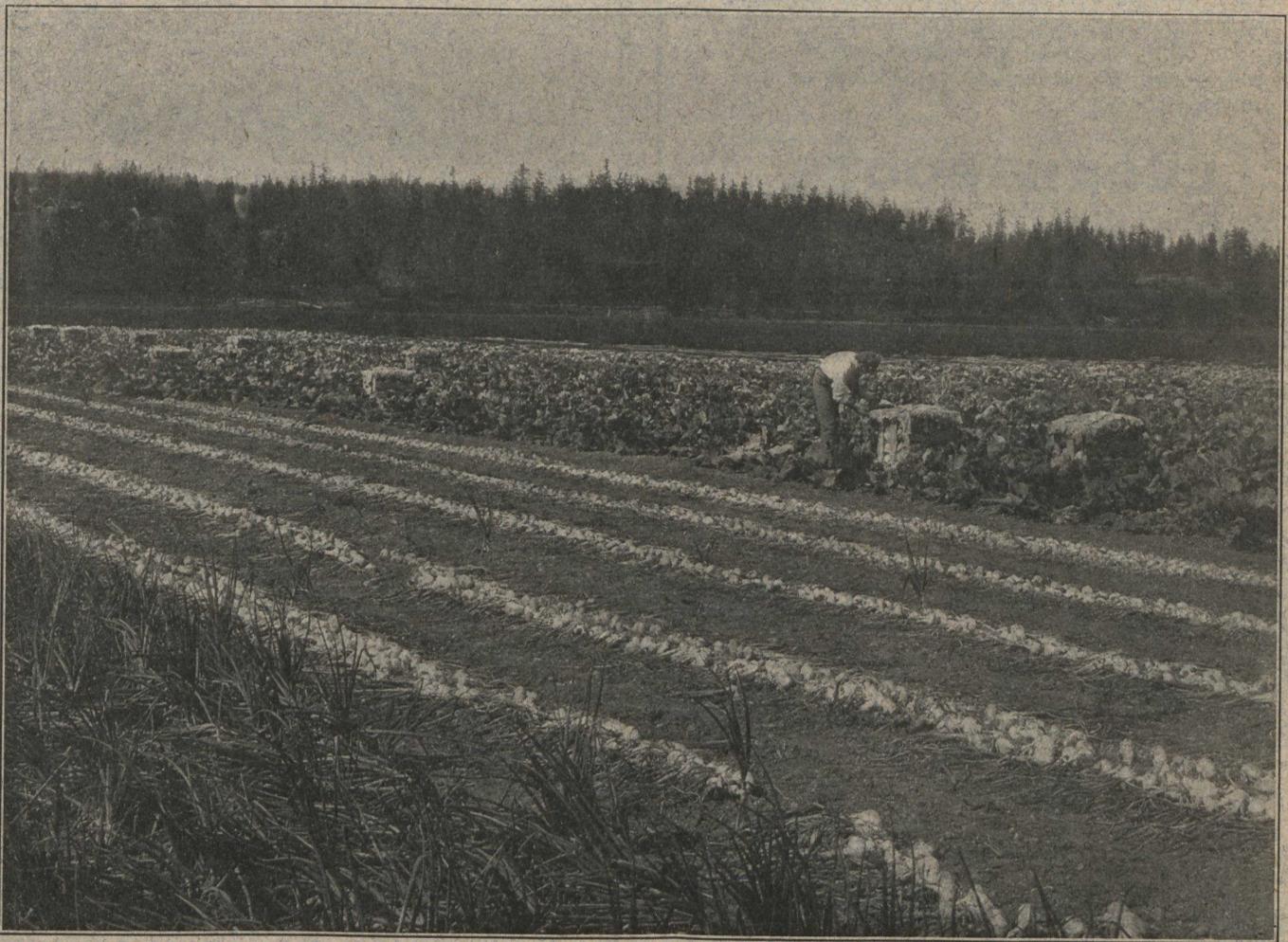


BRITISH COLUMBIA  
**FRUIT** AND **FARM**  
MAGAZINE

Vol. VIII., No. 5

MAY, 1916



VEGETABLE GROWING IN BRITISH COLUMBIA

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## TABLE OF CONTENTS FOR MAY

	Page
Rural Credit and Its Effect, Etc.....	913
A. Lucas, M.P.P.	
Standardization of Fruit Packages.....	915
A. H. FLAIK.	
Editorial .....	918
Marketing B. C. Fruit .....	919
R. C. Abbott.	
Beekeeping in British Columbia .....	922
Williams Hugh	
Gardening for the Home .....	926
H. M. Eddie.	
Lime Sulphur as a Fall Spraying for Apple Trees .....	927-928
John Stewart.	
Poultry Section .....	930
News From Farmers' Institutes .....	934
Women's Section .....	938

# Fruit and Farm Magazine

A Monthly Journal Devoted to the Interests of the Man on the Land.

Vol. VIII.—No. 5

Vancouver, British Columbia

\$1.00 per year  
in Advance

## Rural Credit--its Effect on the Agricultural Industry.

By A. LUCAS, M. P. P.

I have been asked for a short paper on rural credit and its effect on the agricultural industry, with a short description of the Agricultural Credit Act passed by the parliament of British Columbia at its last session.

The act passed last session is largely based on the Rural Credit Act in force in New Zealand, with some important changes, making it, in the opinion of the Royal Commission on Agriculture, more applicable to conditions in British Columbia. As I will have to refer at some length to the operation of the act in New Zealand, I deem it advisable for a better understanding of the subject, to give you a brief outline of the conditions found to exist in New Zealand and British Columbia.

### Conditions in British Columbia.

British Columbia is a country of enormous natural resources in timber, minerals and fisheries, and offers exceptional opportunities for the profitable investment of capital and in the employment of labor. The rapid growth of the coast cities has been phenomenal, and the result has been that men with capital coming to this province find many opportunities for investment that promise better returns than they can reasonably be expected from farming, and the higher wages paid in the mining and lumber camps attract the laboring classes. Consequently, few men with capital engage in farming, and efficient farm labor is scarce and the wages usually demanded higher than a farmer can afford to pay.

There is no monetary institution in the Dominion of Canada that will loan money to farmers to enable them to make permanent improvements of a productive nature for a sufficiently long period of time, and at a low rate of interest, with the privilege of repaying the whole or any part at any time, and the experience in other countries and in the Dominion of Canada demonstrates clearly that that is the kind of credit the agricultural industry requires.

In the older settlements, in the heavily timbered districts of the province, it is very commonly found that when a man has succeeded, perhaps after years of effort in clearing enough land to make a living from it, with perhaps some earnings from other work, he makes no further attempt to bring more land under cultivation. In the interior, we have a dry belt and prairie land requiring irrigation, and with the exception of those who were early in the field and secured favorable locations, the cost of irrigation is very heavy and more than the average individual can undertake.

Many witnesses who gave evidence before the Royal Commission of Agriculture, explained to us that the struggle to accom-

plish what they had done without capital and without credit, and make a living at the same time, was too strenuous to encourage them to continue the effort. The result was that their sons drifted into the cities, or into some mining or lumber camp to secure employment. They further represented that if they could borrow money on the terms above referred to, they would be anxious to use it towards clearing and bringing under cultivation more of their holdings, and they were confident that they could not only provide for interest and amortization payments on such loans, but could largely increase their revenues, and this confidence was based on the operations of the past and from the operations of their neighbors who were fortunate enough to have sufficient capital for their requirements.

In other cases, where better live stock, silos, buildings and similar improvements would greatly increase the scope of their operations, lack of capital or credit had deterred them.

After a thorough investigation, extending all over the province, and after a careful study of the reports of the agricultural credit systems adopted in various countries, the commission decided that one of the first and most pressing needs of those engaged in the agricultural industry was an adequate rural credit system, and that the operations of those systems should be investigated on the ground, and for that purpose one of the commissioners was sent to Europe, and I visited New Zealand and Australia.

### Conditions in New Zealand.

Natural conditions in New Zealand resemble those in British Columbia closely enough to make comparisons valuable. The country is for the most part heavily timbered along the coast with heavy rainfall, and with lighter rainfall and lighter clearing in the interior. As in British Columbia, mixed farming, dairying, stock-raising and fruit-growing are the most important branches of agriculture pursued.

The people of New Zealand, their government and their institutions are all sufficiently like our own to make the operations of the Rural Credit Act in that country an object lesson of special value to the people of British Columbia.

### History of the Rural Credit System in New Zealand.

The history of the Rural Credit system which resulted in the establishment of the New Zealand Advance-to-Settlers Office is briefly this:

For the twenty years between 1873 and 1893, the value of domestic exports, in spite of the rapid expansion in population and their large increase in their national debt, had only increased very slightly, and

in view of the financial obligations of the colony, it was felt that some decisive action on the part of the government was imperative in order to increase production. Of all the industries in New Zealand, the agricultural industry appeared to offer the greatest opportunity for expansion and the surest market for increased production. To secure this increased production they decided that the agricultural industry was in much the same position as any other industry. If the output was to be increased, the capital invested and the labor employed must also be increased, or, in other words, that the agricultural credit required credit on terms suitable to the industry, just as much as the mercantile and manufacturing industries required credit suitable to their industries.

After a thorough investigation of the various European agricultural credit systems, for which work experts were retained, they decided that none of them could be applied to New Zealand, as conditions both in regard to the farmers themselves and the supply of capital were absolutely different from the old settled communities of Europe. They realized that no private company would or could loan money to farmers for a sufficiently long period of time and at a sufficiently low rate of interest to enable them to meet their payments from the net earnings of their farms, and at the same time leave them a sufficient surplus to justify them in adopting a better standard of living on the farm, and it was fully realized that if the industry were to attract the best class of men, and retain them on the land, life on the land must be made as pleasant and as profitable as any other industry or calling in the Dominion. They claimed that every citizen in the Dominion, and every industry in the Dominion, was vitally interested in the agricultural industry and in increased production, and therefore that it was the duty of the whole people, through their representatives in parliament, to provide the machinery and furnish the capital.

Accordingly, in 1894, legislation was introduced and passed by the parliament of New Zealand and was known as the "Advance-to-Settlers Act." Money was borrowed from England on government guaranteed bonds, and loaned to the farmers and settlers through the Advance-to-Settlers Office, for the establishment of which the act made provision. The management has loaned in the last twenty years approximately \$70,000,000. The rate of interest charged is 1 per cent more than the money costs. The 1 per cent is disposed of as follows: To pay flotation charges, working expenses, and to create a reserve fund. During the first eighteen years, there has been a net balance, after the above items

have been provided for, of over \$1,500,000 to the credit of the reserve fund.

You will notice that, although it is not a co-operative system, each borrower being responsible only for the amount of his own loan, yet the borrowers do pay a fraction of 1 per cent per annum into a fund to provide against any individual losses. During the eighteen years, there have been only 35 foreclosures, and no losses. The actual cost of the administration and working expenses is only .14 of 1 per cent.

#### Effect of Rural Credit on Agricultural Production.

At the time the rural credit system was introduced, the per capita value of domestic products exported amounted to only about \$30. In 1912, they had risen to \$111.78, being the highest of any country in the world. The number of bank accounts had increased until there was one bank account for every two and a half persons in the Dominion, and to their credit an average of \$207 to each bank account. It is claimed that this is the highest percentage of bank accounts and the largest amount of money to the credit of the people in the banks of any country in the world in proportion to their population. And, in addition to that, the people of New Zealand are carrying something over \$70,000,000 of their own national debt.

That farmers require credit and know how to use it to their own advantage when it can be obtained on terms suitable to their business, is proved by the fact that they avail themselves of the opportunity wherever the system is provided. There has been about \$1,000,000,000 loaned in the various countries having rural credit systems, and there has been no loss that was not provided for by a fraction of the extra 1 per cent usually charged. This is a record of safe loaning that has not been equalled by any other industry in the world, and proves conclusively that farmers require credit and will avail themselves of it, where it can be obtained, to their personal advantage and to the great advantage of the countries in which they live.

In countries where long term farm loan systems have been adopted, there has been a marked improvement in the standard of rural life, which, including as it does, more recreation and culture, is not only good for the farmers and their families, but tends to keep the boys and girls on the land, and to attract others to follow their example. This is found to be good for the welfare of the whole people.

With money thus available, the farmers of New Zealand have built better houses, or re-modelled their old ones; have brought a large acreage of land under cultivation that would otherwise be lying idle; have bought and kept better live stock; have used more labor-saving machinery on the farms and in the houses; have erected elevated tanks and wind-mills; have laid on water in their dwellings and in their out-buildings; have irrigation for their vegetables and flower gardens; have increased their dairy herds; they keep more sheep and pigs, and have so largely increased the revenue from their farms that they are able to meet the payments on the mortgages and to adopt a higher standard of living and a better one, and throughout the whole Dominion a better rural life is being evolved. The young men and women who are growing up are happy and contented and find ample time and opportunity for recreation and entertainment.

The act passed by the British Columbia legislature last session is based on the New Zealand system, and when we take into consideration the conditions in British Co-

lumbia and the conditions in New Zealand, we have every reason to believe that the increase in production in British Columbia, and the improvement in rural life in British Columbia, will be equally as satisfactory as it has been in New Zealand.

The idea underlying the act is wholly constructive, the loans being calculated to supplement the industry and ability of the farmer, and while the provisions of the act apply directly to those who are now on the land and who are endeavoring to make homes for themselves, and it is from these that the greatest immediate increase in production may be expected, the act also provides facilities for the beginner. A man without capital, but who is able and willing to work, may start in on a raw farm and receive advances as his work of making a farm progresses. In short, the institution which this act will bring into force, will in effect be a friendly loaning company, with \$15,000,000 available as needed, and with the credit of the whole province of British Columbia behind it in order to obtain further credit when necessary. It will be an institution brought into existence for the sole purpose of financing those engaged in the agricultural industry, an institution that will finance every agricultural producer who is willing to help himself, and not only help him make a living for himself and his family, but enable him so to increase the revenue of his farm that he will be able to adopt a standard of living equal to that enjoyed by those engaged in any other industry in the province.

The act will be brought into operation by proclamation in the very near future, and in addition to the rural credit referred to, it also provides for financing a co-operative system, in production, marketing and selling under government leadership.

When we consider the fact that under existing conditions and without credit facilities, over 24,000 pre-emptions have been taken up in this province during the last twelve years, and that there is land available for 24,000 more, and that the natural agricultural production has increased from less than \$7,000,000 to about \$30,000,000 during the same period, we can reasonably expect that with the impetus the industry will receive from the operations of this act, the agricultural industry will grow and prosper beyond anything before experienced in this province, and that within the next ten years the annual toll of wealth that will be taken from the soil of British Columbia will exceed \$100,000,000.

#### TO BOOST PRODUCTION

To boost production this year, when there is a probability of decreased acreage, the 10,000 members of the Boys' and Girls' clubs in Manitoba will plant and cultivate approximately 1000 acres of potatoes of pure varieties. With an average crop of 200 bushels per acre, the aggregate yield will be 200,000 bushels. At an average price this will bring the young growers \$150,000 in cash. The growing of potatoes is made compulsory this year and the plots are to be from one-sixteenth to one-eighth of an acre in area.

#### CROP NOT INJURED

From what he can judge at present, although he admits it is a little early to tell yet, Chief Dominion Fruit Inspector Clarke of Vancouver says that the Okanagan fruit crop will show very slight effects of the hard winter just passed. He believes the production of fruit this year will equal, if not surpass, that of last.



## Synopsis of Coal Mining Regulations

Coal mining rights of the Dominion in Manitoba, Saskatchewan and Alberta, the Yukon Territory, the North-West Territory and in a portion of the Province of British Columbia, may be leased for a term of twenty-one years at an annual rental of \$1 an acre. Not more than 2,560 acres will be leased to one applicant.

Applications for a lease must be made by the applicant in person to the agent or sub-agent of the district in which the rights applied for are situated.

In surveyed territory the land must be described by sections or legal subdivisions of sections, and in unsurveyed territory the tract applied for shall be staked out by the applicant himself.

Each application must be accompanied by a fee of \$5, which will be refunded if the rights applied for are not available, but not otherwise. A royalty shall be paid on the merchantable output of the mine at the rate of five cents per ton.

The person operating the mine shall furnish the agent with sworn returns accounting for the full quantity of merchantable coal mined and pay the royalty thereon. If the coal mining rights are not being operated, such returns should be furnished least once a year.

The lease will include the coal mining rights only, but the lessee may be permitted to purchase whatever available surface rights may be considered necessary for the working of the mine at the rate of \$10 an acre.

For full information application should be made to the Secretary of the Department of the Interior, Ottawa, or to any agent or sub-agent of Dominion lands.

W. W. CORY,

Deputy Minister of the Interior

N.B.—Unauthorized publication of this advertisement will not be paid for.—58782.

