittering laces :
Dogs lie asleep, and little children play
With tops and marbles in the sun-bare places:
And I that stroll with many a thoughtful pause
Almost forgot that winter ever was.

Archibald Lampman.

For St. Patrick's Day

Shamrock Canapes

USE the favorite tea biscuit recipe. Make a rich dough, cut it in rounds, or in rectangles three inches by one inch. After they are baked cut off the top, scoop out the soft center, and fill with shrimp and chopped celery that has been well marinated with salad dressing. Replace the cover and garnish with a small shamrock cut from green pepper. Any salad mixture may be used for the filling, such as cucumber, waldorf, lobster, tuna fish, or apricots and pineapple.

Emerald Iceberg

Boil together four cups of water and two cups of sugar until a fairly thick syrup is obtained. Add three-quarters of a cup of lemon juice when the syrup is cold. Add sufficient green vegetable coloring to secure a desirable shade. Then freeze the mixture. Serve with chopped nuts.

Cork Timbales

2 tablespoons bread crumbs
1 tablespoon melted butter
Worcester sauce
1 cup cold roast beef
1 egg
salt
pepper
2 teaspoons onion juice

Put the beef through the meat chopper, season it with salt, pepper and Worcester sauce, add the other ingredients, and shape the mixture into individual moulds. Bake in a hot oven until heated through. Serve with strips of green pepper as a garnish.

St. Patrick's Soup

1 quart milk
1 cup mashed potatoes
2 tablespoons flour
5 tablespoons butter
1 onion
4 tablespoons tomato catsup
speck cayenne
salt and pepper
2 tablespoons chopped parsley.

Cook the sliced onion in the butter until it is a golden yellow. Remove the sliced onion and stir the flour into the melted butter. Heat the milk in a double boiler, when hot stir in the flour and fat mixture. Stir until the milk is evenly thickened. Season with the cayenne, salt and pepper, and tomato catsup. Add the mashed potato, and let the whole cook about ten minutes. Just before serving add the chopped parsley.

Irish Salad

½ cup chopped pineapple
½ cup shredded celery
½ cup chopped Brazil nuts.

Mix these ingredients with mayonnaise, arrange in leaves of head lettuce, and on top of each put three or five green grapes that have been seeded and marinated with French dressing.

Q. W. I. Activities

CELANESE was the material used in the Quebec Women's Institute exhibit at the Canadian National Exhibition in Toronto last year. Much interest is shown in the Branches in this distinctively Quebec product, and many excellent papers relative to the production of celanese have been given since at the monthly meetings. One of these occupied the attention of the Branch at Abbotsford, which, only recently organized, is, however, forging steadily ahead. An illustrated lecture on the St. Lawrence River was also given.

"The League of Nations" was the subject of study in Chatham Branch in Argenteuil County, a timely topic for January. Sick relief and arrangements for a sale were also considered. Hot lunches for school children are provided by Morin Heights Branch. Jerusalem-Bethany Branch had several papers covering home, school and community. Upper Lachute branch studied Institute Technique and planned a skating party.

Cross Point Branch in Bonaventure County has a record of neighbourly kindness to needy ones during the cold winter months. The branch at New Richmond supplied medical assistance to a boy with a broken leg and provided sick-room kits for those in need of them in the community.

In Brome county the Branch at McNeill's Crossing had several interesting papers read at their meeting. Prizes were offered to each grade in the school, as well as a donation given for general upkeep to the school and to needy families. Abercorn reports cheer to sick and needy. Plans were made for a social gathering. Highwater Branch held a Valentine Party and decided on the purchase of a flag for the community hall. East Bolton held a social evening. South Bolton planned a sale and sent a contribution of useful articles to the Girls' Industrial Home at Sweetsburg. Sutton Juniors held a strictly business meeting, and Foster Branch gave a sugar social.

In Chateauguay-Huntingdon District, Aubrey-Riverfield Branch had an address on the "History of the Women's Institute". Dundee branch placed a McGill Travelling Library in the school, and Franklin Centre studied "Fire Prevention on the Farm" and "Economy of Time and Energy". Howick discussed "Legislation" and Hemmingford "Canadian Literature", and "Industries".

Compton County is considering the establishment of a Health Unit, and naturally the Women's Institutes are interested. Cookshire branch discussed the matter at its meeting. "Legislation for Women and Children" was the topic for study. Canterbury provides hot school lunches, and remembered the sick in the community. Saywerville Branch discussed the "Health Unit", and wrote to headquarters for information. Brookbury and Bury each supplied clothing to needy ones. A Valentine evening was planned by Bury Institute.

Inverness Branch in Megantic County sent generous supplies to sick and shut-ins, and Lemesurier followed the same lines of work. A paper on education formed the programme at the meeting of this Branch.

Cowansville Branch in Missisquoi County arranged for a demonstration, and Stanbridge East studied "Home Economics' at the Monthly meeting.

In Ottawa County the Branch at Eardley had a series of amusing social touches at the meeting, with a practical aspect in the form of a paper on "The Making of Wills". Lascelles Branch arranged for hot school lunches, and studied "Winter Birds". Rupert Branch is already looking forward and planning an inter-branch school fair in 1930. East Alcove Branch devoted its energies to the improvement of school conditions, cleaning, providing equipment and hot school lunches, all receiving energetic attention. Wakefield provided an electric plate for the school to facilitate the giving of hot lunches. "Winter Sports in Canada" was the subject of discussion.

Elmside Branch, in Pontiac County, planned an out-door function and studied the educational work of the Women's Institutes. Shawville sent generous baskets to shut-ins and planned for a fall fair. Dennison's Mills Branch in Richmond County held a "quilting party" and Gore offered school prizes in hygiene and other subjects. "Women Nurses in Northern Ontario" was the subject of discussion.

In Shefford County, Granby Hill branch sent assistance to sick and needy ones and arranged for a demonstration. North Shefford held a quilting party, and South Roxton sent flowers and fruit to the sick in homes and hospitals. The subject of study was "Laws of Quebec". Warden-Waterloo planned an inter-branch demonstration. Hot lunches are provided by this branch for pupils in the schools.

Ayer's Cliff branch in Stanstead County has a member who acts as supervisor of the hot school lunches each day. Much generosity was shown to sick and needy by this Branch. North Hatley held a public supper, followed by a lecture. Way's Mills report covers a great deal of activity, including boxes to soldiers at Ste. Agathe, and the sick and needy in the community. Work on the community hall was financed, and a paper on Hygiene furnished a programme. Hatley Branch assisted the local Sunday School treasuries and held an oyster supper. Stanstead county holds four quarterly meetings during the year in which all branches are interested.

The Rouyn Branch, Temiskaming, is providing layettes for infants, the work being done at the meetings.

"Balanced Meals for Family Groups" was the subject of one of the McGill extra-mural lectures given before Como, Hudson and Hudson Heights Branch by a speaker from the staff of Macdonald College. This proved a splendid success. It was decided to offer prizes in two schools, and to distribute vegetable seeds to the pupils. Later in the month another of the McGill lectures was given under the auspices of this Branch institute. The Institute is providing medical attendance for a sick child, as well as fuel and other necessities for his widowed mother. Several other needy cases were attended to, including a club-footed child whom the Institute has sent to Montreal for correction of his trouble, and who, as a consequence, will be able to walk normally in later life.