#### FOUR DON THE KHAKI

Four more officials of the Department of Agriculture at Victoria have donned the khaki. They are Mr. Henry Rive, chief dairy instructor; Mr. Wm. Newton, who has been in the department for two years; Mr. G. L. Foulkes, who has at times filled the post of secretary of the horticultural branch, and who has been in the department for five years, and Mr. W. H. Robertson, the assistant horticulturist.

## Standardization of Fruit Packages.

By A. H. FLACK,

Chief Fruit Inspector, Prairie Provinces.

Standardization of fruit packages is a matter which warrants our serious consideration. The conflicting opinions that have existed, and probably still exist, have been responsible in aiding to complicate, rather than to solve, this important matter.

Some misunderstandings probably exist as to what is meant by standardization. I have frequently heard growers oppose any move in this direction by stating that they would not agree to any legislation that required them to pack a particular kind of fruit in any particular package, claiming that it would not be to their advantage to do so. As a matter of fact, standardization need not require this.

It would be necessary to select from the various packages at present in use what would be considered the best peach box, four-basket crate, berry crate, pear box, apple box, apple crate, etc., and standardize the packages selected. This would not mean that a packer would be required to pack only peaches in a peach box, or pears in a pear box, etc., but it would require that whatever package used would have to be of a size specified.

There are several reasons that should induce us to carefully consider doing this. Possibly the most apparent is that at the present time there are in evidence on our markets several sized peach boxes, apple boxes and crates, berry crates, etc., which result in confusion to the wholesale trade, retailer and consumer, and are, in some instances, responsible for price cutting.

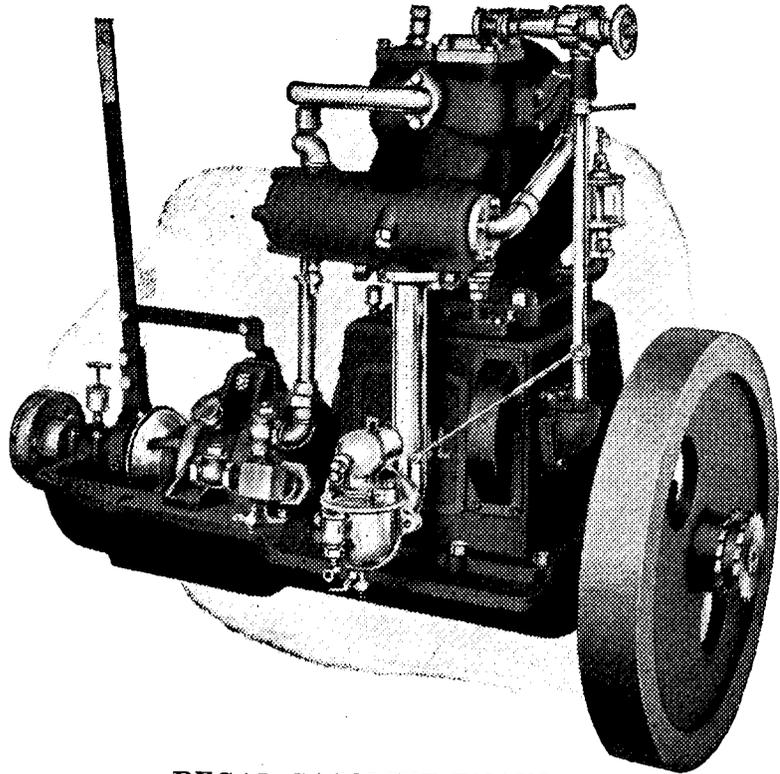
Quite a number of our shippers have adopted the Oregon apple box for domestic purposes, and it may be surprising that whereas the recognized size of this package is 11½ inches in width, 10½ inches in depth, and 18 inches in length, inside measurement, with a cubic capacity of 2173½ cubic inches, some boxes have been made only 10 inches deep, containing only 2070 cubic inches. During the last season the 24 deep pint berry crate was used by some shippers, with a supposed cubic content of 33.6 cubic inches, but packages have arrived on our markets intended for deep pints, but in reality containing only 27.89 cubic inches, or 5.71 cubic inches short.

In conversation with manufacturers of box material, both in British Columbia and Washington, they have advised me that they are sometimes approached to manufacture packages, particularly berry packages, just a little smaller than the usual size. Without standardization this condition cannot be controlled, and it is not necessary to emphasize that it is a situation far from desirable.

### Standardization Protective Measure.

An important point, and one that directly affects our interests, is that standardization would act as a protective measure against the importation of fruit in packages other than those adopted by us. Our competitors in the Western States have, on several occasions, introduced packages on our markets that varied from those in general use here. In view of the fact that the imported goods are usually on the market in advance of our own, and very often in packages superior to ours, they created a precedent in favor of the imported article. It has often been advisable for us to adopt these packages, and, in some instances, for

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our own protection, we have been compelled to do so.

Possibly we do not all realize to what an extent the introduction of packages different from those in general use in British Columbia affect us. British Columbia shippers have, until recently, when shipping prunes in peach boxes, used the 4-inch box. This package was fairly satisfactory and was identical with the package being used for prunes by our competitors. During the season of 1914, however, our competitors placed prunes on our markets in 3½-inch peach boxes. The price of our prunes is largely controlled by the quotations from competitive points, which resulted in our 4-inch peach box having to compete with the 3½-inch box as far as price was concerned. It was a surprising fact that, generally speaking, the wholesale trade could not get any more for our 4-inch box than they were getting for imported 3½-inch boxes, notwithstanding that there would be about 8 lbs. more fruit in the 4-inch package. The retail merchants claimed that it was impossible to impress the housewife purchasing prunes that she was getting better value in the 4-inch box at an advance in price over the 3½-inch package. To her it was a box of prunes, and she purchased the 3½-inch if the price of the 4-inch was higher, thereby obtaining imported fruit. It is, therefore, obvious that if the merchant was obliged to sell a 4-inch box at the same price as a 3-inch one, he could not afford to pay any more for it, and, in many cases, I believe, result in him buying our competitors' prunes. The wholesaler, in his turn, was unable to pay more than he would for the smaller package, with the result that the f.o.b. price of our prunes

was undoubtedly affected. The only manner in which this condition could be met was by our shippers adopting the 3½-inch package, which was practically impossible at that time, as box material was already purchased. The unfortunate situation during 1915 was that some of our shippers adopted the 3½-inch package and were able to quote lower than those using the 4-inch, which had a further tendency to reduce the price of the 4-inch to that of the 3½-inch. This condition is liable to arise at any time unless our packages are standardized. Assuming that all B. C. shippers adopt the 3½-inch peach box for prunes, we have no assurance but that our competitors may appear with a 3-inch box, unless we standardize our packages.

### How Competition Brought Down Price

The same condition existed on the prairie markets regarding our four-fifth crate for strawberries, and other fruit packed in this package. Season 1914 witnessed the introduction on our markets of the 24-pint berry crate from Washington. At this time our shippers were using the 24 4-5th crate, or the 24 2-5th crate for berries. The 24 4-5th crate was used for strawberries and came into direct competition with the 24 deep pint from Washington. The cubic contents of our 24 4-5th crate is 1332 cubic inches, while the 24-pint crate is only 806.4 cubic inches. In other words, the package we were obliged to compete with was approximately only three-fifths the size of the crate we were using. For this reason, then, we could reasonably expect for similar quality fruit, as well packed, that our package should sell for two-fifths more than the deep pint. Generally speaking, on our prairie markets, the four-fifths package sold for the same price as the deep

pint. There were a few exceptions to this; in some cases 25c a package more was realized for our four-fifth, as compared with the imported deep pint.

The imported pint crate predominated in our markets. It is a very neat, attractive package; the berries shipped well, were well packed and faced, and the package immediately became popular. This resulted in the retail merchant preferring the pint package, and eventually it was difficult for him to obtain more for the four-fifth than for the deep pint hallock, as the pint hallock set the retail price for a box of strawberries. In conversation with retailers they have advised me that customers have objected, if a higher price was asked for the four-fifth, stating that their competitors were selling strawberries cheaper. All the merchants' explanation that the hallocks were larger availed nothing, with the result that he would purchase the 24-pint crate and save himself having to make lengthy explanations to his customers, as he often had to do with the four-fifth. The direct result of this was that we were compelled to use the 24-pint crate. Unfortunately it was not possible to do this in 1914, as box material was already ordered, but in 1915 some of our shippers used this package, with good results. It would appear, then, that we have everything to gain, as far as British Columbia is concerned, in adopting the 24 deep pint package in place of the four-fifth. This package can be used with advantage for all the purposes that the four-fifth has been previously. In regard to this package, there is another advantage yet that our competitors had over us. Their strawberries and cherries are faced. Approximately there are 16 square inches to be faced in the deep pint, while the four-fifth has an area of about 25 square inches. It is therefore obvious that our competitors can face their package considerably cheaper than we can our four-fifth. The main point, however, is that with standardization, whatever package is decided on, everybody would be on an equal basis as far as packages are concerned.

Our 24 2-5th package, generally speaking, is not popular on the prairies. This package is used chiefly for raspberries and, owing to the very shallow hallock, which is only one inch in depth, the bottom of the container is very often exposed, especially should the berries receive a jolt in transit, which is often unavoidable. The impression given, particularly to the consumer, is that they are not receiving value, and I have personally often received complaints and enquiries as to whether the package is a legal one. All my assurances that it is a legal two-fifth hallock apparently have not satisfied those enquiring who, in every case, have been consumers. Practically our only competitor with this package is Puyallup, who uses the shallow pint, which measure 1 1/4 inches in depth. The additional 1/4 inch has made all the difference in the appearance on arrival, with the result that the shallow pint has found favor and is to be commended for raspberries.

#### "Four-Basket" Crate Pack Criticized

Our four-basket crate pack has often been criticized, the chief complaint being that the pack was not so heavy as the imported one. In a number of cases this criticism was justified. Unfortunately some very slack plum packs particularly have reached the markets. Slack packing can, of course—and should,—be remedied, but possibly we have overlooked the fact that

most of our competitors' tin tops are larger than our own, measuring 7 3/4 inches at the top, 6 1/2 inches at the bottom and having a vertical depth of 3 3/4 inches, compared with 7 1/2 x 7 1/2 inch at top, 6 1/2 x 6 1/2 at bottom, with a vertical depth of 3 3/4 inches in the tin-top used in British Columbia. We also find a tin-top from Washington measuring 8x8 inches at top, 6 1/2 x 6 1/2 inches at bottom, with a vertical depth of 3 1/2 inches. This acts to our disadvantage, and very few people in the trade even know that our four-basket crate is smaller than the Washington one. The Washington crate often sells in preference, being usually a heavier pack. The situation certainly warrants our consideration in having only one size four-basket crate.

With the introduction of a crate package for apples, we find that different shippers have various ideas as to what constitutes the best package for that purpose. The result was that five different packages were in evidence on our prairie markets last season, including imported ones, and it must be obvious that difficulties and confusion resulted to the trade from this condition.

It probably will not be disputed that sales f.o.b. shipping points are usually to the advantage of growers and should be encouraged. In dealing with standardization it is perhaps not necessary to enlarge on the disastrous results that a consigned market has on the producer. Many of the circumstances that have forced our shippers to consign are outside of their control, and I do not mean to suggest that standardization will overcome this difficulty, but I do believe that it will be a factor in encouraging f.o.b. sales and, for this reason alone, it is worthy of our attention. There have been cases on our markets where wholesalers have refrained from making any offer for a car, preferring to accept it on consignment in order to examine it and ascertain the packages, and I am confident that the trade would have more confidence in buying f.o.b. shipping point if our packages were standardized.

#### Standardization and Price Cutting.

Again, price cutting at shipping point usually immediately results in price cutting at distributing centres, and there probably is nothing that is so disastrous to the growers in general than this condition. It is apt to develop a consigned market, as the wholesaler would be dubious about buying while the market was so unsettled. I believe that standardization would assist in alleviating this situation, which would be advantageous to the producer.

In considering standardization there are several points to take into account before deciding which are the best packages to adopt. We must consider the manufacture and cost, shipper, packer and consumer.

The manufacturers' viewpoint is a very important one as it affects the cost. In deciding on our packages we should endeavor to have as many as possible the same length and width. It is obvious that a number of advantages would arise from this. The mills could work more economically, mixed cars could be loaded with greater ease and shock could be warehoused with less trouble, the same covers and cleats doing for possibly several packages. The sizes of our boxes and crates are, of course, largely governed by their adaptability to carry the fruit in safety, but as there are more than one package in which our fruit carries well, some diversity of opinion is almost bound to exist as to which is the best. It is particularly

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The old reliable Company that  
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BETWEEN  
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Eight Years of Successful  
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in regard to this phase that we should consider it with a broad mind and not permit our various ideas to obstruct accomplishing something definite.

The consumer's viewpoint comes last, but by no means least. With standardization he is protected, for no matter where he buys a package of fruit, he is assured of a standard size. For this reason I do not think that he enters largely into our consideration in determining packages, other than to see to it that our packages do not

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you get every quality needed for land clearing—*strength, power, speed*. The Kirstin is the only stump puller with variable speeds. This gives you a big advantage—saves much time. To start the tough stumps, you have enormous *power*; then when the stump breaks loose, a turn of a wrench gives *greater speed*. Any and all kinds of stumps—big, little, green, dry, tough—also trees and hedges—are pulled quick and easy. The Kirstin holds the record for lowest cost of operation. Prove our claims by

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The Kirstin can be used anywhere—on hillsides, in swamps and on rough ground or in thick timber where no other puller could be used. The Government uses Kirstins—so do several of the State Experiment Stations—and thousands of land owners from Maine to California and from Canada to the Gulf are loyal boosters for the Kirstin because it has demonstrated its superiority as a land clearing device. If you have only a couple of acres of stump land you can't afford to let it lay idle. Get a Kirstin now—clear out those stumps—make your idle land pay you a profit.

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Any one having stump land should get this valuable free book at once. It tells all about the wonderful Kirstin One-Man Stump Puller, the Kirstin Service Bureau, the Payment Plans and fully explains easiest, best, cheapest way to clear your land. Fill out the coupon or mail a postal—today—now!

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Please send me your free book on Stump pulling.

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**A. J. Kirstin Canadian Company**  
5803 Dennis Street, Sault Ste. Marie, Ont.  
"MADE IN CANADA"

Impress him that he is being treated unfairly.

To have packages to accommodate our various fruits, it undoubtedly then, would be advisable to select an apple box and crate, pear box, peach box, lug box, 4-basket crate, berry crate and cantaloupe crate. These packages, I believe, would be ample for all purposes.

### THE COST SYSTEM.

#### How the "New Fangled" Idea Works Out On a Prosperous Missouri Farm.

In a recent number of Fruit and Farm there was a suggestion that the cost system could be applied to farming. Some of our readers scoffed at the idea. We are glad, therefore, to read in Collier's Magazine of April 8 of a farmer, Mr. J. Ed. Hall, living near Lamonte, Mo., who has applied the cost system with excellent results to his place.

Mr. Hall read of the wonderful benefits obtained from the cost system in the big American industrial institutions, and concluded that if it proved so successful in a factory, there was no reason why it should not be equally so in farming. Nothing is done haphazard on Mr. Hall's farm. Everything is planned in advance and executed on the card system. He keeps a time card for each day. So does his wife. Each hour of labor is charged so much. The father sets a certain value on his time. The eldest son has his value; the second son a little less; the third son a little over half that rate, and all outside help is charged at a certain figure on the system. Even the time of the animals—the horses and mules—are graded at a certain price. When they cease to be profitable to the farm they are disposed of.

A careful record is kept of each field on the farm. The cost of the seed, labor, equipment, etc., is all carefully recorded and, if at the end of a year a loss is shown in that particular section of the farm, Mr. Hall knows how it came about. Not only that,

but at the end of the year he knows whether he has made money or not. His neighbors do not.

To quote from Collier's:

"Too much bookkeeping," the average farmer will say. And it does require a good deal of additional work, but it pays, Mr. Hall finds.

"Keep a boy's mind engaged, and you will have no difficulty in keeping him on the farm," he says. "The most interesting period of the day's work on my farm is when at night we figure up the day's work."

When Mr. Hall bought his farm, it had been tilled for more than sixty years, and his neighbors laughed when he paid \$40 an acre for it. But they don't laugh now; any one of them would gladly pay him \$125 an acre for the place, and consider it a good bargain; this in spite of the fact that no considerable sum has been spent in permanent improvements.

Mr. Hall is a "book farmer." Not a dollar's worth of grain is grown for the market. Everything is put back into the soil. By carefully rotating his crops Mr. Hall has made his farm the richest in his county. He fattens hogs and sheep on cow peas, soy beans, alfalfa, rape, corn, and rye. He has something for feed almost the year round. One year when two months passed without rains and nearly all the corn in that neighborhood was ruined the fields on Mr. Hall's farm were green.

The government selected Mr. Hall's farm as one of its three experiment stations in Missouri. He sends daily reports to the government experts located at the Missouri Agricultural College at Columbia, Mo. He accepts the suggestions of these experts and follows them implicitly. And he finds that it pays.

About the house one can see evidences of an exceptional farm. The dwelling, while not pretentious, is comfortable. A water plant furnishes running water throughout. A gas plant lights every room. Mail from the rural route stopping point a quarter of

a mile away is brought to the house by means of a carrier system on the style of that used in department stores. A furnace supplies the bath rooms and two floors with hot water.

The farm has paid for these improvements. Besides, the three sons are attending school or college and all of them will have college diplomas when they are ready to go to farming for themselves.

Farmer Hall is a plain, ordinary citizen. He has worked hard all his life. He had to. He didn't have an opportunity to get an education, but this made him all the more eager that his sons should not suffer the same handicap. Another of his hobbies is that there should be time for play, as the periods assigned to "hunting" or "fishing" on the time cards indicate.

Perhaps the most striking thing to be observed on the farm is the fact that everything possible is done to lighten the household duties of the womenfolk. Seldom an afternoon passes that Mrs. Hall does not find time to take an after-dinner nap—a thing almost unheard-of on Western farms.

"She's like the Frenchwomen in that respect," Mr. Hall says. "And I am mighty glad she has the habit."

### BRAIN FOOD

Keep preaching it, that every one-horse farmer ought to take \$5 worth of papers, every two-horse farmer \$10 worth, every three-horse farmer \$15 worth. Southern farmers spend \$50,000,000 a year to fertilize their lands. If we'd spend about \$1,000,000 more a year to fertilize our brains, would profits likely be doubled? And have you ever noticed it that the man who is "too poor to take a paper" is not too poor to buy whisky to stunt what God-given brain he has? Half the money the South has spent for whisky would give a library and a perpetual newspaper subscription to every home in the South.—The Progressive Farmer.

# BRITISH COLUMBIA FRUIT and FARM MAGAZINE

A Monthly Journal Devoted to the Interests  
of the Man on the Land

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Vol. VIII.

MAY

No. 5

## EDITORIAL

### WILL AID CHILLIWACK GROWERS.

Through the efforts of the British Columbia Fruit Growers' Association executive, valuable concessions in express rates, through joint rates, and express car ventilation, have been secured over the C. N. R. to prairie points, in the interests of the growers and shippers of small fruits in the Chilliwack valley. The association recently met in convention at Victoria, and at the close of the convention the transportation committee met Mr. Muir, general superintendent of the Canadian Northern Express Company, of Winnipeg, relative to this and other matters affecting the fruit industry of the coast. Secretary R. M. Winslow, of the association, in writing Mr. Thornton, the Chilliwack member of the executive, says: "We pressed on him the various necessities of the small fruit traffic at Chilliwack. As a result he agreed to the installation of a rate from Chilliwack to C. N. R. prairie points on the same basis as Mission and Harrison have to those points by the Dominion Express. This will remove Chilliwack's handicap in this respect, and should be of considerable assistance to the growers. He also undertook on our representations, to provide ventilation equipment for their express cars to ensure proper carriage of fruit. He also agreed to install through joint rates for fruit originating on Dominion Express lines in B. C. at 20 per cent under scale rate from the transfer point. This concession is one we have been working on for years past. It implies on the other hand, a similar arrangement of transfer at similar rates to Dominion Express lines to the prairie for traffic originating on C. N. R. lines in B. C. Our transportation committee has already done good work for the growers of your district, and this should help considerably the membership in your district."

### PROTECT THE PUBLIC

In asking that imported eggs bear the stamp of the country from which they come, the poultrymen of British Columbia are not only protecting their own industry from serious and unfair competition, but are asking for something that will be in the best interests of the public.

Chinese eggs a few years ago threatened to ruin the great poultry industry of California. So alarming did the condition become that a commission was sent to China to study the subject. It was found that the conditions there under which the industry was carried on were so filthy and disgusting and created such a menace to health that upon the publication of the commis-

sion's report the legislature of California imposed very strict regulations relative to importations, despite the claim of the California cake manufacturers that cakes, etc., in which Chinese eggs were used, "stood up" better than if the home product was used.

It is a well-known fact that Chinese eggs are held for months in cold storage, shipments arriving in March often being put on the market in November, when prices are high. Some dealers have been known to label the imported eggs, the small size of which excite suspicion, as "pullets' eggs." In San Francisco 720,000 Chinese eggs have been destroyed; in Spokane two-thirds of the importations have been found to be rotten.

While there is a big argument in favor of strict regulation against imported eggs in that Chinese eggs can be laid down in British Columbia as low as 11 and 12 cents a dozen and the fact that we have a rapidly growing poultry industry in this province that will in time be sufficient to take care of home consumption, it appears to us that the best arguments for the new legislation lies in the pure-food aspect of the question. Health comes above all other considerations, and that in itself should be sufficient to induce the federal government to act.

### KEEPING OUT DISEASE

The hot weather will soon be here with its companions, flies and mosquitoes. The real remedy, of course, would be to keep the premises in condition that they would not breed the insects, but this is an ideal state that is next to impossible. In lieu of this, the next best thing is to screen windows and doors. The prudent husband in justice to himself and his family, will see that this is done. The cost will be but slight, and, besides the comfort it will give, the health of the wife and children will be greatly protected. Flies and mosquitoes breed disease. By protecting windows and doors with screens you may be saving the life of some member of your family.

### EGG EXPORTS.

The anomaly of agricultural Canada importing eggs is passing and Canada is now exporting eggs. Two things are contributing to the success of the export business. Since the war foreign shipments to Great Britain have been seriously interfered with. Trade with Russia, a great egg-producing country, was practically shut off and the way was open to Canadian shipments. This and the fact that we are beginning to produce more eggs than ever has been working great changes in the Canadian situation. Last year Canadian hens laid eggs to the value of \$30,000,000. They are going to do better this year. There is a production and thrift campaign on in the Dominion through which all may do their "bit" towards the success of the Empire in the present struggle. One of the ways to help this campaign is to keep a small flock, thereby serving your own table and helping to increase the exports of eggs. Every egg you produce for your own table leaves one extra for the export trade.

### CROP COMPETITIONS.

The horticultural branch of the provincial department of agriculture announces that horticultural crop competitions will be conducted again this year. The various competitions are: 5-acre plots of bearing orchard; 5-acre plots of young orchard; 1-4-acre plots of raspberries and strawberries; 1-2-acre plots of onions and tomatoes; 1-4-acre plots of celery; farm gardens;

city garden. Twenty such competitions were held last year throughout the province, and by encouraging greater care and attention, assisted materially towards better crops.

Farmers' institutes and fruit growers' organizations are required to organize the competitions, in which work, however, they may call on the services of the assistant horticulturists. In the case of city gardens any organization for civic betterment may promote a competition. The department, in addition to providing assistance in organization and in supplying the major portion of the prize money, will also supply the judge from its official staff.

The announcement in full with rules and regulations, application forms, etc., can be had from the department at Victoria.

### A HALF HOLIDAY ON THE FARM.

Just now the cities and towns of British Columbia are in the throes of a weekly half holiday discussion. Not one but agrees that a weekly half holiday is necessary and the only thing at issue is on what day there should be a general cessation from labor.

While the urban population of the province is thinking of its recreation why not the rural section? Play is now recognized as an important feature of human life—at least it is so recognized in the city life. Social workers and civic reformers have paved the way for the movement until now everyone in the city has been educated up to the necessity of the half holiday idea.

Unfortunately the effect of this later day gospel has not been generally felt in the rural communities. The average farmer would "take a fit" if it were suggested that he and his family were to have a regular day in the week on which all would "knock off" work for half of the day. And yet the farmer works as hard, if not harder, than the city man. He is getting richer faster than his city brother but thinks he must work a good deal harder. Then he wonders why his boys will not stay on the farm.

Not for a moment does the farmer relax. Harvest time, of course, obviates the half holiday in that period. Harvest time to the farmer is what a panic is to the stock broker with this difference. After the panic is over in the stock market the broker hies away to the seaside for rest and recuperation. When the harvest is over the farmer keeps right on getting ready for the next crop. His family keeps right along with him. By and by the terrible monotony of the daily grind gets on the nerves of the farmer's boy and he eagerly waits for the time when he can escape to the city.

Why cannot rural British Columbia inaugurate a half holiday? Time was when the farmer was up before daylight and toiled till after sundown. Some do yet, but many are learning more about the pleasure of living. Perhaps in time we will have a rural half holiday for the greater part of the year, making allowances for the extra rush at harvest time.

### THE CODLING MOTH

The Provincial Department of Agriculture is putting up a strong fight against the inroads of the codling moth in northern Okanagan, and has had four big power sprayers at Westbank, across the lake from Kelowna, with three more power sprayers at Vernon. Mr. Winslow says that it is hoped to buck the codling moth this season to the point of extermination. Much of the infection comes from foreign fruit cars entering Canada, and then getting to the fruit districts for the loading of British Columbia fruit.

## Marketing British Columbia Fruit

By R. C. Abbott, Coast Markets Commissioner.

In the past years there has been altogether too great a quantity of foreign fruit sold on these markets to the detriment of our growers. A number of reasons have been put forth as to why this has been the case.

First—The season in the south being earlier than in British Columbia, made it possible for the southern grower to ship into these markets and thus fill the demand before our growers got on the market at all. In soft fruit this is true to a great extent, and every endeavor possible was used this past season by press notices, distribution of fruit date cards and other means to acquaint the consumers with the fact that our crops would be on the market at a certain date, and to wait for and buy only B. C. grown products.

This has had a decided effect on the sale of imported fruits and also proved beyond doubt that the consumers themselves prefer to patronize home industry where possible. My investigations also proved the inability at times of our shipping organizations to fill this demand which we had held in waiting for our B. C. products. This was particularly noticeable in the case of strawberries and apricots.

Second—The lack of a dependable and sufficient supply at all times.

Third—There was the possibility of commission houses bringing in this early fruit and filling up the demand at a fair profit to themselves, knowing that when ours did come on we would be compelled to ship on consignment and they would be in a position to sell same at ridiculously low prices, which would move the fruit in spite of the poor demand, and any commissions made would be money found.

Fourth—A "longer margin" of profit to the wholesaler on inspected fruit. This is brought about in different ways. Consignments sent in from the south; job lots picked up in the American coast cities; brokers from Vancouver houses buying for cash direct from the Washington grower, and assembling cars at different points; buying on "advance payment" per box, which is commonly known as the semi-consignment plan. This latter plan of securing fruit, which is only practised by very few firms is very demoralizing to any market, as these firms hold in their hand a weapon with which they can break a market at will by underselling the legitimate jobber. This plan of buying on a small advance worked havoc with our apple market during the fall of 1914 and early spring of 1915. Steps taken during 1915 to discourage this system met with considerable success.

Fifth—The unreliability of our grades and packs in the past years. This matter will be noted carefully in dealing with the different kinds of produce marketed and there is no doubt but what there will remain suspicion and prejudice against our produce until such time as our growers can absolutely guarantee to the dealers by actual demonstration that any fruit offered by them will be, when shipped, according to the standard offered. Knowing the actual existence of the above-mentioned facts I gave a great deal of attention during the season to the study of how to bring about that much needed "confidence" of the wholesaler, retailer, and also the consumer, in the ability of our growers to market

their produce according to the standards required by the trade.

### Unbusiness-like Business.

Our fruit and vegetable markets are continually being demoralized and kept in an unsteady state by growers shipping their fruits and produce in on consignment irrespective of the conditions of the market. Not only do they ship without previous notice to the commission house, but in many instances they will continue to ship large quantities of perishable fruit even when requested by the commission house to stop. The outcome of this is that the commission house has to get out from under his stuff, and in order to do so breaks the market, and the loss is not only on the one shipper, but comes on many other shippers who are trying to solve the question of proper distribution and better markets. While we deplore this practise and have a thorough knowledge of the disastrous results caused by it, we cannot say that it will be entirely overcome, as long as we have independent shippers, who from their end are unable to keep in daily touch with the market conditions.

### Shipping Direct to Retailers.

In a large city like Vancouver, which is the central marketing point for local fruits and produce, direct shipment to retailers on the consignment plan is detrimental to the best interests of the producers. Direct shipping to retailers at a set market price should not "hurt" our markets, but consigning to "cut-rate" retailers has brought little profit to the shipper and ruinous result to our markets.

It is impossible for any grower living at a distance to measure the selling capacity of a retail store, and invariably we find the retailer being overloaded, who in turn either slumps this perishable produce off at ridiculously low prices or, after holding it in his store until it is almost rotten, sends it to the commission houses to sell.

### Patriotism and Economy.

Many appeals have been made to the consuming public of late to be more patriotic in their purchasing, and the response has been greater than was at first anticipated. These have been strenuous times in the cities, and many consumers have been forced to the point of placing "pocketism" ahead of patriotism, and these must not be judged too harshly, for many a man who in good times would give preference to home products irrespective of price has now to consider price first and price only.

### Weekly Reports.

Regular weekly market reports were issued from Vancouver from April 10th to December 31st. These reports were issued and mailed each Saturday night so as to be in the hands of the farmers Monday morning if possible. In making up these reports care was taken to have them give the true conditions of the markets and also to give the farmer an accurate list of market quotations.

In addition to the regular weekly market reports, private and individual reports were given out whenever requested.

### Advertising

Publicity work, along with my other work, becomes a necessary feature, and although not carried on as extensively as I would like to have done, yet the results obtained proved to be of excellent value to our producers.

## "CUTHBERTSON'S" Infants' and Childrens' Wear

The Jaeger Co. produce a greater variety of dainty garments for Infants and Children than any other makers that we know of.

Garments of this brand are made only of the most refined yarns—that are absolutely non-irritant to the most delicate skin.

A complete assortment of inner and outer garments for Infants and Children---Mail orders receive our careful attention.

Please write for Catalogue and Price List.

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The newspapers in the cities have supported the fruit growers admirably and given much free advertising.

During our strawberry campaign our newspaper boosting was given free, and occasion was taken to place before the public information whereby they could gain some knowledge of the extent of our berry industry. The wholesale trade worked in conjunction with your market commissioner, and on his suggestion carried, for three weeks, canvas banners on their delivery trucks bearing the words: "Buy B. C. Grown Strawberries; Preserving Dates, June 1st to 14th."

Previous to our strawberry season and just when the heavy imports were likely to come in, 500 display cards were distributed to the retail grocers in the cities. This gave me an excellent opportunity to converse with these people and place before them the facts in regard to the fruit-growing industry of British Columbia and to make an appeal to each of them to assist in promoting the sale of our products by buying only those grown in British Columbia.

These display cards covered both strawberries and raspberries, and appealed to the people to support "Grown in B. C. Berries" and thus to keep at home some \$85,000.00 which had been spent in 1914 in imported berries alone.

"Best time to buy B. C. Fruit" cards were also distributed through the retail stores.

"British Columbia Fruit Booklet." This booklet, containing some 225 receipts, besides other valuable information, has indeed been one of our best, if not the best medium for advertising the merits of our fruits. Five thousand and seven hundred of these were distributed through my office. Of this number over four thousand were given out individually to consumers.

This little booklet might be termed the growers' "Silent Salesman," and it has no doubt been the means of materially increasing the consumption of our fruits this season.

Those who have put up their fruit without sugar this season have met with good success, and there is no doubt but what large quantities will be done this way next season.

The consumption of tomatoes, just when there was a likelihood of a break in the market, was greatly increased by press notices and the issuing of circulars on the "Home Canning" of tomatoes.

During the season for soft fruits "Fruit Talks" were also given before the different women's organizations in the city.

After careful consideration had been given to the matter of putting on a "Apple Week" in the coast cities, it was thought advisable to abandon this idea this year, and direct our efforts to obtaining a greater and quicker movement of our apples by newspaper advertising.

**Packages**

Comments on the package question usually draw severe criticism from the growers who do not yet realize the great necessity of a "standard" package for the different kinds of fruit and the undisputed fact that one of the great features to be considered in "working up" and "holding a market" is giving to the consumers value for their money.

A great deal of confusion was experienced by the trade and consumers during the past season on account of the growers using different sizes and different shaped berry crates and while I may dislike to mention this fact, I am in duty bound to say that, to the majority of the trade and consumers alike, "a crate is a crate," irre-



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spective of size, and the prices obtained for the large crates did not warrant their use. As long as the growers continue to use a number of different size crates for the same kind of berries, there will always be confusion and dissatisfaction in prices, but as soon as we eliminate all the sizes but one—no matter what size we adopt—then the price will adjust itself accordingly.