M. ELIZABETH McCURDY,
Prov. Con., Publicity Committee,
Quebec Women's Institutes.

Constructive Economy

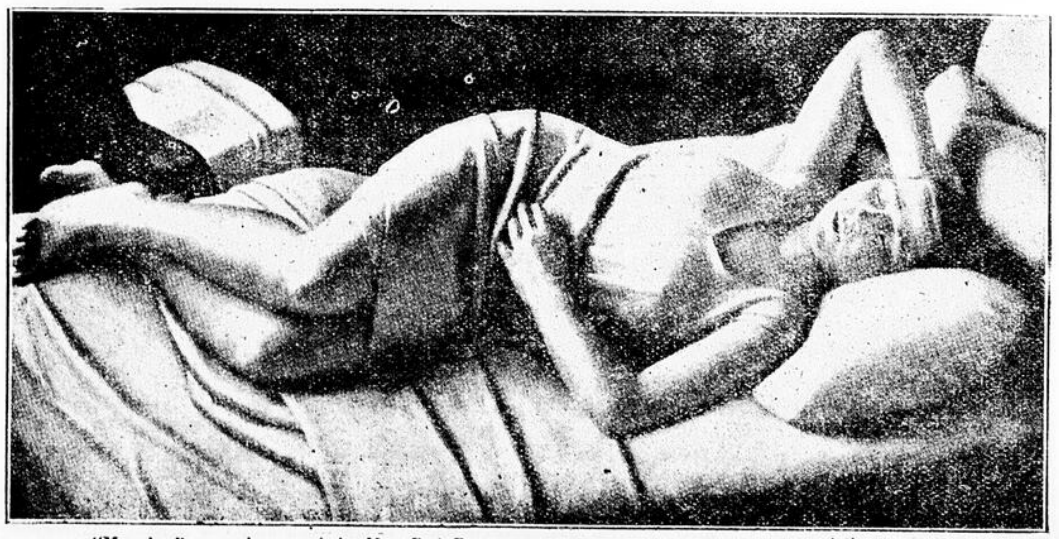
"A penny saved is a penny earned", is an old and trite saying, and is true, in a sense. To save is the first step towards the accumulation of means to safeguard life, but there are different kinds of saving, and these must be taken into account.

Mere saving for the sake of accumulation of wealth is not true economy. Savings, if they are to be of any use, cannot be stagnant. They must be used for the production of wealth and still more wealth. Prosperity is a living thing, not a hoard of gold and bank notes which are doing no one any good. It is an endess chain, forever moving, broken only when wealth is deposited in vaults and fails to take its share in the general financial movement.

Few people become rich by the mere method of putting by a certain amount each week or each month, either in an old cracked teapot, or in a bank at bank interest. This method rarely provides enough for old age, except where the whole life is a penurious grind, deprived of everything but the merest necessities. This system is all wrong, because of its effect on the standards of life, which become in the case of such people hardly worth the living. Wrong, too, because if the whole world followed this method, there would cease to be development of any kind, and the world would be at a stand still in this regard.

Consumption of the products of the world means increased production of them, thus calling new wealth into being. To use a normal share of the world's goods and to pay a fair price for them, is a surer way to individual and national prosperity than a rigid system of saving, which should be looked upon not merely as a constructive means of securing a larger income in future, but of enjoying a better income in the present.

M. ELIZABETH McCURDY.



"Morning", a modern work by Mrs. Dod Procter, gives an outstanding example of solidity in form.

Little Reminders

SO many people ask: "What is the thermometer's fatal mark?" It is impossible to state any definite degree of fever that places the patient beyond recovery, as different diseases have different limitations. In pneumonia 105° F. is a frequent temperature, while 104 is alarming in diptheria. Patients have recovered from sunstroke after a temperature of 110. The body can stand a greater increase rather than decrease in temperature.

The organs controlling the temperature, pulse and respiration are all so intimately connected that whatever affects one generally affects the others, in a greater or lesser degree. The taking of the pulse is thought to be more difficult than the reading of the thermometer. It cannot be fully described by the inexperienced nurse as to its force, volume, tension, etc., but the number of pulsations in a given time can be noted. For the sake of convenience, the pulse is generally taken at the artery just above the wrist on the thumb side. To count it, place the index and middle finger (never the thumb, as it contains a pulsation of its own) over the artery, making a slight pressure. The normal pulse is even and regular. The average frequency varies even in health; food, exercise, excitement and sudden emotion will all raise the count. Position, too, will cause a slight alteration —the beat being quicker when a person is standing than when sitting and quicker when sitting up than when lying down. The average pulsation in me is from 60 to 70 per minute, in women 65-80, children over 72-90, young children from one to seven years 80-120, and infants 110-130. If a patient has a high fever one looks for rapid pulse, and vise versa—any great divergence in the ratio of the pulse to the temperature is a grave symptom.

The respiration being to a certain extent under the patient's control, it should be counted without his knowledge. To do this, count it while holding your fingers on his wrist as though still taking his pulse. Watch the rise and fall of the chest-wall, and count an inspiration and expiration as one breath. The respiratoin and the circulation are so closely connected that anything affecting the blood will immediately cause a corresponding change in the breathing. In fever, the blood is laden with an excessive amount of impurities; therefore the respiration becomes hurried in endeavouring to supply an amount of oxygen sufficient to purify the blood. Pain and sometimes hysteria will cause the breathing to become more rapid. In men and children the respiration is deeper than in women. The normal rate per minute is 16-18 in adults, 20-24 in children and 24-30 in infants.

M. G.

"So you asked Geraldine to marry you?" asked one man of the other.

"Yes, but I didn't have any luck," replied his friend. "She asked me if I had any prospects."

"Why didn't you tell her about your rich uncle?"

"I did, hang it all! Geraldine's my aunt now."

modelled and some new ones built to accommodate the exhibits and then the sessions had to be held outside the congress pact. In London everything will be held in the best building for the purpose in the world, the Crystal Palace. A building with all the walls and roof of glass, and a quarter of a mile in extent from end to end. Already space in this huge place is at a premium, which will indicate the greatness of the event.

In the Crystal Palace the sessions will be held every morning; the afternoons and evenings will be taken up with seeing the exhibits, also in the Crystal Palace attending receptions and other functions prepared for the delegates. Those who do not wish to take in all the morning sessions, will have that much more time for sight seeing, and there is no place that has as many places of interest as has old London.

This is a blend of Japan's most fragrant green teas
"SALADA"
(GREEN)
743
JAPAN TEA
'Fresh from the gardens'

In the exhibits there will be national exhibits from forty different countries, live bird exhibits from as many countries, birds representative of breeds that have never been seen outside their native country. There also will be commercial exhibits from many countries. The tremendous areas

A Corn Ear Worm

SINCE the European Corn borer has been doing damage to corn fields in Canada it has often been confused with another worm, particularly in garden corn. The corn ear worm, unlike the corn borer, works in the ear, eating out the kernels of the cob when at the cooking stage. The caterpillar of the corn ear worm when mature is from 1¼ to 1½ inches in length. It varies in colour from light green to dark brown with rather indistinct stripes on the back and a wider and inconspicuous pale coloured band along the side. Its description is given in Bulletin No. 112 of the Department of Agriculture at Ottawa, by Mr. Arthur Gibson, the Dominion Entomologist and Mr. C. R. Twinn, an officer of the Entomological Branch. It attacks the ear of garden corn feeding on the kernels, particularly those near the tassel. Some years the insect is quite abundant and, according to these authorities, at such times it also may be found boring in the fruit of the tomato.

Fourth World's Poultry Congress

By F. C. Elford, Pres. World's Poultry Science Association.

THE World's Poultry Congress will be held in the Crystal Palace, London, England, this summer, from July 22 to 30. It is expected that over five hundred Canadians will attend, going by special boat leaving Montreal July 12. Upon this same boat along with the Canadians five hundred or more delegates from the United States will also go.

Canadians and many in the United States will remember the splendid congress held here in Ottawa in 1927. Many who were at that third congress hope to attend the fourth this year in England. It is expected that the fourth congress will be larger and better in every way than the third. In Ottawa 43 countries were represented, but about 60 will meet in London. One hundred and fifty thousand people attended the congress here, while a million will probably attend in London. In Ottawa many old buildings had to be re-

in the Crystal Palace have all been taken up by the countries who will participate in the congress activities. Canada is doing her share in that she will have an outstanding national display, also a large live bird exhibit, and in addition Canada will have all the space that has been allotted her filled with commercial exhibits. Further each province in the Dominion will have an attractive space in the Canadian group.

Canada advertised her splendid poultry at the Spanish Congress in Barcelona in 1924. In 1927 not only Canada's poultry but her cities, her climate, her crops, her country, her people advertised Canada as an ideal place in which to live to the 43 countries represented as she had never been advertised before. The congress in London gives another opportunity for Canada, and this will be made use of by taking a thousand of our northern-grown vigorous birds, bred under the most advanced system of Government breeding policy that can be found. All the exhibits will be a credit to Canada, some of which according to arrangement will be on exhibit in the Crystal Palace for one whole year following the close of the congress, but the chief advertising feature from Canada will be the number of delegates that we will send to England. Outside of the British Isles it is expected Canada will have more delegates in attendance at the congress than will any other country, not excepting the great country to the south of us.