The test given the climax basket this season was not a fair one. Growers used the wrong size of basket for certain heavy fruits, and too large a size for certain over-ripe and soft fruits. Teamsters and expressmen abused the basket in handling, and wholesalers' salesmen did all they could to discourage its use. I would advise growers to give more attention to which fruits they ship in this basket, and I would further recommend the use of the six-quart and eleven to some limited extent for high-grade red-colored desert apples, as I believe the use of a smaller package than the present box for this class of desert apples would meet with approval of the consuming public, as at present they who cannot use a whole box at a time have to buy by the pound and carry home in a paper sack.

During the past year the sales of foreign fruits in the coast cities have been cut down to a large extent.

**The Situation in Vancouver**

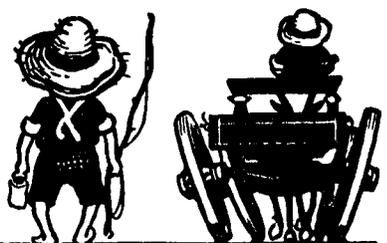
I would like to make a few remarks in regard to the apple situation in the city of Vancouver. The apple market this year has been in favor of the British Columbia grown product. British Columbia grown apples of 1914 were on sale here up to May 1st. The varieties consisted of Yellow Newtons, Spitzenburg, Ben Davis, Hall's Jenettes, Red Cheek, Pippins, Grimes' Golden, Baldwin and Spys. Most of these varieties were showing waste, the Baldwins from the Okanagan Valley holding up well.

From the time the early apples first arrived on the market till the end of the year our supply has been equal to the demand as far as quantity is concerned, yet at times somewhat short on certain sizes and grades.

The early apple market was supplied almost entirely with B. C. apples, there having been only a few boxes of inferior quality brought in from Wenatchee.

During the latter part of September and the early part of October the demand favored the No. 1 grade, but on account of the high prices it suddenly changed to the No. 3 grade and crated stock, and has held strongly to this class of apple right up to the first week in December, when it suddenly changed again to the better grades.

The pack and grade of British Columbia apples this season was on the whole well up to standard, which will work to the benefit of our growers in the future. Notwith-

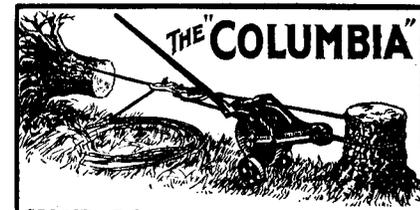


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standing this, there are a few facts we feel we must comment upon. Wholesalers complain that in buying a car of apples they do not know what they are going to get as to sizes, etc. This is a very important fact, and shipping organizations would do well to furnish their brokers with a (detailed) manifest showing the number of boxes of each size contained in the car and any information necessary. Large sizes of desert apples are poor sellers on these markets, yet jobbers can always handle a certain proportion in each car. Another very important matter is the establishment of a standard for the No. 3 grade by selling organizations themselves. The wide scope used in putting up this grade most certainly works against the growers to a certain extent, and is also confusing to the consumer. For one organization ships in "orchard run" stock graded No. 3, and another takes out the No. 1's and No. 2's and ships in the balance as No. 3 grade, while still another shipper will send in, under No. 3 grade, that which is no better than hog-feed; yet all these to the consumer and also to the trade are simply "Grade No. 3."

A noticeable feature of our apples this season was their poor keeping quality, no doubt by the abnormal climatic conditions this past season, which caused nearly all kinds of fruit to mature at least twelve days sooner than other years.

Viewing the apple situation right through the season, we believe this to be the most satisfactory year that our growers have ever experienced on this market, both as to price and the quantity sold. Further, I believe had our people been able to supply the grades and varieties requested at times by the commission houses the imported apples could have been entirely cut-out.

The demand for British Columbia apples is proved by the fact that a can of fancy apples from Cashmere, Washington, brought in early in September and distributed along the wholesale row was not cleaned up till late in November. The price of American apples declining in November, the Vancouver jobbers, anticipating a rapid raise in prices after the first of the year, placed the greater portion of imported apples brought in during November and December in storage, to be brought out after the British Columbia stock is cleaned up.

The heavy months for imports were January, February, March, October and November. Two interesting facts in regard to the imports are that out of the total of 118,240 boxes brought in, 66,111 boxes were received during the first three months of the year and 18,170 boxes were on hand at the end of the year.

**THE APPLE TAX AGAIN.**

A convention held in Moose Jaw, Sask., last month attended by representatives of the B. C. Fruit Growers' Association and members of the executives of farmers' organizations of three prairie provinces brought out a full discussion on the higher protection which the B. C. fruit growers are asking to prevent unfair competition from American growers. Mr. Thos. Abriel of Nakusp, president of the B. C. Fruit Growers' Association, pointed out that Oregon and Washington could supply the world with apples when all the trees were bearing and then some of the crop would have to be destroyed on account of over-production. He said that in British Columbia there was little over-production and the consequence was that Canadian growers were forced to meet the competition of inferior grades of fruit dumped on the

market at prices lower than the cost of production in British Columbia. He stated that the increased duty asked was to protect Canadian growers against this dumping of fruit from United States.

Unfortunately, however, the prairie farmers' representatives could not see the advantage in protecting a Canadian industry. Viewing the matter from the standpoint of what appears to them their own immediate advantage, they stated it was unfair for growers in the coast provinces to seek a legislation to force the prairie consumer to pay the higher prices in order to cover the higher cost of production in British Columbia which it was claimed, was brought about by the necessity for irrigation and other overhead expenses.

It did not, evidently, occur to these farmers that the apple industry of the west was in a precarious condition—a condition that in time would have affected them. What was to prevent the American grower, when he had successfully secured control of the Western Canada market and ruined the British Columbia growers as a factor for competition, in running up the prices to suit his own fancy or to ship in a decreasingly inferior grade of apples into this country? Canada will never be developed by running any of its great industries, such as fruit growing for the temporary advantage of cheaper prices to the prairies. Just as in any great organization, the success of the whole depends on the efficiency and good conduct of any single department, so it is with the several industries or sections of the country that go to make up a nation. British Columbia and the prairie provinces have much in common and it is by working hand in hand for the benefit of the other that the best results will be obtained. At the best the increased price the prairies may have to pay for apples as a result of the new tax—and even this is very problematical—is so slight as to create no serious factor. It will never be noticed by the prairie farmer and it means the very existence of thousands of British Columbia fruit farmers.

**A NEW INSECT PEST**

The appearance of the Pear Thrips, a new insect found last year near Victoria, capable of destroying an entire crop of apples, plums, etc., by attacking them in the blossom stage, is the first recorded arrival of the pest in Canada. Mr. R. C. Treherne, of the Dominion Entomology Department, says a mixture of nicotine, sulphate and soap has been found to be effective, and tests are going to be made of miscible oils.



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# Beekeeping in British Columbia

By WILLIAMS HUGH

## TO THE BEEKEEPERS OF BRITISH COLUMBIA.

Department of Agriculture,  
Victoria, B. C., March 23, 1916.

### Bee Culture.

The season of 1915, from a beekeeping standpoint, having been the worst that British Columbia has seen in 30 years, it is probable that 1916 will be at least an average year, so now is the time for each beekeeper to put forth the best that is in him.

The average of 23 pounds to a colony all over the province, especially when so many beekeepers were practically beginners, is encouraging for the worst season known; in fact, very few regions in the world have so enviable a record. At the prices ruling in the province for local sales and most of our honey is sold to neighbors, it meant an average income of four dollars per hive. In the great honey regions of this continent, professional beekeepers consider the season good when the income averages five dollars from a hive. Such figures clearly indicate that British Columbia both in average crop and in price is peculiarly favored, and that it is really worth while for the beekeepers to put brains into their business.

Furthermore, our long springs have enabled the inspectors to formulate a system of management that calls for far less labor than is necessary in other regions where the building-up season is short. In fact, now that we know the worst about beekeeping in British Columbia there is no need for anyone to be the least downhearted, but there is great reason for all to be optimistic.

### Inspectors' Work for the Season.

Mr. Harris and Mr. Sheppard will work their districts as usual. Mr. Todd, instead of holding demonstrations for the first six weeks of the season as in past years will at once proceed with inspection work in the foul brood regions of his district, but at the urgent request of many beekeepers who want to see the details of a season's work he will every Saturday afternoon at 2:30 give demonstrations at the Sugden Apiary, Lynn Valley, North Vancouver, where he has the management of two dozen colonies. Those who intend being present should take the North Vancouver ferry boat at one o'clock on the Vancouver side, connecting at North Vancouver with the Lynn Valley car. The conductor will give all necessary directions.

The colonies of this apiary were packed for the winter according to the system described in the revised issue of Bulletin 30. From September 1st, until the end of February they were absolutely uncared for, and for several weeks were buried under

three feet of snow. When the thaw came not a single bee left the hives until all the snow was gone. A brief examination at that date showed every colony so packed to be not only alive but very strong, and with plenty of stores. An apiary in such condition at the end of the winter has great possibilities for honey production in a normal season, hence it will be worth while for those who can spare the time to follow its management during the season.

It is Mr. Todd's intention to make considerable increase during the year, so there will be opportunity to see how colonies are increased artificially; how weak hives are strengthened and built up for the honey flow, in fact, the general routine of an apiary for a whole season will be on display for those who can find time to attend.

### Bees in Ordinary Boxes.

The Foul Brood Act demands that all bees in the province shall be kept on movable frames, but there are still in some districts of the Lower Fraser a number of colonies that are housed in ordinary boxes and cannot therefore be examined. The inspectors have been as lenient as possible in the past, but with the menace of foul brood in the district, they will, in order to protect those who are investing their capital in the industry, destroy from now on all such colonies, unless they find that an effort is being made to transfer them to regular hives. Anyone owning colonies so housed should notify the inspector if he wishes to sell, and the inspector will probably find a buyer for them.

### Bees for Sale.

Every spring the inspectors have enquiries from those who wish to buy bees. Beekeepers who have bees for sale should notify the inspector of their district or the department, who will refer prospective buyers to them.

### Reminders.

If all needed supplies for the season are not on hand, attend to the matter at once.

Read the Calendar of operations on the first page of Bulletin No. 30, making special note of the table showing brood increase at various dates.

WM. E. SCOTT,

Deputy Minister of Agriculture,  
Victoria, B. C.

L. HARRIS, Vernon, B. C.  
W. J. SHEPPARD, Nelson, B. C.  
F. DUNDAS TODD, Hotel Canada,  
Vancouver, B. C.

### FOUL BROOD BEES ACT, 1911;

Chap. 18. S. 1. C. 11.

The Department of Agriculture has issued the following notice:

"Sir:—I have the honor to bring to your attention the fact that owing to the con-

tinuance of Foul Brood in certain districts of this province, which has been directly traceable to bees imported from outside points into the province, the Hon., the Minister of Finance and Agriculture, issued a public notice under authority of Order-in-Council No. 468, approved April 27, 1915, to the following effect:

"Notice is hereby given in conformity with Section 12, of the Foul Brood Bees Act, 1911, Chap. 18, that any or all bees imported with their hives into the Province of British Columbia shall be quarantined at the point of entry into said province or at such other place as may hereafter be appointed for a period of not more than nine months, and if such bees are found to be infected they shall be destroyed, and to further recommend that bees imported by the pound, in packages, or crates, may be admitted into the Province of British Columbia upon production of a satisfactory certificate from a State or Provincial Inspector, of freedom from Foul Brood at point of origin."

### BEEKEEPERS' EXHIBIT AT VANCOUVER FAIR

The committee appointed by the Beekeepers' Association of B. C. to formulate a program and list of prizes for the proposed exhibit at the Vancouver Fair to be held during the second week of August, have produced a comprehensive list. There is to be a display of the products of the apiary, exhibits of various kinds of hives, made in British Columbia, and other appliances used in the apiary; an attractive educational display, showing the development of the bee from the egg to the winged insect, observation hives of various kinds, and illustrations showing the anatomy of the bee. Prizes will be offered for exhibits of honey in sections, jars, and bulk, and for bees' wax. There will be a special prize for lady beekeepers, and to keep in mind the old truth, "Unto him that hath shall be given," gold, silver and bronze medals will be given to the exhibitor winning the largest number of points. It is proposed to hold a convention of beekeepers Thursday of the fair week at 10 a.m. on the grounds of the exhibition, and the management have generously granted members of the Beekeepers' Association free passes for the day. All interested should use every effort to make this exhibit the biggest and best feature of the Vancouver Fair. However small your contribution may be, it will assist in making the exhibit a success. Full particulars will be published in our June number.

### MEETING OF THE BEEKEEPERS' ASSOCIATION OF B. C.

The large hall of the Board of Trade in Vancouver was filled to the limit with enthusiastic followers of the honey craft, April 5th, from all parts of the province. The association having incorporated, it was necessary to hold a general meeting of the members within three months from the date of incorporation. Mr. D. Mowat, pres-

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ident, occupied the chair, supported by Mr. John Reagh, of Ladner, and Mr. E. S. Knowlton, of Vancouver. Secretary Hugh reported that the Department of Agriculture had granted a certificate of incorporation, and he had applied to the department for a small grant towards defraying the expenses of an exhibit of the products of the apiary at the forthcoming Vancouver fair, to be held next August. Mr. Hugh reported he had taken the question of an exhibit at the fair up with the manager, who had promised to give the association every assistance, and granted a free site, with material, for a stand.

The members discussed the securing of a label of a distinctive design. The question was referred to the committee on labels—Messrs. E. S. Knowlton, Geo. Coe, W. H. Lewis. The important subject of supplies to members at a reduced rate was left with the committee—Messrs. W. H. Turnbull, Chas. Sprott, Fred E. White and E. C. Appleby. Chairman Turnbull reported as follows: "I, the undersigned, beg to report on behalf of the committee on supplies that the attached tender of Messrs. Trapp & Co., Ltd., was the lowest one we received, and acting upon your instructions, we accepted same." The tender submitted shows a considerable reduction to members on the price of foundation and other supplies. All members will be granted the reduced rates for cash with order. The following comprise the exhibition committee: D. Mowat, Wilfred M. Smith, W. C. Harris, Fred E. White, Mrs. Langford, John Brooks. The committee met and drew up a list of prizes which will be found in another column.

Mr. W. H. Lewis delivered an instructive and interesting address on "Spring Management and Swarm Control on the Lower Mainland of B. C.," relating his experiences from the time when the present City of Vancouver was known as Gas Town to the present day. During the past seven years he had had no swarming in his apiary except superceding swarming. Mr. Lewis has promised to give his methods for publication in the near future. Mr. J. Brooks read a paper upon the work of the queen, and Mr. Fred E. White read a paper on "Honey Exhibits at Fairs." Both papers will be published in the Fruit & Farm Magazine.

Mr. F. Dundas-Todd, F.B.I., answered many questions. The very successful meeting closed with an addition of thirty new members to the association.

#### NOTES FOR BEGINNERS

There is considerable difference in time from the laying of the egg in the various cells by the queen to the fully developed bee in the Imago stage.

The egg deposited in the queen cell passes through its several stages to the matured queen in 15 days.

The egg in the worker cell becomes a full-grown worker bee in 21 days.

The egg in the drone cell takes 24 days to become a fully developed father.

The transformation or metamorphosis of the egg to the imago may be retarded or developed a few hours by a variation in temperature.

During the process of change from the egg to the winged form, we have the larva, then the larva spins a cocoon, then there is a resting period, then that form called by Aristotle, pupae or nymph, then the Imago, or term given by Linnaeus to the winged form of the fully developed insect.

The various cells are sealed on the ninth day.

# BEEKEEPERS'

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The queen bee leaves her cell on the 16th day.

The worker leaves its cell on the 22nd day.

The drone leisurely comes forth into the world of life on the 25th day.

The queen flies on the 21st day and the worker and drone on the 38th day.

There may be a little difference in time when the several actions take place within the hive, but the student can rely on the above mentioned times.

Dr. C. C. Miller stated some time ago in "Gleanings" he had six queens out of their cells in 14 days, 17 hours, 50 minutes. From my own observations I attribute this early development to the maintaining of a steady temperature.

Mr. Dundas Todd, F.B.I., announced at the beekeepers' meeting he would hold demonstrations every Saturday at 2:30 o'clock in Mr. Sugden's apiary, Lynn Valley. Let me urge upon all those commencing beekeeping to attend and learn the inside view of bee activity. By attending you will readily grasp the best method of manipulating frames, and you will gather more information one afternoon than you will in a month's reading. Take the 1 o'clock North Vancouver ferry, then the Lynn Valley car.

The backward spring with its accompanying rains and winds is responsible for delaying brood rearing, and much spring dwindling will follow unless the present inclement weather gives place to warm sunny days, enabling the bees to gather pollen and nectar from early bloom and blossom. If any colonies are found to be low in stores, feed with syrup. If you have no feeders, then sweetened water. This enables the bees to provide the necessary food for the brood, and encourages brood raising.

Under the heading, "Notes from My Apiary," I have been promised letters from such well-known beemen as John Reagh, of Ladner; Tom Lehman, W. Hill-Tout, Fred F. White, W. H. Lewis. I am sure the many who are about starting out along the honey way will find much encouragement from these friends. All are aiming at more production and better beekeeping.

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# Production and Thrift

"CANADA from her abundance can help supply the Empire's needs, and this must be a comforting thought for those upon whom the heavy burden of directing the Empire's affairs has been laid. Gain or no gain the course before the farmers of Canada is as clear as it was last year—they must produce abundantly in order to meet the demands that may be made, and I believe this to be especially true in regard to live stock, the world's supply of which must be particularly affected in this vast struggle. Stress and strain may yet be in store for us all before this tragic conflict is over, but not one of us doubts the issue, and Canadians will do their duty in the highest sense of that great word."—HON. MARTIN BURRELL, Minister of Agriculture.

"MODERN war is made by resources, by money, by foodstuffs, as well as by men and by munitions. While war is our first business, it is the imperative duty of every man in Canada to produce all that he can, to work doubly hard while our soldiers are in the trenches, in order that the resources of the country may not only be conserved, but increased, for the great struggle that lies before us. 'Work and Save' is a good motto for War-time."—SIR THOMAS WHITE, Minister of Finance.

## THE CALL OF EMPIRE COMES AGAIN IN 1916

TO CANADIAN FARMERS, DAIRYMEN, FRUIT GROWERS, GARDENERS

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"THE AGRICULTURAL WAR BOOK FOR 1916" is now in the press. To be had from The Publications Branch, Department of Agriculture, Ottawa.

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### THE LOOK OF THE QUEEN.

By JOHN BROOKS

Before proceeding to outline the duties of the queen, it would probably be interesting to compare the structural difference between the queen and the worker bee. The abdomen of the worker is comparatively short, and rounded; that of the queen is larger and longer, and comes to a fairly sharp point. The tongue of the worker has a spatula at its extremity and is furnished with sensitive hairs. The tongue of the queen is shorter and the stapula is smaller, while the hairs show greater length. The worker has a complicated system of wax secreting discs under the honey plates of her abdomen; in the queen these are entirely absent. The nervous system of the

worker is much more highly developed than that of the queen. All this goes to prove the queen is unfitted for labors outside the hive. Watching bees at work for the first time through the glass panels of an observation hive or in the modern hive with moveable combs, one sees something human-like in their movements over the crowded combs, and the old comparison of a bee-hive to a city of men is never out of mind. There are the incessant hurrying to and fro, a hundred different enterprises going forward in every corner of the hive. You will see the huge full bodied queen laboring over the combs from cell to cell with a circle of attendants ever about her. We will leave the bees here amidst their busy toil and follow the queen on her journey round the hive.

A little observation will soon make it clear that the bees which surround the queen on her egg-laying journey are neither devotees or courtiers.

They are actually her guards, her keepers. The queen's movements are all prompted by the incessant strokings and pushings and gentle touches of these her escort. Thus they allow her free passage over the combs, and stop her at each vacant cell gathering close about her evidently with the most absorbing anxiety and interest in the operation. First she peers into the cell, examining it carefully. Then she rears, the bees give way before her; she takes a step or two onward until the end of her body is over the cell and then she thrusts her abdomen deep into it pausing a moment,

mounts again on the comb, and the attendant bees at once resume charge of her, and manoeuvre her to the next empty cell. This process never seems hurried and yet in the height of the season she will furnish anywhere from 2,000 to 3,000 cells in a day which gives an average of two eggs a minute, even supposing she works twenty-four hours.

The cells designed to contain the work brood measure 1-5 of an inch across the mouth; drone cells the larger, having a diameter of a quarter inch as well as greater depth. The queen may pass from one species of comb to the other, but she seldom makes a mistake.

The egg deposited in the worker cell hatches out a female, that which is laid in the larger cell becomes a drone or male bee. Obviously the deposition of the different kinds of eggs is well under the control of the queen.

It will also be seen that not only does the mother bee lay either male or female eggs at will, but their number also is subject to her discrimination. From the time when she begins laying until she reaches her period of greater activity in early summer, the increase of the colony is not regular, but goes by fits and starts, according to the weather or by the amount of incoming food. If pollen and nectar are plentiful brood rearing goes on steadily, but if unseasonable cold stops the work of the foragers this will immediately affect the output of the queen, and under exceptional adverse conditions, egg-laying may cease entirely. This may also take place when the hive is too small, or supers are not given when the lower chamber is crowded. To keep the queen at work and to supply the bees with combs in which to store their honey, constitutes the essential features of successful bee-keeping.

That the powers of the queen can be augmented or restrained according to the needs of the colony and that the proportion of the sexes in the hive can be varied at will to suit like contingences—can only be understood when the details of her life history have been passed under review. In the normal, prosperous colony which we are now studying, the queen will be in her prime. A queen bee is at the zenith of her fecundity in the second year of her life. After that her egg-laying powers steadily decline, although she may live to be four, or even five, years old. But the authorities in a hive rarely allow a queen to retain her position after she has shown signs of waning energy. Preparations are at once set on foot for the raising of another queen. A very old queen will have lost her power to lay worker eggs and will have become nothing but a drone breeder. But the bees are seldom caught napping in this way. Long before this happens, the building of the royal cells will have commenced in the hive. A queen cell has been likened, to an acorn, and when half completed it bears a very close resemblance, both in size and shape, to an inverted acorn cup or peanut. This is commonly hung mouth downward at the side, or base, of one of the central brood combs, but it may be placed right in the middle of the comb, in which case the cells round it are cut away, to give it air and space. Whether the old queen herself deposits the egg in the royal cell—thus unwittingly supplying the means for her future dethronement—or whether the workers transfer it to an egg or grub, from a common cell, is not yet finally ascertained, as, however, the mere sight of a royal cell usually excites the queen to fury, the chances are that she is never allowed to approach it at any time, and the egg would

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then be placed there by the worker bees. But in the great majority of cases, it is probable that new queens are raised by enlarging an already existing worker cell, in which an egg has been previously laid. As far as it is known, this is always the case when a young larve is used for the purpose instead of an egg. It is impossible also, that the queen is physically incapable of laying in a royal cell an egg that will produce a female bee; but this curious point will be touched upon at a later stage.

#### SWARM CONTROL.

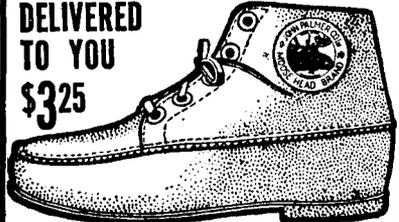
The season is approaching when the bee-keeper may expect swarming and it behooves him to be ready to control the impulse as far as possible. Men of eminence in the bee world, like Doolittle, Miller and Root, have by repeated experiments, done much towards mitigating the evil of swarming at a time when we require every bee to be in its place ready to help bring in the honey harvest, and any suggestions emanating from such a grand trinity of bee specialists is worthy of emulation. According to one authority the swarming impulse is caused by a congestion of the brood nest, and a surplus of nurse bees, so, if the congestion is relieved the swarming impulse must necessarily abate; this is done "by splitting the brood nest in the middle, and turning it wrong side out, the congestion could be broken." Every apiarist knows that the bees build their brood nest in a spherical form. The combs in the middle of the nest contain the most brood, while those in the outer part the least. To perform the operation we reverse the order, placing those with the least brood in the centre, and those with the most brood on

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# Gardening for the Home

By H. M. EDDIE, F.R.H.S.

(Our readers are invited to submit any troubles or difficulties which they may encounter, to Mr. Eddie, who will be glad to give them his advice, the outcome of technical training and practical experience. Address letters to the Editor.—B.C. Fruit and Farm Magazine.)

May is a very busy month in the garden and owing to the late spring will be busier than ever this year.

Owing to wet, cold weather several things which ought to have been done last month had to be deferred; seeds were not sown, ground was not dug, and now everything has to be done at once; well, well! better a little late than to sow seeds or dig ground before conditions are right.

About the middle of the month sow seeds of squash, pumpkin, marrow and cucumber, on well prepared beds; those plants are gross feeders and require an abundance of quickly available food.

For each hill dig out a hole 4 feet square and 1½ ft. deep and fill up with the same soil again if good but well mixed with about two barrow loads of good horse, cow or chicken manure and a liberal dusting of wood ashes. When rounding off the hill leave the centre basin shaped to facilitate watering during dry weather, sow about seven or eight seeds to each hill and when the plants are well up thin out to four of the strongest. The hills ought to be at least seven feet apart each way.

Tomatoes may be planted out about the middle of the month, taking advantage, if possible, of showery weather; should the weather be very bright the plants are liable to get scorched, especially if they have been grown close together in the frame, and to avoid this it is a good plan to stick a shingle on the south side of each plant to shade it during the brightest hours of the sun.

When cultivation is performed by hand the plants may be set out 18 inches apart and 30 inches between the rows.

Larger fruit and more ripe ones will be obtained if the single stem system of growing is adopted. Each plant is given a stout stake to which it is tied as it grows, care being taken to leave enough room in each tie to allow for the enlarging of the stem.

All laterals, i.e. shoots that arise from the axils of the leaves must be rubbed off as quick as they appear, and the main stem stopped by pinching out the tip when the fourth or fifth truss of flowers is plainly visible, leaving one leaf above the last truss. Wood shoots are very liable to develop from the fruit trusses and a sharp eye must be kept on them so that they are not allowed to rob the fruit of its sustenance.

Plant out cabbage, cauliflower, brussels sprouts, etc., make successional sowing of peas, kidney beans, radish, lettuce, carrots, and turnips; and take the opportunity to run the hoe between rows of earlier sowings whenever they appear through the surface to keep weeds in check and aerate the soil.

Towards the end of the month most kinds of half hardy annuals may be planted out; this, as with tomatoes, is best done during showery weather.

When planting up beds or borders in

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Vancouver, B. C.

which spring flowering bulbs have been growing do not cut off the foliage of these, this will weaken them materially for another year; if they are deemed too unsightly lift the bulbs carefully and heel in closely in an out-of-the-way corner where they can ripen off naturally.

Keep a sharp look out for green aphid on rose and other trees, the first brood hatches out about this time and if promptly and effectively dealt with now much trouble will be saved later on. Quassia extract and soap is a sure and safe spray to use for this pest.

### Answers to Correspondents.

Mr. Wm. Manning, Port Alberni writes to ask my opinion of the cause of the bark splitting on his three-year-old fruit trees. A few more details would have been useful to me in my diagnosis, such as kind of fruit tree, variety, and whether the tissues of the bark adjacent to the split are healthy or apparently diseased. Splitting may be caused by a variety of agencies, viz. black spot canker, frost, a bark bound condition of the tree, or did you allow a fire to get too close to them?

The first named cause is by far the most serious but at the same time the most easily recognized. If the wounds are oval shaped and that portion of the bark inside the oval dark brown and hard on the outside and the underlying tissues dead, then I am pretty sure the cause is canker. If this is the cause take a sharp knife and cut away all the affected bark, burn it, and give the wound a dressing of red or white lead. In the fall before the wet, "muggy" weather sets in give the trees a thorough spraying, winter strength, of lime-sulphur solution or winter strength Bordeaux mixture.

If the splitting is attributed to any of the other causes I would advise that the ragged edges of bark be smoothed with a sharp knife, and if the wound be wide enough to expose the wood of the tree treat with red or white lead, but be careful when using paint of any kind on a tree that it only gets on to the wound and not be allowed to run down the trunk. As to the effect of the

splitting upon the trees, if the cause be canker and the affected part be large enough to encircle the trunk all above that will die; if part way round the growth of the tree will be affected in proportion to the size of wound and, what is surprising to the novice, the tree will produce fruit sooner. On the other hand if the splits have merely got length and no breath to speak of they will heal up in the present season and be little or no detriment to the tree.

Mrs. J. A. Murray, Sooke, B. C., writes asking information about winter flowering plants, mentioning that the subject is being given considerable attention by their "Woman's Institute."

The desire to keep the garden bright and attractive is a most laudable one and worthy of the attention of every woman's institute.

By the by the fair sex are doing much for the encouragement of "the garden beautiful" movement, and I am glad to learn that here at least is one company of ladies who have not got the merely spasmodic idea of a bright summer garden, but have the "stay with it" spirit and wish to have the garden beautiful from January to January.

Sooke is, I am told, one of the mildest spots in British Columbia and no great difficulty ought to be experienced in keeping the garden bright during the dull months.

For winter effects recourse has to be made largely to berried plants, plants with ornamental foliage and those with colored bark like the scarlet dogwood and the golden willows. The flower you know is the most delicate part of a plant and is very susceptible to frost but there are some plants brave enough and hardy enough to flower even in winter, for instance the Hamamelis or Wych Hazel.

I am afraid I cannot afford space here to give this subject anything like justice, but as Mrs. Murray says, there is a paper being prepared on the subject; if she care to furnish me with the date on which it is to be read I will furnish her with a list of plants and cultural details by mail in time for incorporation in the paper.



# Sutton's Seeds

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## Lime Sulphur as a Fall Spraying for Apple Trees.

Last fall sulphate of copper could not be procured through the usual channel—the British Columbia Fruit Growers' Association. The writer was not prepared for such an eventuality. The sulphate of copper could have been got from Trail but it would have taken three or four weeks to get here and that would have made the fall spraying too late as the fall rains had already set in. Something had to be done in the way of fall spraying so it was resolved to try the lime-sulphur spray.

Two cwt. sulphur and 1 1-2 barrels lime were procured. The mixture was boiled in an iron glycerine drum procured from the powder works of the Canadian Explosives Co. for \$7.00. A hole was cut in the drum for a dollar and the boiler was ready for action when it was laid on two stout bent iron hoops supported on a brick fire-place. There was as much concentrated material made in the morning as would keep the motor pump going all day—usually 35 lbs. ground sulphur and 45 lbs. lime. About 20 gallons of water was put in the boiler and then a good fire put under and when the water was warm the lime was added which was not long in boiling.

When the contents of boiler commenced to boil, the sulphur, after it had been put through a flour sieve and made into a thin paste, was added to the lime and boiled together until amber colored. When it was in the amber colored stage a sample was taken and cooled in a tube and the strength taken with a beaume scale. If it went 30 deg., five gallons was added to the 36 gallons of water in the spray barrel, and if it went 34 deg., four gallons was added to 36 gallons. The pump that was used was a spramotor duplex, driven by a Fuller & Johnston farm pump engine. At first the pump did not give satisfaction. The relief valve would blow off at 80 lbs. and sometimes at 250 lbs. It was very unreliable, so the relief valve was plugged up and a Brown specialty relief valve put on one of the outlets. The Brown relief can be set to blow off at any desired pressure so it was set at 200 lbs. and it has proved itself reliable, which is a great virtue in the accessory of a spray pump. The gasoline engine was plenty able for what was required of it. If there was any trouble nine times out of ten, it was in the feed. It is a suction feed with a check valve at the bottom to keep the gasoline an even level in the feed pipe. If the check valve leaked it was somewhat trying on the temper. When it was in the leaky state it would run just until the pressure was up and then it would stop. The best way to do in such cases is to turn the engine over a few times and find out what the trouble is.

If it is a leaky valve take the valve off and put a little fine grinding compound on the lower part of the valve and the seat and take and give the check valve several turns with a screw driver with some pressure so that the valve and its seat will fit

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snugly. It is a good thing to have a small tube of grinding compound on hand for grinding the brass valves of the spray pump, for sometimes they get wrought and will not lift. In that case take them out and grind them with the compound. The engine and pump are connected by two arms of iron which work horizontally. The combination is bolted down to two 10-inch planks two inches thick. When getting ready for work the apparatus is loaded on to a common dump cart and a bolt put through the plank and down through the frame of the cart. The spray barrel being placed on one side mid way so as to balance the cart. Lime sulphur seldom clogs the strainer wire at the intake of the suction pipe. When double strength Bordeaux mixture is used—8.8.40 the strainer wire clogs up too often. When that happens the pressure runs down and if the operator looks around he would see the suction hose sucked as flat as a board. Take the strainer out of the barrel and it would be found with a good thickness of solid matter attached to the wire strainer. Give the strainer several raps on the cart wheel and that frees the strainer of all the obstruction. The Bordeaux mixture does that although there is a good agitation in the barrel.