There will be more than 500 Canadians in attendance, and great preparation is being made for their comfort and pleasure. An official Congress tour has been arranged, briefly the details of which are — leave Montreal 10 a. m., July 12, by C. P. R. Duchess of York, motor trip from Liverpool to London, Saturday July 19, followed by eleven days in London during the congress, which will include the official opening by Royalty, various meetings of congress, sight seeing trips, functions of various kinds culminating in (it is expected) a Royal reception towards the close of the congress.

On the morning of July 31, the tour takes in eleven days sight seeing through the British Isles. This section includes motoring through the Shakespeare country, North Wales, Dublin, and the Irish Free State, Cork or the Lakes of Killarney, North Ireland, Belfast and the Giants' Causeway, then to Glasgow, the Burns country, the Trossachs, Edinburgh, Lancashire, and the English Lakes, Liverpool and back to London the night of August 10.

At 10 a. m., Monday, August 11, the continental section starts. The first night and following day is spent in the city of Brussels, then two days in Holland, seeing The Hague, Amsterdam, Zulder Zee, Barnevell and on to Coblenz and up the Rhine to Mayence, through Frankfort and Munich on to Oberammergau for Saturday night, August 16, Sunday, August 17, at the Passion Play, Monday morning back to Munich and a government reception, Tuesday morning, on to Switzerland where four days will be spent enjoying the wonderful sights of that most beautiful country. Then four days in and around Paris before taking the boat home.

For those who want to see the Canadian Battlefields, provision is made to take two days off the stay in Paris, and instead of taking the boat at Cherbourg it will be boarded by these at Antwerp. The trip ends at Montreal, September 5.

Extensions to this tour are arranged to Spain, Rome, Berlin Moscow and to Denmark. Full details can be secured from either of the Canadian Railways or the Canadian Pacific Steamship Lines.

GROUND ALMONDS

Amazingly Prolific — Easily Grown From Seed.

The Ground Almond has a flavor that is **most excellent**, resembling the cocoanut. The meat is snow white, covered with a shell or skin of brown color. It grows close to the surface and anything from 200 to 300 Almonds may be expected from a single nut. There is no trouble whatever in growing anywhere and in any kind of soil. May be planted any time, and in eight or ten weeks from time of planting you will have an **enormous crop** of the **most delicious Almonds you ever tasted.** Seeds 15¢ packet, postage 3¢.

SPECIAL OFFER 4 packets Ground Almond and 2 packets of the rare and delicious Japanese Giant Radish (some specimens weigh 25 lbs.) all for 65¢ postpaid. Order now.

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Write for catalog of complete line.

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It isn't a SPRAMOTOR unless we made it

You can fairly SEE THEM GROW!

WHEN little pigs are fed Purina Pig Chow both before they are born and after, you can fairly SEE THEM GROW.

Pig Chow has all necessary food elements to develop strong, sturdy little bodies before the pigs are born. It keeps the sow in the pink of condition for farrowing. Those two things give the little fellows the kind of start that is half the battle in producing pork at a profit.

Then it gives the sow plenty of milk for every hungry little squealer. You don't see many runts. And when you put some dry Pig Chow in a small trough where the pigs can get it as soon as they are old enough to eat—they simply jump in growth.

After weaning, it keeps them going right ahead without a set-back, because it balances home chop to make a perfect growing ration.

Ask the men who topped the Department of Agriculture's Bacon Litter Contest last year. Thirteen of the prize-winners fed Purina Pig Chow with their home chop—and the cost-records reported showed an average cost of production of less than 6 cents a pound.

Balance your home chop with Purina this year—for sows and pigs of all ages. Compare the results with those of other mixtures. You will find invariably that the Purina Pound is the Cheapest.

Ralston Purina Company, Limited
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8B

AT THE STORE WITH THE CHECKERBOARD SIGN

Sun Life Makes Amazing Record

FOUR years ago the Sun Life Assurance Company of Canada announced over one billion dollars of assurance in force; and this evoked much gratified comment in Canada, at the time, for the Sun Life was the first to reach that figure. According to the annual statement made public after the recent annual meeting the Sun Life now has close to 2½ billion dollars of insurance in force, or $100,000,000 more than the total net national debt of Canada. The new paid-for business for the year shows an increase of 48 per cent. over 1928, and the increase itself is greater than the total amount of business written in 1925. The actual new paid-for business was $654,540,000.

Commanding such large and constantly increasing resources, the investment policy of the company becomes, naturally, one of the chief concerns of the management. The income for investment averages over half a million dollars a day, and the figures show how onerous is the duty which the officers of the company are called upon to discharge. The field for investment of life insurance funds is restricted by statute; it is further limited by the sense of fiduciary responsibility resting upon the officials, and there is ground for satisfaction in the fact that the investment policy has been so wisely conceived and so rigidly observed as to have been both profitable and safe. In discussing this phase of the company's operations, the president, Mr. T. B. Macaulay, explained that securities are bought to be held, with a view to future earning power rather than to stock market fluctuations. The wisdom of this has been demonstrated in recent months, the annual dividends received by the company having increased by one million dollars since the collapse of the stock market in the autumn of 1929.

Canadian Jersey Notes

QUEBES Jerseys continue to move from Quebec to Ontario. During 1929, over ten carloads went from the Townships to the sister province. The last sale of the year was made by Richmond Jerseys Inc., at Richmond, to B. H. Bull & Son at Brampton, Ont. The transaction included forty-one heifers and two young bulls. The heifers ranged in age from five to fifteen months and were indeed a lovely lot. At least a dozen of these heifers were by the internationally known sire Xenia's Oxford Kink. Several of the remaining thirty were by sons of Xenia's Oxford King.

New Quebec Breeder Buys Great Sire

A new man to the Jersey ranks of the Cowansville district is J. A. Eccles, of Montreal. Mr. Eccles recently purchased a very fine farm near Sweetsburg and has decided to establish a Jersey herd. That Mr. Eccles realizes the importance of having an outstanding sire at the head of his herd is evidenced by the fact that he has purchased, from A. E. Ruiter, the imported-in-dam yearling "Brampton Estella Noble". This young bull was purchased by Mr. Ruiter last spring for use in his own herd, and it was not without persuasion that Mr. Eccles was able to buy the bull. This young bull is sired by the $25,000 bull, Nobly Born, and has for dam the record cow, La Sente's Spotted Mistletoe, that was sold last July for $1,800. With the addition of a few outstanding females, Mr. Eccles hopes to have one of the good herds of the Province.

New Herd Sire for Ailwin Farms

The purchase of a potentially great sire for Ailwin Farms at Bedford, Que., is of much interest to Quebec Jerseys. The Ailwin herd is one of the largest in Quebec, and the owner, Mrs. C. W. P. Ramsey, is to be congratulated on the choice of the young bull recently purchased from the Pinehurst herd at Cowansville. For sire this calf has the prize winning bull Brampton Forward Volunteer, and for dam, an imported daughter of Sybil's Successor. This young cow is considered one of the best individuals in Quebec and has an average butterfat test, for the year, of over 5%. Bulls from such sires and dams are not easy to find, and their use in large herds assures a continued prestige to Township Jerseys.

Taber Buys More Jerseys

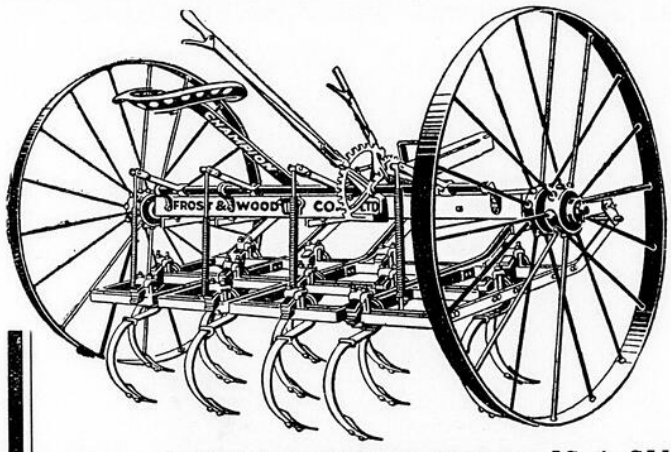
It has been rumored that Mr. P. W. Taber, of East Farnham, is no longer a Jersey owner. It is, therefore, of interest to know that Mr. Taber has requently purchased upwards of thirty head. The purchases have been made from several well known herds and consist mostly of open and in-calf heifers.

Quebec Jerseys to Vermont

The sale of eleven head of registered Jerseys to W. Shepherd of Richford, Vt., has been announced by the vendor, O. A. McLaughlin, of Knowlton, Que. Mr. McLaughlin has, for several years, maintained a very fine, small herd on his farm, near Brome Lake, and it is not surprising to know that American buyers have selected animals from his stables.

W. ELMO ASHTON.

Waterloo, Que.,
Jan. 17/30.



The "CHAMPION" IS A SURE WORKER

The Champion Cultivator is a great helper in working up a seed bed or in keeping down weeds. Each section operates independently under a separate pressure spring. All sections are controlled by a single lever. This enables the Cultivator to do a good job under all land conditions.

The Spring Steel Teeth, strongly reinforced and carefully tempered for heavy work, are curved to enter the ground at the proper angle. Wide points can be supplied for thistle-killing or summer fallowing. The 1½" and 2" points are reversible, ensuring extra years of service.

The Champion is made in two sizes. The 13-foot size can be fitted with grain and grass seed boxes for broadcast seeding. The 17-foot size is equipped with Power Lift and Tractor Hitch when desired.

Sold in Western Ontario and Western Canada by

COCKSHUTT PLOW Co., Brantford, Ont.

Manufactured by

FROST & WOOD CO., Limited
Smiths Falls, Ontario

FROST & WOOD QUEBEC, Limited
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The Quality goes in before the name goes on

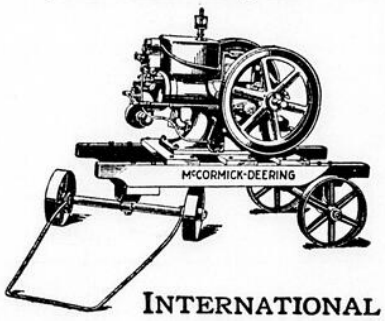
FROST & WOOD
DEPENDABLE FARM IMPLEMENTS

"No Wonder they sell so many"

NEW owners are delighted when they discover the advantages of owning a McCormick-Deering Cream Separator. Ask some of them. You will find them enthusiastic about its close-skimming, easy-turning, silent operation — its cleanliness—and its fine appearance. . . You don't know how much you are missing until you see and try the McCormick-Deering yourself. On request the local agent will bring one of the six sizes to your farm for a trial. Tell the agent whether you prefer a hand, belt, or motor-driven model.

Let this useful Engine help you

BUILT in four sizes that meet every engine requirement: 1½, 3, 6, and 10 h. p., with or without transport trucks. Heavy-duty construction, replaceable cylinders and high-grade parts assure long-time service. High-tension WICO ignition system assures easy starting. Flyball-type governor maintains even engine speed by regulating flow of fuel. Low fuel consumption. High-quality, durable main bearings; heavy, drop-forged steel crank-shaft, long connecting rod that reduces wrist-pin wear, and efficient oiling system. Ask the local McCormick-Deering agent to demonstrate.



INTERNATIONAL HARVESTER COMPANY
HAMILTON of Canada, Ltd. CANADA

McCORMICK-DEERING
ENGINES AND CREAM SEPARATORS

NEW LOW PRICES

140 Egg $13.55 | **250 EGG $19.75**

Buy direct from factory—save one-third. Why pay so much more than our prices and in addition pay $2 to $10 freight charges.

WE PAY the Freight

WE GIVE 30 DAYS' TRIAL MONEY BACK

Guarantee—Test them—if not pleased, return at our expense. You take no risk. Made of Calif. Redwood. Insulated, hot water, Copper tanks, double walls, dead air space, double glass doors, roomy nursery. Egg turning trays, etc., complete, ready to use. FREIGHT PAID

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Wickless Canopy Oil Brooders With Sol-Hot Heaters

No wicks to trim—no carbon, smoke, soot or fumes. Automatic flame control. Guaranteed.

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WILL rid your poultry, of all ages and breeds, of poultry lice, mites and vermin, by simply dropping "Magic Tablet" in every gallon of fowl's drinking water. No dusting or handling birds—harmless—increases egg yield—splendid poultry tonic—bulletins on poultry diseases and feeding problems free with orders. Large box of 225 tablets, good for 225 gallons of water, lasting you one year, sent for $1.00 postpaid. Agents wanted. RELIABLE STOCK FOOD CO. Box 566, Toronto, Ont.

100 gals. of milk for about $5.00

Nowhere can you save more real money in calf raising than by feeding Blatchford's Calf Meal. The average price of this reliable substitute for milk is around $5.00 in single 100 lb. bags—and every 100 lbs. of Blatchford's Calf Meal actually equals in feeding value 100 gallons of pure whole milk.

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Blatchford's ESTABLISHED IN 1800

Calf Meal

Trade Mark registered

Go Right on Selling the Milk

RAISE Sturdier Chicks on

Blatchford's Chick Mash

It Reduces Losses

Shields Chicks from Disease

Buy BLATCHFORD'S Today

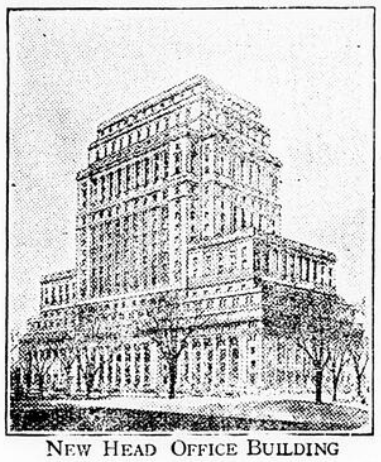
From Your Local Dealer

SUN LIFE ASSURANCE COMPANY OF CANADA

A TOWER OF STRENGTH

1929

New Assurances Paid for (An Increase of $213,207,000)	654,451,000
Assurances in force (net) (An Increase of $504,322,000)	$2,401,237,000
Total Income (net) (An Increase of $28,110,000)	172,857,000
Surplus earned during the Year	42,863,000
Payments to Policyholders and Beneficiaries	69,174,000
Surplus and Contingency Reserve (An Increase of $5,869,000)	72,807,000
Total Liabilities (Including Paid up Capital)	495,390,000
Assets, at December 31st, 1929 (An Increase of $79,239,000)	568,197,000



NEW HEAD OFFICE BUILDING

Rate of Interest earned on mean invested assets 7.02%

The high rate of dividends allotted to participating policyholders is continued and the special dividend on maturing policies extended and increased.

EXTRACTS FROM DIRECTORS' REPORT

New policies paid for numbered 161,391 for a net amount of $654,451,143.27, an advance of $213,206,752.36, or more than forty-eight per cent., over the previous year. This marked increase and the fact that the average policy, for the first time, exceeded $4,000, afford impressive evidence of the ever-growing popularity of the Company.

After deducting amounts reassured, the total assurances in force amount to $2,401,237,036.94, an increase of $504,321,102.37. This advance is notable not merely for its magnitude, but because when allowance is made for terminations by death and maturity, it represents a remarkably high rate of continuance, and evidences great satisfaction on the part of our policyholders.

The amount paid to policyholders since organization, together with the amount at present held for their security or benefit, exceeds the total amount received from them in premiums by $139,290,474.03.

The rate of interest earned on the mean invested assets has risen to 7.02 per cent. This figure includes a certain amount from bonuses and stock privileges accruing on many of the Company's holdings; but if these were entirely eliminated the rate would still be 6.60 per cent.

A net profit of $13,077,284.62 was realized from the redemption or sale of securities.

The surplus earned during the year, based on the values entered in the accounts, amounted to $42,863,578.59, but from this sum substantial appropriations have as usual been made to further strengthen the position of the Company.

An additional $10,000,000.00 has been deducted from the market values of our securities as a provision against possible market fluctuations, raising the amount thus set aside for this purpose in the accounts to $30,000,000.00.

A further $1,000,000.00 has been written off the Company's buildings.

$931,000.00 has been appropriated to raise the annuity reserves to the Rutherford table of valuation, with interest at 3½ per cent. This exacting standard requires reserves $2,656,000.00 in excess of those of the Dominion Government standard.