The engine cost \$100 and the pump \$50 with accessories. Last fall the outfit worked splendidly and kept the pressure at 200 lbs. steady. There were 25 barrels put on an orchard of five acres. The cost per barrel of lime sulphur material only was 21 cents, and the cost per barrel of Bordeaux mixture, if the bluestone had been procured from Trail would have been 86 cents per barrel. Now to compare the results of the last fall spraying with that of the former years. When the pruning was being done this spring the writer had the best opportunity to observe closely the effects of the lime-sulphur spraying. It was surprising to find that the lime-sulphur did far more effective work than the 8.8.40 Bordeaux. There were few spots of new canker (and these spots were probably missed because of leaf obstruction) whereas after the Bordeaux spraying there were quite a number of spots on the new growth in the heart of the tree. After this season's experience I would not be bothered with the expensive Bordeaux mixture. It is very troublesome to make—the milk of lime has to be placed in one tank and the solution of bluestone in another and the lime and bluestone has to be run off so that it will mix in falling into the tank on the ground and then it has to be baled into the spray barrel. Two barrels of lime-sulphur can be put on the time that one of Bordeaux can be made and put on, although the bluestone and lime are in stock solution. Another advantage of fall spraying with lime-sulphur is that it saves the spring spraying, what is usually done before the buds are far out.

JOHN STEWART,

#### LARGE SPUD ACREAGE

According to all accounts there will be an even larger acreage this year than last in potatoes throughout the province. In this connection it is stated that some growers are planting seed potatoes that cannot but eventually bring British Columbia crops into disrepute. One Vancouver broker advocates that the government pass legislation permitting its inspectors to condemn as seed potatoes any stocks which they feel will not produce good crops. It is stated by the same man that Chinese gardeners on Lulu Island are the worst offenders in this respect.

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### DAHLIAS

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## BEEKEEPING

Continued from page 925

the outside of the brood nest, just as if we were to split an apple open and turn the convex sides together. In doing this we do not place any combs without brood in them between combs containing brood. The bees go to work at once to re-establish the spherical form of the brood nest, and in doing so they fill out the centre comb and extend the brood into the adjacent combs outside the brood nest. By this plan, reversing brood every ten days or so, we can delay swarming till we get the brood chamber full of brood. Then, unless we do something to prevent, there will begin to be a surplus of nurse bees, that is, there will be more chyle accumulating in the stomachs of the nurse bees than the brood can consume, the authority states, that these nurse bees with their overloaded stomachs grow restless and bring on what is known as the swarming fever. To prevent this, as soon as the brood chamber is full of brood, excepting the two outside frames, he advised that we remove two frames of sealed brood, putting in the place empty combs or full sheets of foundation. The above suggestion offers a good field for discussion and experiment. It is worthy of a trial, but does it go far enough Editor "Fruit and Farm,"

Yorkshire Bldg., Vancouver, B. C.

I read with interest your magazine, especially the page on Bees. The more I learn about our little friends the more I want to, and the more I realize there is to learn. I try some experiments on my own sometimes and find much pleasure in them. If one has confidence there is no trouble and the bees soon learn to know when one is not afraid. I often pick up a pollen laden with bees and remove the pollen from the basket. I also lay my hand in the entrance and allow the bees to crawl over it as they enter the hive. In the evening when they are in for the night and only the guards are to be seen, I tap the alighting board and some of them come running out and pretend to be vicious but as soon as they scent my hand and examine it they merely crawl over and after they have satisfied their curiosity return to

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FARM SCENE IN BRITISH COLUMBIA

their duty as guard till they join the cluster for the night. All day long the fanners are busy keeping the air circulated throughout the hive to keep the inside from getting too hot as well as to have fresh air for the baby bees. Some one asked me the other day, "Why don't they sting?" I answered by saying, "Why should they sting?" If there's nothing to make them sting they won't do it. If the weather is stormy, rainy, windy, or likely to be, or a bee is crushed or a quick motion is made, or if one beats at the air when the bees are before one's face then they might sting, but not always. But if one is gentle, not hurried and the weather warm and clear they will not sting. Confidence is the secret and is half the battle. The bees know a person who handles them timorously from one who is deliberate and calm.

A. W. W.

Esquimalt, April 22, 1916.

**ELECTRICITY ON THE FARM.**

Electric power will be used hereafter at the Charles E. Hope farm, at Fort Langley in place of gasoline, the power line from the B. C. Electric Railway Company's wires now being under construction. Practically all work on this 600 acre farm will be done by the electrical drive after this. The principal use of the power, however, will be to operate the large drainage pumps, part of the farm land being at the confluence of the Salmon River with the Fraser River and privately diked, there requires to be constant artificial drainage. During the freshet season pumps will be used twenty-four hours a day. The farm house has been lighted from B. C. Electric lines for a number of years but the present extension now being made from the company's power wires will include the stables, barns and other buildings about the place. The electric drive will be used to operate the usual farm machines such as the grain crusher, straw cutter and so forth. The barns will also be lighted throughout by electricity.

Material for the power line having been shipped by the B. C. Electric the extension will be completed within a short time.

**UTILIZING VACANT LAND**

In an effort to make some of the vacant land in and around Victoria productive the Victoria and Island Development Association have organized a Seed Growers' Association, affiliated with the Seed Growers' Association of Canada, and have about fifty members who will experiment. A list of the most suitable flower and vegetable seeds has been sent to each member and arrangements made to have experts address a series of meetings. Along the same lines an effort will be made to stimulate the growing of medicinal herbs, and the association has now on file a list of seventy which can be grown on the island profitably.

**EARLY VEGETABLES**

The Oyama correspondent of the Vernon News says: Lettuce, spinach and asparagus are now being used in this locality. It may be of interest to our readers if we explain how this is possible with such a late spring, and grown in the open, too, and not fussing with the hot bed. Plant the seed in the fall (in a sheltered place where the snow will not blow off), early enough to have the third or fourth leaf formed when the frost comes. As soon as spring opens up they start growing again and are perfectly delicious, the snow and the frost having really improved them, making them very tender and luscious.

The Dominion Telegraph and Wireless Institute is now in a position to accept pupils for a thorough course in Wireless Commercial and Railway Telegraphy at a reasonable rate. The most up-to-date Marconi equipment installed. Our instructors are masters in their profession. Our college is thorough in every respect. Young men and women take advantage of this great opportunity.  
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# POULTRY SECTION

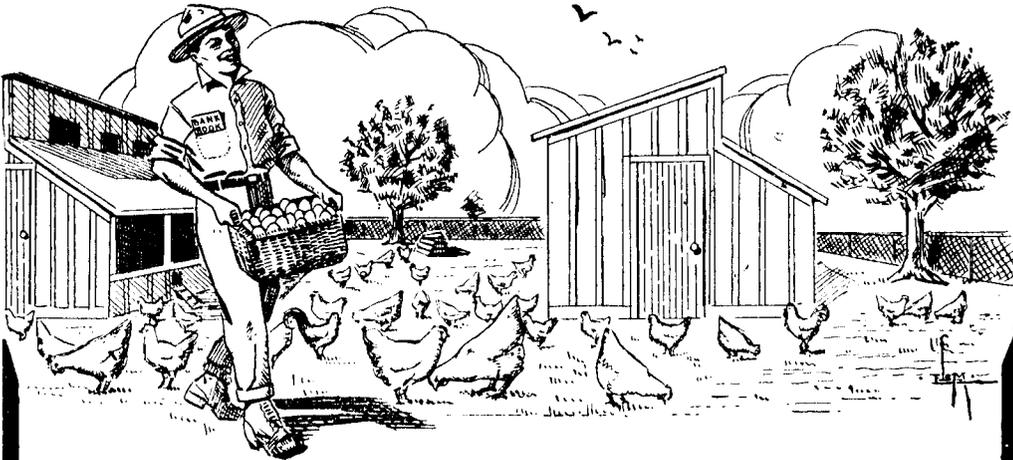
## ON FEEDING YOUNG CHICKENS.

A mistake that even a great many experienced poultrymen make, is the feeding of the chicks too soon. When the chick leaves the shell it comes into the world with a sufficient supply of nourishment, in the form of the egg yolk, to last it for several days. Therefore, what a chick requires at that stage of its existence is not feed, but warmth and rest. It is not wise to be dogmatic about feeding, as, given strong, healthy chicks many systems will prove successful, but the following may be used as a guide. When the chicks are removed to their brooding quarters there should be some coarse sand or fine chick grit scattered where they can have free access to it. They should then be left until they show positive signs of hunger, which would be between two and three days after hatching. They may then be given some bread crumbs that have been very slightly moistened with milk; this may be scattered on clean sand or chick grit. If being brooded by a hen she will see that no food is allowed to lie around, but if in a brooder, feed which the chicks do not pick up in a few minutes should be removed, as nothing in feeding causes so much trouble as leaving food of that nature around until it is sour. The chicks should be fed five times a day. The following system may be adopted or altered to suit conditions; first feed, bread crumbs moistened with milk; second, finely cracked mixed grains; third, rolled oats; fourth, moistened bread crumbs; fifth, finely cracked grains. If too early to get the chicks out onto the grass at once, green food should be supplied in the form of young lettuce, sprouted grains, or any other tender succulent food that is acceptable. After the chicks are ten days to two weeks old, coarser foods may be allowed; all changes should be made gradually. The infertile eggs may be boiled and mixed with mash food and the bread and milk discontinued. Hoppers in which are placed cracked grains, dry mash or rolled oats, should be easily accessible to the chicks. As soon as they become accustomed to the hoppers, the hand feeding may be reduced to the mash feeds, and if the chicks are on range it will be found that after a time they will get careless about coming when called; it may then be dropped and dependence placed entirely upon the hopper feeding. Place grit, water, also if possible, a dish of sour milk where the chicks will have free access to it. Nothing provides animal food in better form than does milk; the chicks like it and thrive on it.

Naturally, poultry farmers are ambitious. They want to get all the good out of their hens possible. They have installed trap nests and are breeding only such hens as give big records. First they arrived at the 200-egg strain, and now they want to make it 50 eggs more.

Prolificacy, coupled with stamina, is a worthy object to work for, but prolificacy should never be encouraged when it is known to jeopardize hardiness.

When the aim is to establish a 200-egg strain—that is, have the flock average that number of eggs in twelve months—a number of individual layers will be compelled to lay as many as 250 eggs, or even more, to make up for those which have not reached the 200 mark.



## Royal Standard Mills Chick Food

is made from the very cleanest, choicest grains. It contains a high percentage of protein—the food element that builds bone, flesh and strength. Not "high-priced" food—yet it is a food that will nourish and bring to a full, healthy, strong maturity.

**POSITIVELY WILL NOT "SCOUR" YOUNG CHICKS.**

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**VANCOUVER MILLING & GRAIN CO., LTD.**

Vancouver, Victoria, New Westminster, Nanaimo.

Of late I notice a tendency to go still higher, some advocating a 250-egg strain. That would make it almost necessary to have some hens lay 300 eggs in one year.

What will be the outcome of all this high speed? It will mean a future generation of weak stock. If all the energies are spent in one direction, what will there be left of stamina?

It is far safer to work for 150 eggs a year as an average than to go higher. It is possible for hens properly bred and cared for, to maintain good health and vigor while aiming at 150 as an average.

The American breeds of today are a strong, hardy race, and famous for good laying and good table qualities. Twenty years ago they were of a more or less delicate nature, and rather indifferent layers. What was the reason? It seemed then to be the idea to breed solely for feather, shape and other show requirements, regardless of any other qualifications. The fanciers today recognize the value of utility and make that the foundation stone.

Now if the utility men are going to sacrifice everything to secure great laying, they will not only inbreed, but will destroy the breeds entirely, doing probably more damage than did the fanciers of a score of years ago.

If every aim is to be for phenomenal egg records, what will become of our meat supply? Surely an unnatural flow of eggs

will not only cripple fertility, but will also make weak and puny chicks.

Have good, strong, vigorous hens as the foundation. Use trap nests, and each year pick out the best layers among this strong, vigorous stock, mating to males of equally good condition—but never inbreed—and then gradually aim for a figure that will leave no bad effects.

In the mad rush for these great egg records, the stock is forced by condiments, heavy feeding of meat, and any and everything of a stimulating nature. Such feeding will bring the eggs, and it will also bring on early decline.

The method generally adopted by those ambitious for big results is to hatch the eggs from one or more phenomenal layers, and mate up the offspring—brother with sisters—and repeating for two or three years. Is there a more sure way of deteriorating stock than that?

The rule should be, never inbreed; each year select the best layers, and feed material that will make eggs, but no stimulant should be used that will force beyond the intention of nature.

### POULTRY POINTERS

Collingwood says there is no animal mixture under the sun so intricate, so compact, so full of power and force as the egg.

The color of the eggs sold today are considerably darker than they averaged thirty

years ago; all of which proves that Asiatic blood has been largely introduced throughout the country, and that it has its effect on the egg.

In organic form the egg contains 650 grains of water, 125 grains of fat, 108 grains of lime, 80 grains of albumen, 26 grains of sugar and 10 grains of ash.

Eggs may differ materially in color, and yet not differ much in nutriment. Again they may differ largely in nutriment, when, for instance, they are neglected or poorly fed or when they eat filth, damaged grain or tainted meat. The crop and gizzard of a hen cannot transform impure food into pure products. The real value of an egg for food lies inside the shell, and is not indicated by color of shell.

In France they mix spices and herbs with the food given to fattening poultry, which are said to impart a delicious flavor to the meat.

Powls intended to be killed should not only be confined in a coop for 24 hours without food, but should be supplied with plenty of drinking water, which aids in cleaning the intestines.

If a drawn carcass has any distance to go, it may mould inside; or if a fly does not "blow" in it, there is a large exposed surface hidden from sight, which may become infested by some means during transit. If mouldy, sour, or fly-blown, it is no longer saleable, at least for anything like a fair price, and it is not safe as food.

A poultry lecturer in Scotland some years ago, in an address on the rearing and general management of chickens, said on the subject of food, he would give a "wrinkle" worth its weight in gold. At three days old the chickens were qualified to eat pretty nearly everything, but he warned them against the practice of feeding the chickens on soaked bread. They should adopt the following plan: Fill a little linen bag half full of rice, put it into water and let it boil five minutes. They should then withdraw the bag and let the water drain away and they would find the rice whole and separated. A handful of oatmeal should be mixed with the rice and it would absorb all the moisture. This the chickens should be allowed to pick up for themselves, but they should not have too much.

As the duck has no crop, it does not assimilate and thrive on whole grain.

For flavor and delicacy of flesh, there is nothing in the line of domestic water fowl equal to the Cayuga duck, but it has never become popular in this country on account of its black plumage.

A gentleman remarked the other day in a restaurant: "I don't eat eggs now. They are not good. Thin, pale yolks show it." Another said in reply: "Well, I'll order soft boiled eggs, for I know that it is grass and green weeds that make the yolks that very dark color they have later on, and it is the good grain food they have to feed now to make hens lay that makes the yoke so pale. I've raised chickens and know." There are city people to whom the taste of genuine fresh eggs would be a revelation.

Juiciness in broilers is due to pure food and rapid maturity.

**WHITE and COLUMBIAN** Wyandotte, Light Brahmas and S. C. White Leghorns. Over thirty years a breeder. Stock and eggs for sale. **MICHAEL K. BOYER**, Box M, Hammonton, New Jersey.

**HEALTH AND FOOD VALUE OF SOME FARM PRODUCTS.**

If one is to judge by what the would-be authorities write in the daily press the farmer should be a remarkably healthy man seeing that he eats largely of those things that, according to the popular writers, are most conducive to health. Eggs, milk, buttermilk and honey are all words to conjure with when it comes to recommending what is good to eat and drink.

Do we all realize the tremendous debt we owe the hen and the cow and the busy bee? It is claimed that there is more nourishment in a fresh hen's egg than is to be had from three or four times its weight of meat of even the choicest cuts. Why pay 75c for a choice cut of meat when you can get infinitely more good from 25 cents invested in eggs? Why worry about the high cost of living of these things are true. Meat is going to be high next winter they tell us. Then pack eggs when they are selling at from 25 to 30 cents a dozen and save 50 cents on every dollar that you would spend for them next winter. Cut out the meat and then think of what you would save. (The live stock men will not mind this because no one is seriously contemplating giving up their nice juicy steaks.)

Then they tell us that a quart of fresh milk is worth 25 cents in food value compared with beefsteak or other meat at 15 cents a pound. Combine milk and eggs in your daily food is the advice and eliminate many of the common complaints which impair health and usefulness.

Then we have the case of the buttermilk. Buttermilk is the latest panacea for a long life and a healthy one. Scientists have been chasing that elusive something through the centuries that will prolong life. It's a hard world but somehow or other everyone wants to live as long in it as one can and is loth to part with this mortal coil no matter how tortuous and worrisome the going may be.

In the nineteenth century a physician named Brown-Sequard recommended the use of a liquid made from the glands of animals which he thought would prolong life. The Brown-Sequard elixir passed into the discard and became the newspaper joke of the discoverer's day. Today Bulgarian culture is having a great run, and common everyday buttermilk has its millions of enthusiastic devotees whose numbers are no doubt increasing as Prohibition advances.

Eli Metchnikoff, a scientist of considerable reputation, has written a book known as "The Prolongation of Human Life." In this book he inclines to the belief that old age is either a disease or the product of a disease, and he advances the theory that it may be due to poisoning of the tissues. If this is the case, it naturally follows that anything which will arrest poisoning of the tissues will, at least, postpone old age. His view is confirmed to a certain extent by facts regarding long-lived races, and among these long-lived races the use of soured milk is common.