$1,200,000.00 has been set aside as additional provision for claims arising from total disability, death claims as yet unreported, and possible claims under cancelled policies on which a surrender value or reinstatement might be applied for.

$22,606,265.67 has been paid or allotted as profits for the year to policyholders.

The special amount entered as a liability to provide for unforeseen contingencies has been maintained at $12,500,000.00.

After making all these deductions and allocations, $5,868,899.96 has been added to the undivided surplus, bringing the total over liabilities, contingency accounts and capital stock, to $60,307,762.44.

In accordance with our usual conservative practice the securities owned by the Company have again been valued at figures much below the market quotations current at the close of the year. This undervaluation represents an important element of strength to the Company additional to the specific provisions in the statements.

Your Directors are pleased to announce that the high scale of profits at present allotted to participating policyholders will be continued during the ensuing year, while the Special Dividend on maturing policies, introduced last year, has been extended to include policies maturing after having been in force five years or longer and the scale of benefit has been increased.

The business of the Company has always been conducted under the exacting provisions of the Canadian Insurance law and the rigid supervision of the Insurance Department of the Government of Canada. Ever since we entered the United States in 1895, the Company has been under similar supervision there and is now subject to the regulations of thirty-eight States of the Union which require periodical examination of the affairs of all companies licensed in their territory. In the discharge of their regular duties a committee of twenty-two examiners, representing the States of Michigan, Massachusetts, Minnesota, Ohio, Tennessee, Washington, Virginia, West Virginia, Florida and the District of Columbia recently completed an exhaustive examination into every department of the Company's affairs. The report of this committee makes gratifying reference to the liberal treatment accorded to our policyholders, and provides authoritative testimony to the Company's strength. Even adopting the low valuations placed by us on our securities, the committee still reported a surplus at the close of last year $1,333,921.71 in excess of the figure claimed by the Company.

SUN LIFE ASSURANCE COMPANY OF CANADA

GENUINE BARBADOS Extra Fancy MOLASSES

THIS trade mark on the head of every cask is your guarantee and your grocer's guarantee of the World's Finest Molasses.

REGISTERED TRADE MARK · EXTRA FANCY MOLASSES · BEMA · GUARANTEED GENUINE · BARBADOS B.W.I.

Rich in Vitamins and Mineral Salts

USE IT ON THE TABLE AND IN COOKING

301

VIKING CREAM SEPARATOR

World known
Recognized for Clean skimming
Appreciated its Durability
Demanded Simplicity
Easy turning

A Finer Cream Separator Has Never Been Built!

The world wide popularity of Viking Separators can be directly attributed to.....

1. *Clean Skimming Efficiency*

Thousands of enthusiastic letters from experienced users say that the Viking skims off more cream than any separator they have ever used. Viking gets MORE cream because it gets ALL the cream!

2. *Superior Construction*

Viking is quality built through and through--just as durable and long-lasting as separators can be made. Its parts are so perfectly constructed and fitted that years of every day service will never affect their perfect balanced adjustment.

3. *Simplicity of Parts*

The Viking is famous for the scientific design and simple construction of its parts. It includes no complicated or unprotected mechanism to get out of order. Fewer parts too, make it easier to clean and assemble--an outstanding feature that saves much time, labour and money.

4. *Efficient Easy Operation*

A small child can operate the Viking. Its light weight accurately balanced bowl, carefully machined gears and automatic oiling system make turning extremely easy.

Years of continuous improvement --the achievements of experts-- make such surprising separator efficiency possible.

Write To-day!

It will pay you to find out more about the Viking. We will send you complete information on request.

Five Big Features

1 *Self-balancing Bowl*—Improved straight disc type. Thoroughly efficient and practically everlasting.

2 *Driving Gears*—Completely enclosed to keep out the dust and dirt. Ratchet on worm gear shaft acts directly on worm gear and insures smooth and silent running

3 *Neckbearing*—Specially hardened steel wire spring, practically unbreakable, absorbs shock and vibration and eliminates troubles caused by the more common type.

4 *Splash Lubrication*—Oil bath system on all large sizes.

5 *Guaranteed*—For a period of Ten Years.

Swedish Separator Company Ltd
29 Notre Dame Street East
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This Planet Jr. *is the way to* HOE

New Planet Jr. Motor Cultivator

Ask your dealer about this Planet Jr. Garden Tractor. Ask him for catalog or write us. Convenient terms.

Take the grips of this Planet Jr. No. 17 single Wheel Hoe in your hands. Try it out down a row or two. Notice the ease with which the sharpened, tempered 6-inch hoes snake out the weeds and riffle through the soil. Or notice how sweet and clean the culivator steels break up the crust and loosen the soil. So easily, with so little effort.

Or try the little plow (with real landside), to furrow, to hill, to kill weeds. Then ask your Planet Jr. dealer the price of this great garden tool. You'll wonder that you have put up so long with the tedious, tiring, back-breaking old hand hoe, when for ridiculously few dollars you can have a real Planet Jr. Wheel Hoe.

Send for our free garden book and New 80-page Planet Jr. Catalog which contains full description and illustrations of the No. 17 as well as 59 other Planet Jr. tools—wheel hoes, seeders, fertilizer distributors, one- and two-horse cultivators and the new Planet Jr. Motor Cultivator.

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Check which you want:

☐ New 80-page catalog and garden booklet.

☐ Planet Jr. Motor Cultivator Book, with time payment plan.

Name.....

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Dividend paying meal

The majority of farm rations are weak in protein—maker of flesh, blood and milk—consequently, it is necessary to complete them in adding a meal rich in protein as the

"Maple Leaf" Brand Linseed

Oil Cake Meal

This brand of old-fashioned process contains 35% of protein and 33% of carbohydrates—the two principal ingredients making animals **sturdy** and **fat** and putting the cows in form to give the **greatest yield.** You can order the Maple Leaf Brand Linseed Oil Cake Meal from your dealer or directly from mills. Farmers may join their order to make a carload. The Maple Leaf Brand Linseed Oil Cake Meal pays itself, many times in extra weight and milk.

Will you read a booklet "Facts for Breeders". Sent free by mail.

The Canada Linseed Oil Mills, Ltd.

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lasts longer

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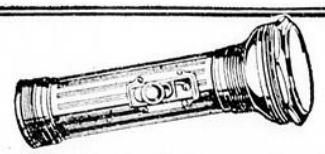

Eveready Flashlights are sold with the Service for Life guarantee. They are the safe, sure light that can't start fires.

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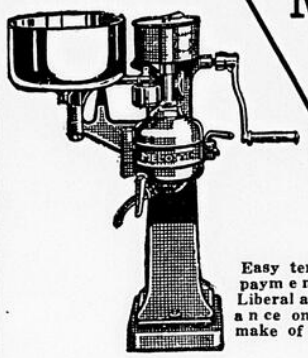
CNF 130



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CLOSE skimming makes extra money. For 40 years the Melotte has been famous for getting ALL the cream. Some of the first Melottes are still in use—and are just as close skimmers as ever.

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Electric Lighting Plants,
Pumps and Water Systems,
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Branches throughout Canada.

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Direct from Factory

Before you buy another rod of fence—see how our DIRECT FROM FACTORY TO FARM plan gives you stronger fences and *Longer lasting* fences for your money. Over 50 styles of farm fence, lawn fence, gates, steel posts, fox and muskrat chain link wire, barb wire — all of wonderful rust-resisting quality.

15 Years, Good as New, writes customer

Dear Sir.

The fence my brother purchased seemed good as new, and practically free from rust after 15 years.

Yours truly,
D. R. M. Woodbridge, Ont.

Quick Service—Money Back Guarantee

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Most orders are shipped within 24 hours, unless an article has to be made specially. All orders taken with the understanding that you will be well pleased with the look of your goods when they arrive—or your money will be refunded.

Send for free fence folder today
You'll find it well worth while

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Please send me now follder showing longer-lived fences.

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Canada's Participation

CANADA is taking a prominent part in the Fourth World's Poultry Congress, London, July 22 to 30, 1930.

National Exhibits.

Provincial Exhibits.

Commercial Exhibits.

Live Bird Exhibits.

1,000 birds—the largest exhibit from any country.

500 delegates—the most from any country except Great Britain.

Two After-Congress Tours

After the Congress—an eleven day tour of the British Isles—the Shakespeare country, North Wales—Ireland, Lakes of Killarney, Dublin, Belfast—Scotland, the Trossachs, Edinburgh—back to England, Lancashire, the English Lakes.

Then a Continental tour—Brussels, Holland, the Hague, Amsterdam, Frankfort, Munich, Oberammergau (to see the Passion Play), Switzerland, Paris.

Canadian and United States delegates and visitors sailing together from Montreal, July 12th, on the "Duchess of York."

For detailed information write to the nearest of the following:

Dr. F. N. Marcellus, Ontario Agricultural College, Guelph.

Prof. W. A. Maw, Macdonald College, P.Q.

J. D. Barbeau, Department of Agriculture, Quebec, P.Q.

J. G. Morgan, Experimental Farm, Nappan, N.S.

or

F. C. Elford,
President of the World's Poultry Science Association, Ottawa.

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The Hon. Dr. W. R. Motherwell
Honorary Chairman

Dr. J. H. Grisdale
Honorary Vice-Chairman

H. B. Donovan—*Chairman*
President, Canadian National Poultry Council

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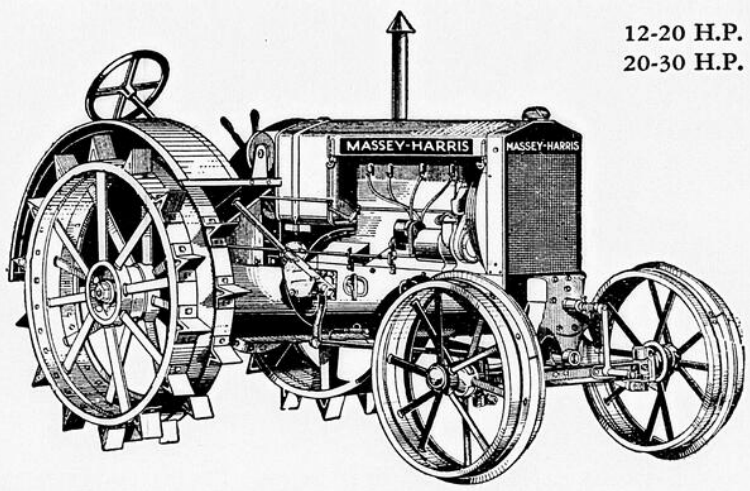
114 Vittoria St., Ottawa E1

A NEW ERA IN AGRICULTURE

Low Cost Tractor Power Puts Farm Work on a Profitable Basis

12-20 H.P.
20-30 H.P.



Modern machinery has brought about a new era in agriculture. Farmers are buying machines that enable them to do more work in less time at less cost. Tractors and Power Farming Implements are in demand.

It costs less for gas and oil when you do your work with a Massey Harris Tractor. Reckon up the number of times you go over a field in plowing, cultivating, seeding and harvesting, and you will readily see why the "low-cost-per-acre-power" of the Massey-Harris Tractor leaves you a wider margin for profit.

Light in weight, easy to handle, and strongly built, the Massey-Harris Tractor is full of pep and power. It is the ideal Tractor for belt, draw-bar, and power-take-off work.

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ESTABLISHED 1847
TORONTO · MONTREAL · MONCTON · WINNIPEG · BRANDON · REGINA · SASKATOON
SWIFT CURRENT · YORKTON · CALGARY · EDMONTON · VANCOUVER *Agencies Everywhere*

THE KIDNEYS

purify the blood. When they fail, poisons accumulate and Rheumatism, Sciatica, Lumbago and a host of ills often follow. Gin Pills, by restoring the Kidneys to normal activity, give permanent relief. 50¢ a box at all druggists.

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THE WORLD'S BEST REMEDY FOR ALL KIDNEY AND BLADDER TROUBLES

Mail this coupon and receive a sample of Gin Pills FREE.
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Learn How to Keep Your Canary in Health, Vigor and Voice. His Cheery Song Will Repay You

Your bird's diet is very important. His song, plumage, vitality and general health depend upon proper food. That is why the most successful breeders and owners of canaries everywhere in Canada rely on Brock's Bird Seed. It is composed of seeds selected from all over the world, scientifically blended into a properly-balanced food ration. Every package also contains a cake of Brock's Bird Treat, a tonic every bird needs—aids in moulting, improves song.

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Sold by all Druggists, Grocers and Seedsmen.

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TORONTO

Every Home Should Possess a Sweet Singing Canary

Is there anything more cheering than the sweet song of a pet canary as he greets you each morning and trills his joy to you during the day? If you haven't a canary, write us and we will tell you where you can procure one. Here is our offer to all bird lovers. Brock's famous Book on Birds is the acknowledged authority on cage birds. Tells how to feed, breed and care for them in health and sickness—280 pages, 42 illustrations. Sells regularly for 25c, but to those answering this advertisement we will send this book, also a generous sample of Brock's famous Bird Seed and a sample cake of Bird Treat—a wonderful bird tonic.

MAIL THIS COUPON D 3

Messrs. NICHOLSON & BROCK, LTD.
125 George St., Toronto 2.
Dear Sirs: Enclosed please find 10 cents for Brock's Book on Birds, a sample of Brock's Bird Seed and Brock's Bird Treat, as advertised.

Name.....
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40

"PERMANENT PARTNERS OF THE CONTINENT"

In Ringing Declaration President Macaulay Describes This As Effect of Sun Life Company's Investment Policy.

Its Wisdom Vindicated in Wonderful Report For Past Year.

Montreal, March 1st. — A most lucid explanation of how little the fluctuations of Wall Street affect companies whcih buy securities, not for re-sale, but for investment, was given by President T. B. Macaulay at the annual meeting of the Sun Life Assurance Company of Canada. He reduced to the plainest terms what is obscure to many, when he compared the Stock Exchange to an auction room where prices fluctuate according to the mental condition or the bank balance of the bidders, and not according to the intrinsic value of the articles on sale. Mr. Macaulay expressed comparative indifference to these things, his company being concerned primarily and chiefly with the continuance or increase of dividends on the sound securities held by his company.

Impressive Vindication of Investment Policy

And judged by that test, the head of the Sun Life Company surely had remarkable vindication of his investment policy in the report he submitted to a crowded meeting of enthusiastic policyholders. Not only was he able to report new assurances for the year of over $650,000,000 which carries his company well on to the three billion mark of assurances in force—he was able to show profit earnings which have risen close to $43,000,000. And as though in mockery of the gyrations of the Stock Market, the dividends actually being paid on Sun Life stocks are $3,374,000 in excess of those payable on these shares when purchased, while the rights and stock privileges have been worth about $17,000,000.

Great National Future Shared by Company

"Through our large stock holdings," he said, "we have become permanent partners in the great utility and other corporations which furnish such essential service that they may almost be said to be part of our national life.

"We believe in the future of our entire nations—both Canada and the United States. What will they be fifty years from now? Does any one doubt their future?

"We have hitched our investment policy to the star of this Continent," Mr. Macaulay declared amid loud applause, "and, in particular, to our great cities, and, just as surely as they continue to grow and prosper, so surely will our investments grow and prosper."

THE PRESIDENT'S SPEECH

Mr. Macaulay spoke as follows:

"It is with very special pleasure that I move the adoption of this fifty-ninth annual report of the Company. We have grown accustomed to great and increasing prosperity, but the achievements of the past year surpass all previous records in even our history.

"The New Assurances paid for reached the huge total of $654,000,000. Even more impressive, however, is the fact that this is an increase of more than forty-eight per cent. over last year.

"The Assurances in force now exceed $2,400,000,000, an increase of over half a billion. But a few years ago we rejoiced at reaching the one billion mark: we now have passed the second billion and are well on towards the third billion.

"The Income has reached $172,000,000, and the Assets are now $568,000,000.

"More important still, the profit earnings of the year have risen to nearly $43,000,000. We have as usual applied a considerable proportion of these earnings to further strengthening the position of the Company.

"Another $10,000,000 has been deducted from the market values shown in the report, raising that item to $20,000,000. $1,000,000 has been written off the Company's buildings, while over $2,000,000 has been added to our various special reserves.