In Genesis we discover that Abraham used sour milk for food. The Egyptians, the Russians, the Tartars and Bulgarians are users of some form of soured milk.

Bulgarian buttermilk is advertised widely as a healthful drink, and one which promotes longevity. It is supposed that buttermilk and soured milk produces a bacterium which combats the harmful germs, and that if it is used it will increase the span of life.

A. R. Swetser, professor of botany at the University of Oregon, states that if the value of Bulgarian buttermilk is due to lactic acid in it, common sour milk or plain buttermilk

**MOORE LIGHT GASOLINE SYSTEMS IN USE IN THE HOME.**

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would also be beneficial. However, he adds, some people do not thrive on it and some do, so its use must be governed by individual needs. If no favorable results follow, no amount of buttermilk or sour milk will prolong life. Indeed it would be apt to shorten it, but where the use of buttermilk proves beneficial there is no doubt that its steady, sane use will be the good thing.

Then in the health foods we must not forget honey. The bee has a long and honorable history and it is pleasing to notice that he is coming into his own.

If you would be healthy, live long and get the cheapest and best food for yourself and family, you British Columbians, eat honey and lots of it.

This is the advice of Mr. Dundas Todd of the provincial department of agriculture, who is expected to know as much about bees and honey as any other man in the province and who puts his theories into practice.

"Honey is a food, not a luxury," Mr. Todd told a Fruit and Farm representative. "It was the natural sweet of the human race, sugar only coming into general use after Columbus discovered America. Honey is predigested and enters into the circulation at once. In addition it contains in delightful form many mineral substances necessary for the human body, especially iron and manganese. One of the professors at Ames Agricultural College, Iowa, recently worked out the food values of honey in calories (which is heat value standard of foods) as compared with more common foods in use such as eggs, cheese, fish, etc., and on comparing the cost in British Columbia I found that honey was cheaper as a food than all other foods in common use excepting milk, and even then the difference in cost is very slight."

Honey is good for the youngsters, says Mr. Todd, and he speaks from experience of a family of five children where the winter consumption, when all were home, was 200 pounds. There was no limit to the honey the children were allowed to use, with the result that they never asked for candy, being fed up with sugar which is a great source of heat. "The skin surface of a child—the radiating surface—is very much larger in proportion than in the case of the adult and that is why children need so much sugar," said Mr. Todd. "In view of this sugar is thus supplied to the child in the most digestible and cheapest form in honey and it was my experience that while my family was using large quantities of honey they had a clean bill of health."

Here is a good pointer for British Columbia housewives Mr. Todd gives: Buy your honey in five-pound tins. This ordinarily retails at \$1. Buying honey in 25-cent jars you get 12 ounces, the jar costing seven cents, and you are therefore paying at the rate of 32 cents a pound for honey. The other way the honey costs but 20 cents a pound and in larger quantities you get a cheaper rate.

In Mr. Todd's own family three people consumed 60 pounds from September 1 last to December 31.

Honey, like any other sweet, he says, should not be used straight but should be diluted with water or milk, either mixing milk with it or drinking copiously of water after eating it. A delightful drink for children, says Mr. Todd, is to put one or two teaspoonfuls in a glass of milk and thoroughly mix. As for himself he uses honey to sweeten both his tea and coffee or cereals.

## WISE MEN NOT ONLY PRAY FOR RAIN

On Thursday, March 30th, the first steps in the preparation of the program of the 10th Annual Convention of the Western Canada Irrigation Association were inaugurated at Kamloops when the permanent secretary met members of the Board of Trade, City Council, Farmers' Institute, Agricultural Association and Stock Breeders' Association, and formed a Local Board of Control. J. L. Brown was unanimously elected as chairman of this board with Mr. C. E. Lawrence as secretary, and the program discussed freely and tentatively drawn up. Men prominent in irrigation and agriculture in the western provinces were chosen to speak on subjects of greatest interest to the fruit growers and farmers, and with the encouragement of the British Columbia, Alberta and the Dominion governments and the active executive of the association itself there is every reason to believe that a most successful convention will be pulled off. July 25, 26 and 27 were chosen as the most acceptable dates to both the prairie and the British Columbia farmers.

It is now two years since the last irrigation convention was held in British Columbia when Penticton was the place of meeting. Last year Bassano, on the Alberta prairies, drew in two hundred interested farmers at which time the bidding between Kamloops and Nelson for this year's convention was very keen. The eloquence of J. L. Brown, Ald. Dobson and C. E. Lawrence finally won out and these men are now jubilant over the fact that the convention is finally coming to Kamloops again after an interval of six years. Of the members of the executive of the association at that time controlling the destinies of the association the then president, Wm. Pearce, is now a resident of Ottawa; First Vice-President F. J. Fulton, K. C., still resides in Kamloops; Second Vice-President R. R. Jamieson is dead; C. W. Peterson and W. H. Fairfield, residing respectively in Calgary and Lethbridge are yet both active in the association's affairs; Horace Greeley resides at Maple Creek; Dr. C. W. Dickson of Kelowna is an officer in the Overseas forces; C. A. Macgrath is yet M. P. at Lethbridge; R. H. Agur has joined the great majority; R. M. Palmer, of Cowichan Bay, is now vice-president of the B. C. Fruit Growers' Association; Treasurer C. W. Rowley manages the Bank of Commerce at Winnipeg; and former Secretary John T. Hall of Brandon passed away after the Calgary convention in 1911. It would be interesting to follow up the changes and movements of the 163 delegates who registered at that convention but space in this article will not permit other than mention that at this writing I recollect that, former President W. C. Ricardo is overseas; Capt. J. C. Dufresne, of Penticton, is fighting in France, and Arthur Chamberlain of Kamloops is also with the Overseas forces.

It is proposed at the Kamloops convention to post a printed list of these 163 members in order that it may be seen how many of those who attended the convention in 1910 are present at the 1916 meeting.

The following is the Local Board of Control:

Chairman, J. L. Brown, president Agricultural Association and member of our executive.

Secretary, C. E. Lawrence.

Finance committee, S. C. Burton, chairman.

## Danger Lurks in the Mouth!

### How Long Have Your Teeth Been Decaying?

THE HIGHEST MEDICAL Authorities state that in more than 92 per cent. of cases of Cancer of the Alimentary Tract (the region traversed by the food from mouth to intestine) is caused by poison from the mouth—arising from decaying teeth.

NEGLECT OF THE TEETH is responsible for a number of ailments besides the malignant and incurable Cancer. Chronic sore throat and tonsillitis is nearly always brought on by the poisons from decaying teeth and diseased gums. Rheumatism and diseased state of the kidneys and liver; Ulcers of the stomach—these are mere warnings of nature of the "danger that lurks in the mouth." The constant swallowing of pus and poisons from decaying teeth, it has been proved, is sure, sooner or later, to bring about serious illness.

THE DANGER OF DELAY in having the teeth made sound and the mouth sweet and healthy, should not be overlooked. If you can not afford to have missing teeth replaced, you should at least have the decayed ones either filled or removed and the balance scaled and cleaned. Nothing can be as important to you as this. And when you consider that my **Perfect Crowns and Bridges**—the very finest that money can buy—made of the finest materials and guaranteed to remain **really perfect** for ten years—are but \$4 per tooth . . . then there can be no excuse for "getting along (?)" for another week without them.

LET ME EXAMINE YOUR MOUTH without fee or obligation. I will tell you what you need to put your mouth in perfect condition . . . or what to have done to put you beyond immediate danger.

## DR. LOWE

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Vancouver, B. C.  
Seymour 5444

Reception committee, Capt. Worsnop, chairman.

Accommodation committee, Ald. Dobson, chairman.

Entertainment committee, Mayor Tirrell, chairman.

Exhibition committee, J. F. Smith, chairman.

Publicity committee, Ald. Johnson, chairman.

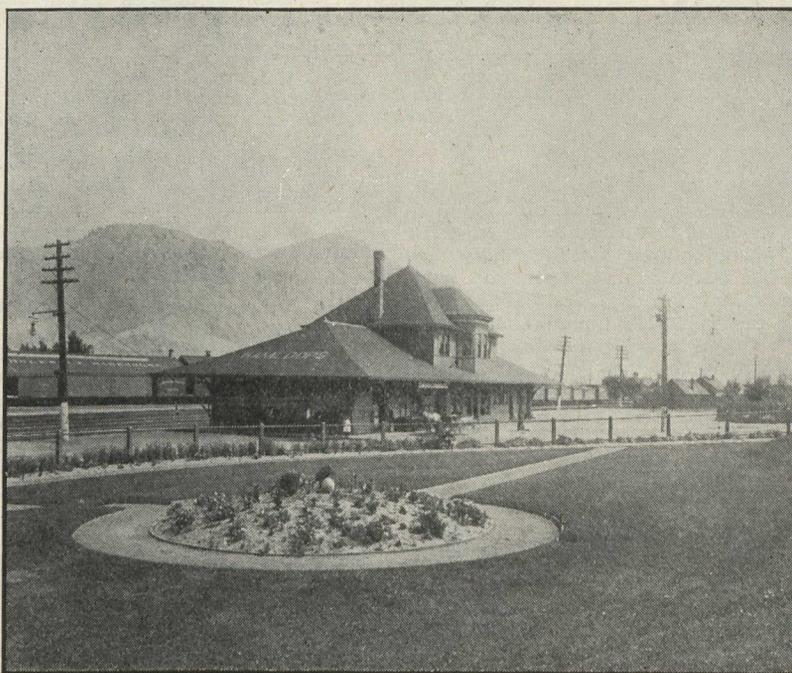
Decoration committee, E. Stuart Wood, chairman.

The slogan of the Western Canada Irrigation Association is: "Wise men not only pray for rain—they pay for it. It used to read "Wise men no longer pray for rain—they pay for it," but out of deference to objections on the part of religious bodies it was changed to read as above.

VICTORIA, April 27.—The newly appointed Agricultural Credits Commission met yesterday afternoon and formally organized. Mr. Wm. Bridge, of Richmond, was appointed chairman, and Mr. Wm. Duncan, of Comox, secretary. Regulations provided, and the seal of the commission governing the proceedings at meetings were approved. The head office is to be the Parliament Buildings, Victoria.

The commission yesterday passed a by-law authorizing the issuance of securities to the amount of one million dollars. These will be sold as debentures guaranteed by the province. This formal action merely confirms the recent sale of the million dollars worth of agricultural credits bonds by the minister of finance.

The commission proposes to provide application forms for intending borrowers, as well as to print a pamphlet describing the Agricultural Credits Act.



KAMLOOPS. B. C.

Just because the ears rust off the mop pail, don't throw it away if it is otherwise good. Take a stout piece of heavy band-iron and make some ears.

Left-over asparagus makes an excellent salad with a dressing of oil, salt, pepper and a few drops of vinegar rubbed together. Serve very cold.

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# NEWS FROM FARMERS' INSTITUTES

*N.B.—All Subscriptions (or renewal subscriptions) to FRUIT AND FARM, which are forwarded through secretaries of Farmers' Institutes will be accepted at the reduced rate of 50c. per annum, instead of \$1.00*

## Co-operation Urged.

At a recent meeting of the Chilliwack Board of Trade the president, Mr. Mackin, said that through mistaken ideas on both sides the business men had not fully appreciated the benefits of co-operation with the farmers and the farmers had similar views with regard to the business men. He felt that the time had come when it is absolutely necessary that the rural community should be urged to take part in the discussions of interest to the whole district, that the board keep in touch with the two organizations which are recognized by the provincial government, viz., the Farmers' Institute and the Women's Institute, and that the farmers should also be asked to bring their grievances and their progressive moves to the Board of Trade meetings. Mr. Mackin pointed out that the Board of Trade was the one organization recognized by the provincial and federal governments, as the mouthpiece of the district, and official notice had to be taken of petitions sent to Victoria or Ottawa from any organized Board of Trade. Mr. Beldam spoke along similar lines, suggesting social gatherings as a means of drawing together the interests of the city man and the country one.

## Robson Farmers' Institute.

At the last meeting of the Robson Institute "Potato Culture" was the subject of an interesting address by Mr. Joseph Irwin. During the course of his remarks the speaker demonstrated that the use of clover as a fertilizer was the best, as it produced a larger yield, was of greener foliage and gave better results in dry seasons. He had, from a patch less than three-quarters of an acre in extent, produced a yield of eight tons, five and three-quarters tons of which were marketable and the balance seed potatoes. He preferred using whole potatoes about the size of a hen's egg, for seed. His method of planting was to plow the seed in, and harrow the land until the tops were six inches high. The speaker closed an interesting talk by urging the members to keep the potato standard up by seeing to it that the tuber was a clear white. A streaked potato showed that it was going back. His method of preparing seed was to cover in formaline for two hours. At a meeting the Junior Robson Farmers' Institute Thursday afternoon it was decided to enter the hog raising contest, seven members having already entered.

## Canford Irrigation Scheme.

At a well attended meeting of the members of Canford Farmers Institute the principal question up for discussion was the proposed irrigation scheme for the district. Mr. S. G. Lytham presided over a gathering which was directly interested in the land improvement scheme which the settlers hope to see fulfilled, with the assistance of the government. The scheme calls for the excavation of a ditch some eight or nine miles long, to run north from Petit Creek, and so provide irrigation facilities for several settlers, and to benefit probably over a thousand acres. The scheme in prospect is to put in hand jointly by the residents affected and the government, the former having agreed to furnish the ex-

penses of an engineer who will be sent in by the government to size up the whole situation and advise how the scheme desired can best be worked out, and give the estimated cost of its completion. The engineer is expected at an early date.

## Addressed Okanagan Institute.

Mr. L. Harris of Vernon, government apiarist, gave an interesting address to the Okanagan Farmers' Institute at its last meeting on the subject "The Honey Bee." In reply to enquiries as to cost of starting the industry, Mr. Harris estimated that \$18 to \$20 would cover the outlay for a colony and the usual appliances. He advised a beginner to read a good work on bees and recommended a couple of books. A number present had expressed a desire to go into bee-keeping and so much interest was taken in the subject and so many questions were asked that it was 10:15 p. m. when Mr. Harris closed his address. He was tendered the hearty thanks of the meeting by President Richmond for his valuable address. The report of J. R. Brown, delegate to the Central Farmers' Institute, was submitted.

## Westbank Institute.

At the April meeting of the Westbank Institute it was decided to forward a long side-tracked petition from Westbank, urging upon the government the desirability of the free ferry. However, it was suggested that in view of the many new districts which need government aid in this respect, too much should not be expected of the government with regard to the local request. Further correspondence concerning the formation of farm clubs for boys and girls, and the securing of pure-bred stock for this district, was laid before the members and discussed at much length. The latter question received the very hearty approval of all stock-raisers present. The water situation in Westbank came in for much discussion and resulted in a resolution being framed up addressed to the provincial government, urging upon them the necessity of immediate conservation of the water of Powers Creek for irrigation purposes in Westbank District. The secretary was advised to secure the co-operation of the other institutes of the valley in this matter, and with the united action it is planned to forcibly present to the government the present needs of the ranchers in the dry-belt with regard to irrigation, and also to point out the serious condition of depopulation and discontentment which is conspicuously menacing the present and future prospects of the Okanagan Valley, and which is undoubtedly due to the present chaotic state of the irrigation question.

## East Kootenay Convention.

Reporting to the Cranbrook Institute on the recent Victoria convention, Mr. A. B. Smith stated that while at Victoria, the delegates from the East and West Kootenays held an informal meeting, proposing some united action from that district on local matters prior to the next annual convention. It was decided to appoint a convenor and to gather as many delegates as possible at preferably the Nelson Fall Fair. Mr. Jamieson of the South Slovan Institute was appointed convenor and will communicate with the different institutes before long. In

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If you buy a home on the installment plan and die, you leave a debt. If you buy Life Insurance on the installment plan and die, you leave an asset for your wife and family. For the price of ten cents smoke a day—this saving would purchase a \$2,000 policy in the Mutual Life of Canada—It's a duty you owe yourself and family. Insure with Canada's only mutual, where you get the largest amount of insurance for the least possible outlay. Send me your age and name, will gladly mail you full information. You'll have no regrets for doing so.

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District Manager

Mutual Life of Canada, Vancouver, B.C.

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a private letter to him, Mr. Jamieson had expressed the opinion that possibly all the institutes of the East Kootenay could more usefully meet separately, as they have stock, range and water questions to solve in which the West Kootenay institutes are not greatly interested. Mr. Mitchell, the delegate from Golden, proposes an East Kootenay sub-convention at Invermere Fair next fall, and Mr. Smith thought it a good idea and one worth following up later on. He expected to see Mr. Mitchell soon, and would express to him any sentiments the meeting might advise. The following resolution was then carried: That the Cranbrook Farmers' Institute is heartily in sympathy with this suggestion, and is willing to co-operate with the other East Kootenay Institutes in arranging for a convention of these institutes. It was resolved to ask the Cranbrook Board of Trade to co-operate in a request to the City Council to erect a public watering place in a convenient position in the city, at the same time bring forward the matter of erecting a suitable shelter for teams entering the city.