"The sum of $22,600,000 has been distributed as profits to our policyholders, and in addition to all this nearly $6,000,000 has been added to the undistributed surplus, now more than $60,000,000.

"This wonderful showing is, as always, based on a valuation of our securities enormously below the market quotations actually existing at the close of the year, so that the real strength of the Company is only partially disclosed.

STOCK EXCHANGE A MERE AUCTION MART

"That such results should be achieved in the face of the Stock Exchange panic, of which we have heard so much, may at first appear strange. It is, however, not so surprising, for we are apt to over-estimate the importance of that crisis, serious though it was. What is the Stock Exchange? It is merely a place where public auctions are held. It differs from other auctions only in the articles sold, and in the volume of the transactions. It is no more true of this auction than of other auctions that the prices bid are an infallible index of the real value of the articles dealt in. The quotations fluctuate with the optimism of the pessimism of the bidders. They are frequently much better evidence as to the bank accounts and credit of the bidders than of the value of the stocks bought and sold.

BUSINESS AS USUAL

"That was exactly the situation during the recent price reaction. It was purely a Stock Exchange panic. It was not caused by any trouble in general business. We did not see the closing down of factories, wholesale discharges of employees, and other symptoms of business distress such as marked the great depressions to which our minds revert. Outside the ranks of the unfortunate speculators there was little to show that anything unusual was happening in the Wall Street auction rooms. On the wildest days of the reaction the business of the country went on as usual. Men continued to work, children continued to be born, the population continued to grow, the great electric companies continued to increase their output, enlarging their power houses or building new ones. The great corporations whose stocks we own continued to expand, continued to prosper and to earn even larger dividends, just as if there were no dealings in their shares at all. What happened was merely that last June, in a wild burst of enthusiasm, speculators bid up prices beyond normal levels, and this in turn produced a wave of selling which began as profit-taking, but ended in a panic which carried prices as much below normal levels as they had previously been forced above them. The prices of November last, of course, showed a great drop from the quotations of mid-September, but in reality that great reaction did little more than remove the temporary bulge caused by the over-enthusiastic bidding of the previous months of the year. The actual intrinsic value of the shares was, of course, not affected by the fact that the speculators had exhausted their bank accounts and had had to lower their bids.

DIVIDENDS ON SECURITIES GREATLY INCREASED

"The investor who buys for permanent holding is but little concerned as to the prices which may be bid for his stocks by those who frequent the Exchanges. What interests him is to know that his dividends will not only be paid regularly but will gradually increase with the passing years. I will apply this test to our own holdings. At the present time the dividends actually being paid on our stocks are $3,374,000 in excess of the dividends payable on those same shares when we purchased them. This is equal to one and a quarter per cent. per annum on the book value of all our holdings. We have also received rights and stock privileges worth about $17,000,000. And the end is not yet. Even since the slump began on say October first, the dividends payable on our stocks have increased about $1,500,000 and we have received rights with a value even in these markets of $1,100,000

NO LOSSES BY PERMANENT INVESTORS

"To imagine that loss was caused to any except those carrying shares on margin because market prices in 1920 marched up a hill and then marched down again, is to remind me how an old friend told me mournfully some years ago that he had lost over a million dollars during the preceding twelve months. When I replied sympathetically, he added with equal mournfulness: "Yet, I have lost over a million by not buying stocks a year ago when they were low." The losses supposed to have been suffered by permanent investors, such as the Sun Life, are like those of my jocular friend—they are not losses at all, but merely profits which we might have made had we known just when the peak was, and had altered our practice so as to sell out at that time.

FOLLOWING THE CONTINENT'S "STAR"

"When investing our funds, we look always to the distant future—ten, twenty, thirty years hence. Through our large stockholdings we have become permanent partners in the great utility and other corporations, which furnish such essential service that they may almost be said to be part of the national life. We believe in the future of Montreal, of New York, of Chicago, and of all our great centres of population. We believe even more in the future of our entire nations—both Canada and the United States. What will they be fifty years from now? Does any one doubt their future? We have hitched our investment policy to the star of this Continent, and in particular to our great cities, and just as surely as they continue to grow and prosper, so surely will our investments grow and prosper. What need we care for the moods or pocketbooks of in-and-out speculators? Why should we reverse our policy and throw our great holdings on the market for some possible temporary gain? Could we be sure that we would ever get our shares back? We prefer to continue as permanent partners.

SUN IMPREGNABLE ON BLACKEST DAY

"We must, of course, consider market quotations when preparing our annual report, but our policy is so to undervalue our holdings that there can be a tremendous drop in prices without even reaching the figures at which our securities are carried in our accounts. Last year we announced that we had a margin of $100,000,000 to provide for just such a possible market crisis as we have experienced. We expected a reaction, but I confess that we did not expect one of such severity. Our assets have now been tested by one of the worst financial reactions in history, and you will be interested to know that the provision made by us for such a contingency proved more than ample, for even on the blackest of the black days we still had about $35,000,000 of the amount intact as a margin of excess valuation still remaining to protect our surplus. I am now able to say that even after distributing the large profits which we have announced, after making the further reserves to strengthen our position, and after adding $6,000,000 to our declared surplus, we have today the entire margin of $100,000,000 again intact. The blow has fallen, the slump has come, the values are marked down and we are in a stronger position than ever before in our history.

"This practice of undervaluing our securities is now a permanent feature of our investment policy. I look forward to the time in the not distant future when we will have an undisclosed margin so huge that even the present large figure will appear comparatively small. It is our ambition that the values placed on our securities will always be buttressed by safeguards so great that market fluctuations will affect us no more than the winds that whistle around our building.

SECURITIES COMPARED

"I would not have you suppose that I am blind to the merits also of well selected bonds and mortgages as investments. There is much to be said for them. Their values, nominally at least, do not fluctuate greatly. They are particularly attractive at times when stock quotations appear unduly high, as in the latter part of last year. But while they offer greater resistance to price reactions, they have no power of growth. Personally

I prefer securities that live and advance, that keep pace with national growth and development—securities with a future, rather than securities which, even if protected against deterioration (not always successfully) by gold caskets, can, at best, only remain stationary and unchanging by the side of the road while the army of progress marches past. There is a happy medium. I think that our Company should always have a large amount invested in choice bonds, but I also think that in the best interests of our policyholders a considerable proportion of our assets should always be invested in high grade progressive common stocks.

A FUTURE THAT DEFIES PROPHECY

"It is a wonderful report that we present, but I always think of the present as a mere vantage ground from which to get an ever further vision into the future which must be planned for. What is our future to be? The realities of the present are far in advance of anything that we even imagined possible but a few years ago, and the outlook now is brighter than ever. I hardly dare to make a prophecy. If any of you care to calculate what our position will be if we can maintain anything like our present rate of progress for even the next few years, the results will surprise you. We already occupy a remarkable position. We have a character and an individuality all our own. We have an enthusiastic army of policyholders, and we enjoy the confidence of the public in a very unusual degree. We can, I think, look forward to a future so glorious that even the achievements of the present will then seem small. And let us never forget that every extension of our business is an extension of service and blessing to humanity."

SOUFFLERINE

A guaranteed cure for HORSE HEAVES, COLD, BROKEN WIND. Certificates in our hands prove the real merit of "SOUFFLERINE". Don't delay to learn about, write at once.

5 lb-box $4.80, 10 lb. $9.00
Sent by mail C. O. D.

MAINLAPBERT, P. O. Box 1597, MONTREAL

Simple Remedy For Bad Stomach Gives Swift Relief

No Need of Strong Medicines or Diet. Safe and Simple Home Recipe Keeps Stomach in Fine Condition.

If you are a victim of Stomach Troubles — Gas, Sourness, Pain or Bloating—you may have quick and certain relief by following this simple advice.

Don't take strong medicines, artificial digestants or pull down your system with starvation diets. For within reason most folks may eat what they like if they will keep their stomach free from souring acids that hinder or paralyze the work of digestion.

And the best and easiest way to do this is to follow every meal with three or four tablets of Bisurated Magnesia—a pleasant, harmless, inexpensive, and handy tablet form of Magnesia that promptly neutralizes acidity and keeps your stomach sweet and clean.

A week's trial of Bisurated Magnesia tablets, which any good druggist can supply at trifling cost, should quickly convince you that 90 per cent of ordinary stomach distress is absolutely unnecessary. Be sure to get Bisurated Magnesia Tablets!

You can save money— Buy "Nu-Roof" "Twin-drain" "George" Shingles on Easy Payments

PEDLAR'S SPRING PAYMENT PLAN

The Pedlar Spring Payment Plan makes it easier to re-roof your barn. Order your roofing now for delivery up to May 1st, 1930; you have till June 1st to pay—no interest. Allowance at rate of 7% per annum if payment made before June 1st.

Send dimensions of building for our quotation on Pedlar's Nu-Roof, Twin-drain or "George" Shingles,

THE PEDLAR PEOPLE LIMITED
Montreal Office & Factory—24 Nazareth St.
Factories: Oshawa, Montreal, Winnipeg, Vancouver.
Branches: Montreal, Ottawa, Toronto, London, Winnipeg, Regina, Vancouver.

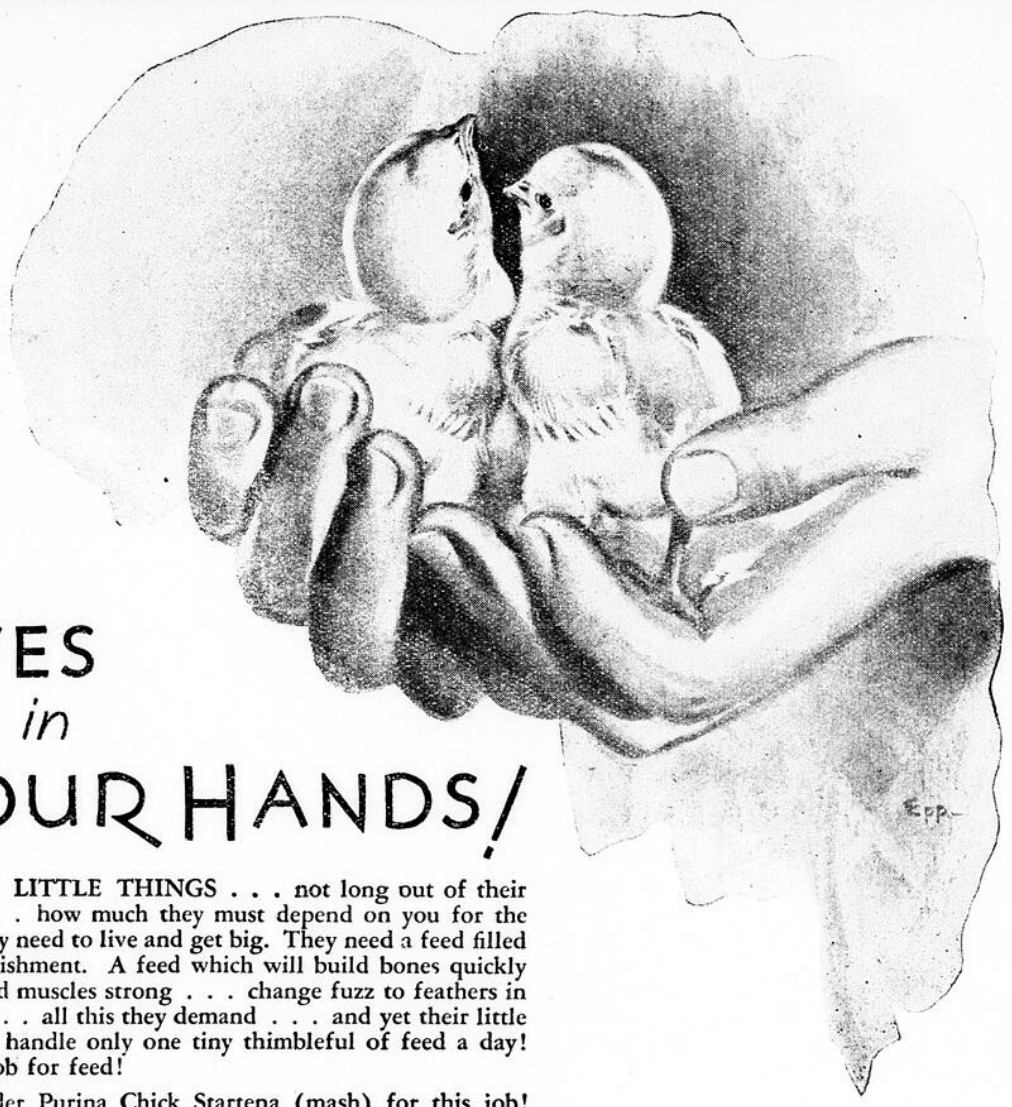
PEDLAR'S METAL-BUILT PRODUCTS

GARDEN HUCKLEBERRY

The Garden Huckleberry grows from seed the first year. A new fruit that cannot be excelled for Pies and Preserves. Very prolific, yielding an immense crop of fruit. It is annual and must be planted each year from seed. Grows and thrives in all climates and on all kinds of soil. The fruits grow larger than the common Huckleberry or Blueberry. If cooked with apples, lemon or anything sour, they make the finest jelly. You will be delighted and astonished with this easily grown and wonderful novelty. Packet, 15¢ postage 2¢.

SPECIAL OFFER 3 packets Garden Huckleberry and 2 packets "Famous Yard Long Bean" 55¢ postpaid. Order now.

DOMINION SEED HOUSE
310 Elgin Street, Georgetown, Ont.



their LIVES *are in* YOUR HANDS!

DOWNY LITTLE THINGS . . . not long out of their shells . . . how much they must depend on you for the things they need to live and get big. They need a feed filled with nourishment. A feed which will build bones quickly . . . build muscles strong . . . change fuzz to feathers in a hurry . . . all this they demand . . . and yet their little crops can handle only one tiny thimbleful of feed a day! What a job for feed!

Consider Purina Chick Startena (mash) for this job! In every thimbleful are 12 ingredients! Cod-liver oil . . . dried buttermilk . . . alfalfa flour . . . granulated meat . . . these and eight others are there . . . each one with a real job to do.

These 12 ingredients . . . think how carefully they must be mixed to make every thimbleful alike. Purina Startena is mixed over and over again . . . 960 times just to be thorough! And you will find the same care taken with Baby Chick Chow (scratch) . . . to be fed with Startena until your chicks are six weeks old . . . and with Purina Growena (mash) and Purina Intermediate Hen Chow (scratch) . . . to be fed from then on until the pullets are laying at 16 weeks.

Your chicks . . . what they do for themselves . . . what they do for you . . . is entirely in your hands. They eat so little . . . yet it counts so much . . . that you can afford to do only one thing . . . feed Purina Chick Startena!

Ralston Purina Company, Limited
Department L - Woodstock, Ont. 5B

AT THE STORE WITH THE CHECKERBOARD SIGN

FIFTY YEARS OF CONSTANT ENTERPRISE

HE WAS A NOTABLE IN TOWN

He used to come along the street every night about supper-time and light up the old oil lamps. In the morning he would fill them for another night.

He and his horse were notables in town.

You may not remember the lamp-lighter because he belongs to the Canada of fifty years ago when Imperial Oil was a new company making the kerosene which the lamp-lighter used.

Invention of electric light was the end of the lamp-lighter but it was only the beginning of change in the oil business. The automobile, modern machinery, the airplane—each has demanded new products. Each new product has meant endless experiment and unceasing effort.

That has been the work of Imperial Oil men through fifty years—to make modern transportation possible by perfection of gasoline and lubrication.

Because their work has been good, people have learned to trust Imperial Oil products and Imperial has grown from a few hundred men in one small refinery to over nine thousand men—six great refineries—stations in every corner of Canada—pipe-lines in South America—drillers in the Arctic—miles of tank cars—ships on the Atlantic and Pacific.

Fifty years of constant enterprise and experience are in the products Imperial Oil sells today.

Marvelube is Imperial's finest motor oil.

Imperial Premier and Imperial Ethyl are its best gasolines.

Which means that nothing finer can be put in your car.

IMPERIAL OIL PRODUCTS

ALWAYS SO MUCH BETTER

FOUNDED IMPERIAL 1880

IMPERIAL PREMIER GASOLINE
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IMPERIAL ETHYL GASOLINE
•
MARVELUBE MOTOR OIL
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POLARINE GREASES
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IMPERIAL INDUSTRIAL LUBRICANTS