## Matsqui Farmers' Institute.

At a meeting of the board of directors of the Matsqui Farmers' Institute, held at Merryfield Bros.' store, Mt. Lehman, on April 14, the advisability and use of a pure bred Berkshire hog was discussed and it was decided to purchase one. Mr. J. A. Morrison Coghlan was appointed caretaker at \$2.50

per month. The fee will be \$1.50 to members and \$2.00 to non-members. A crop competition will be held for 1916 in oats and potatoes with an entry fee of \$1.00 for each entry. The institute is looking for a keen competition this year, many members having decided to make an entry in one or both of the contests. Owing to the late season and farmers being busy at present the annual Dominion Day celebration held on the Municipal Hall grounds was held over till the next meeting. We have not been able to form a Boy and Girl Club as yet but hope to do so shortly. Mr. James Gibson occupied the chair in the absence of both president and vice-president.

PHILIP JACKSON,  
Secretary.

#### Okanagan Centre's Worthy Record.

Okanagan Centre and Oyama Farmers' Institute has a record for enlisting for overseas service that any organization in the province might well be proud of. Mr. M. P. Williams, the president of the institute, who has just joined for overseas duty makes the 27th member of this institute who has enlisted. The biggest membership of the institute consisted of 82 members in 1914 which was reduced in 1915 to 67. At the last meeting on the 18th, Mr. Williams gave an interesting report of his mission as delegate to the recent convention. The institute decided to enter the crop competition, manures being the crop chosen. Two more books were added to the library, which consists entirely of books pertaining to farm life. At the conclusion of the meeting a vote of thanks was passed to Mr. Williams whose departure, needless to state, will be felt by his fellow members.

P. W. PAXTON,  
Secretary.

#### REGARDING PHENOMINAL RECORDS.

By  
MICHAEL K. BOYER.

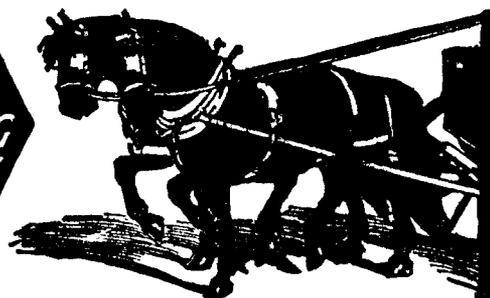
According to Mr. Albert Munckton, of Metchosin, Vancouver Island, the Dorset horn sheep of England cannot be beaten for great profits. He has based his assertion on forty years' experience in many different countries and says: "On my arrival on Vancouver Island I found it impossible to purchase any Dorset sheep, so decided to buy the best Down ewes at \$6.50 each in March, and all the ewes that had a twin of ewe lambs were sold in September at \$8 each, making a clear profit of \$17.50 in 6 months, and the cost of feed was very small as they only had grass-paddocks to run in." Mr. Munckton says that Canada should carry ten times as many sheep as at present.

#### CARING FOR THE HORSE.

A horse which has been idle during the winter months cannot be expected to suddenly start hard spring work without preparation. Exercise the work horses in the barnyard and gradually change to light and then heavy work. The over-fat, soft horse requires the most attention and loses most weight when put on heavy work. Sudden changes in feed cause stomach and other troubles, often the loss of the horse; feed in proportion to work done. You will find the following rations good: For light work—Equal parts oats and bran, 3-4 of a pound per hundred pounds live weight, with good clean hay, 1 pound per hundred pounds live weight. For heavy work—Gradually change the above ration to one of oats, 5 parts, and bran, 1 part, fed in the proportion of 1 to 1 1-4 pounds per hundred pounds live weight and hay as above.

Be sure that in-foal mare is not too fat

**KEEP YOUR  
HORSES IN  
PRIME WORKING  
CONDITION**



**S**OUND legs pull big loads. No horse with a Spavin, Splint, Curb, Ringbone, Bony Growth or Sprain, can do itself justice. Thousands of horsemen have been keeping their horses sound by using Kendall's Spavin Cure—the old reliable, safe remedy. Mr. Edmund E. Harrison, Ingoldsby, Ont., writes—"I have cured two spavins with your Spavin Cure and am at present using it on a lame horse. The swelling is disappearing—also that lameness."

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IF YOU USE ROYAL BRAND—Dried Brewers Grains in conjunction with your other stock food you will get better results at a lower cost. Many FARMERS are using ROYAL BRAND DRIED BREWERS GRAINS to advantage. Why not you? Order a trial ton today and we are sure you will be pleased with the results.

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Vancouver, B. C.

and is getting regular exercise or, better, light work. Overfeeding of brood mares just before and after foaling is the cause of much of the digestive disorders and mortality in foals. Take special precautions against navel ill in foals, by thoroughly disinfecting the foaling box and also about the navel of the foal. After foaling, give

the mare a warm drink only for the first few hours. Then start a light daily grain ration, gradually increasing until she is on full feed, in about a week. It is as important to feed for milk in the mare as in the dairy cow; a grain mixture of oats, 6 parts; bran, 3 parts; and oil cake meal, 1 part, will give good results.

**FEEDING THE COW.**

The cow calving thin has a poor chance to make greatest profits, if any profits at all. The persistent-milking cow needs four to eight weeks' rest and good feeding before her next freshening. Is your cow which is not persistent less profitable because she is not so good, or because she is poorly fed and managed? Only by keeping records of milk produced and feed consumed can this be discovered. Free forms for keeping records may be had upon application to this magazine.

Discard the mongrel and scrub bull and save money. If calves are worth raising, they should be of the best breeding possible, on the sire's side at least. Use only the very best pure-bred bull available; good dairy cattle are more valuable each year, and the good ones never come by chance, but are well bred and reared.

Greatest profits are made in steer feeding when the animals are finished and marketed as baby beef (12 to 20 months) or as prime 2-year-old steers. In finishing steers in summer, the poor pastures must be supplemented by the green fodder crops above mentioned and a good grain ration.

Sheep were never more profitable than now; have you a flock, or is your flock as large as might economically be carried?

**HOLSTEIN ESTABLISHES RECORD.**

A Holstein cow at the Ontario Agricultural College, Guelph, has a worthy record. On March 8, she completed a new world record for butter and fat production. From March 9, 1915 to March 6, 1916, she produced 20,072.7 pounds of milk containing 819.95 pounds of butterfat, equivalent to 1,024.94 pounds of butter. This constitutes a record for cows milked twice daily both for milk and buttermilk.

All previous records of over 19,000 pounds of milk and 650 pounds of fat in a year have been made by cows milked three and four times daily throughout the greater part of the year. Only four cows in Canada, three Holsteins and one Jersey, have given more butterfat in a year than this cow.

She was five years old at the commencement of her year's test, and was college-bred and raised at Guelph. At no time was she forced in feeding, the largest amount of grain fed being 12 pounds per day.

**SHEEP IN BRITISH COLUMBIA.**

Mr. William Thompson, owner of the SX ranch in the Aspin Grove, Nicola Valley, says that the sheep industry throughout the valley is proving a big success both financially and numerically. While the past winter was a severe one, his sheep came through in splendid shape and though the severest snowfall recorded in years visited his section, the ranges were sufficiently clear to allow him to turn his sheep on them some weeks ago, the feeding season being less than three months.

Mr. Thompson is an old sheep owner in Montana and Idaho, and speaking of these states in comparison with British Columbia, says that the latter has many advantages in its favor. "One I might mention is that we are not subject to the equinoctial storms that raise such havoc and cause large losses to Idaho and Montana sheepmen. The feeding season is practically the same. Better prices prevail here in British Columbia both for mutton and wool."

**RECOMMENDS CLOSE-FLEECE BREED**

Professor L. Stevenson, of Bazan Bay Experimental Farm, says that only close-fleeced breed of sheep should be kept on Vancouver Island. He states he knows of

instances during the recent cold snap where two-thirds of large flocks were killed simply through the negligence of the farmer in choosing a breed not adapted to the climate.

**To Increase Dairy Products.**

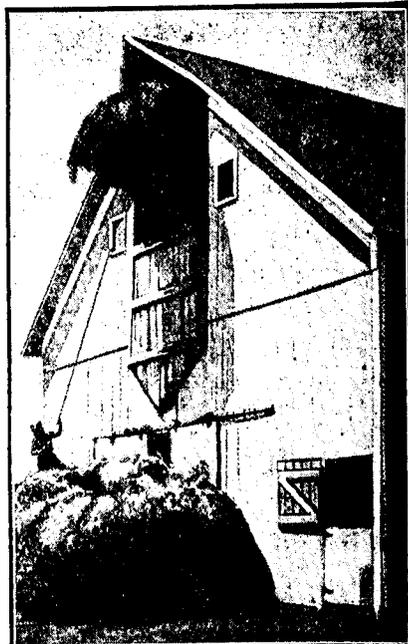
Last month Fruit and Farm spoke of the opportunity the boards of trade of the province were neglecting in not doing something of real value to the farmer. Those

remarks do not apply to the Victoria Board of trade which invariably has two and three committees studying marketing conditions, the development of the agricultural areas adjacent to Victoria and in undertaking other matters of benefit and interest to the farmer. This organization now has a committee finding out ways and means of increasing the quality and quantity of dairy products on Vancouver Island.

**WITH LOUDEN EQUIPMENT**

**IT IS EASY**

Your time during haying and harvest is most valuable. Save one-third of it by using Louden Hay Tools. They enable you to move larger loads easier and faster than in any other way. There are no delays at the barn for the use of Louden equipment. Louden Carriers with forks or slings will handle the loads safely and surely, and just as fast as they can be drawn from the fields.

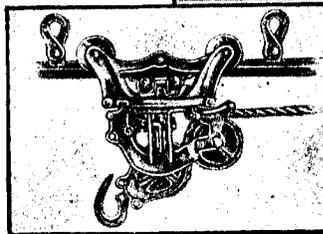


**THE LOUDEN JUNIOR CARRIER**

Is at all times safe and dependable, because of its simplicity and its strength. For twenty years it has been standard, and on thousands of farms it is to-day giving excellent service.

**THE LOUDEN BALANCE GRAPPLE FORK**

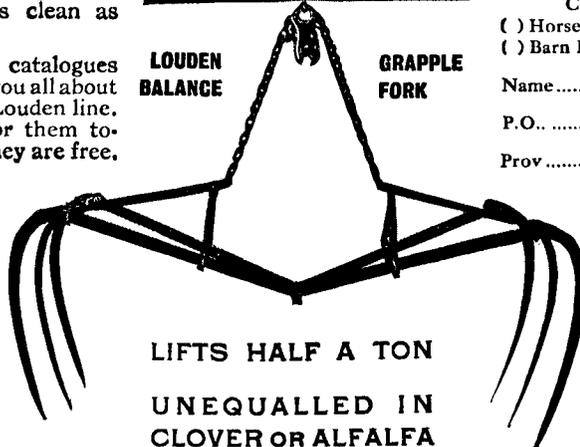
Set the tines of the fork deep into the load. It will lift an immense bundle and deliver it in the mow in even flakes, not tangled up as is the case when other forks are used. Handles clover, alfalfa, loose grain or straw, as clean as timothy.



**LOUDEN BALANCE**

**GRAPPLE FORK**

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### DON'T PASTURE TOO SOON.

The average cow that freshens in the spring begins her year's work with a serious handicap. She does if she is poor in flesh, and the cow that is dry during the winter or a stripper is apt to be, for a low production or no production does not prompt good feeding. Good clover, hay and corn silage or clover hay and fodder corn will bring a dry cow up to her period of freshening in pretty fair condition, but wild or timothy hay and corn stover will not.

It is now generally recognized among farmers who make a study of their cows that good feeding during a dairy cow's six weeks or two months of rest is as

profitable or even more so than at any other time. The flesh a good dairy cow lays on at this time will be converted into milk later. Her milk flow will be larger and her test will be higher when she freshens, if she is in first-class condition.

Shortage of feed, the rush of spring work and the temptation to turn the cows on pasture before there is feed there for them are all to the disadvantage of the cow that freshens in the spring. Whatever may be the portion of the rest of the cows and stock, it will pay to feed the cow well that is soon to freshen. Not only a low milk production and a weak calf follow poor feeding at this time, but after birth retention which may lead to serious ailment.—St. Paul Farmer.

### ASSOCIATION DISCONTINUED.

A meeting of Langley Fort Poultry Association was held recently. The secretary, Mr. Spencer Pallot, has had to relinquish his position, having enlisted for overseas. After a deal of consideration, it was decided that the association be discontinued but that the Egg Circle be still carried on with all energy, Mr. Tozer continuing as manager. The eggs will be collected at the West & Bartlett store in the Fort Block and shipped from there per the Canadian Northern. It was stated that, in consideration of the eggs being stamped and their freshness thus guaranteed, the Circle had been obtaining a cent or two above the prevailing prices.

# WOMEN'S SECTION

## British Columbia Women's Institutes

Motto—"FOR HOME AND COUNTRY"

### Hatzic Juniors Busy.

The regular monthly meeting of the Hatzic Women's Institute was held on April 20th with a very fair attendance in spite of the bad weather. Mrs. Osborne of the Mission City Women's Institute gave a very interesting talk on "Canning Fruit and Vegetables," which is likely to prove helpful to many of the members. Mrs. W. Stratton demonstrated the making of her candy which took the prize last month. The junior members handed in the handsome sum of \$26.50 for use by the Patriotic committee, this being the result of their supper and dance on St. Patrick's day. The sum of \$7.00 made at the magic lantern lecture entertainment so kindly given by the Rev. D. J. Welsh, was voted towards the Prisoners of War Fund. After the adjournment tea and cake were served by the hostesses for the day.

### Upper Sumas Institute.

The Upper Sumas Women's Institute met at the home of Mrs. M. Murphy, Huntingdon, on April 13th. After the usual business was transacted reports were heard from various committees and a school committee was elected for the present year. More wool was on hand and it was decided to give out work at one meeting and collect finished articles at the next, thus enabling them to send a package regularly each month. Several members took advantage of the privilege of obtaining a pair of socks to send direct to friends at the front, Mrs. Gordon donating an excellent pair. Mr. Skinner was unable to give in person his paper on "Beautifying Home Surroundings," but it was ably read by Mrs. Chadsey and very much appreciated. Two dollars and twenty-five cents was realized for Red Cross work from tea served by the hostess. Members present were: Mesdames Campbell, Gunn, Cobley, Murphy, Frazer, Yarwood, Everett, McMurphy, F. York, Munroe, Porter, T. York, Fadden, Skinner, Winson, Gordon, and Miss Elderkin. Visitors, Mrs. Chadsey and Miss Turnbull.

### Surrey Has Big Meeting.

Over one hundred people were present at the Surrey Institute meeting on April 4. Mrs. Davies, chairman of the advisory board addressed the gathering. She first congratulated the institute on the number of members now on the books, and recalled her first visit some four or five years ago, when the average attendance was only about half a dozen. She then spoke on the subject of Boys' and Girls' Clubs, when the department of agriculture is anxious to see organized in every rural district, and said the women's institutes were invited to assist in this work. The clubs are formed of ten or more boys and girls between the ages of ten and seventeen, who elect their own officers, but are supervised by an adult organizer. The clubs must enter for one or more of the following competitions: Potato growing, corn growing, pig or poultry raising. The department offers very generous prizes, and also sends judges at midsummer and again in the fall to score the exhibits.

### Vernon's Good Start.

The total membership to date, of the Vernon and District Women's Institute is 51, and the prospects are that this will be

largely increased in the near future. The movement has been somewhat slow in development here, but now that it is fairly launched everything indicates that the Vernon branch will be one of the most flourishing and useful of these institutions in the interior. A well-attended organization meeting was held last month at the Agricultural Hall of the Court House, with Mrs. Lipsett, of Summerland, a member of the advisory board, in charge. After an interesting and encouraging talk by Mrs. Lipsett, officers were elected as follows: President, Mrs. Price Ellison; 1st vice-president, Mrs. C. Marjoribanks; 2nd vice-president, Mrs. B. M. Richards; secretary-treasurer, Mrs. J. H. Miller. Auditors: Miss Jessie Smith and Miss R. Stewart. Directors: Mesdames Ellison, Richards, Miller, Duncan and Marjoribanks. It was decided to hold the regular meetings of the institute on the first Saturday of each month, and a special meeting will be held on the afternoon of Saturday the 15th inst.

### Kelowna Women's Institute.

The Kelowna Women's Institute held their monthly meeting in the Board of Trade room, in April, when some sixty members were present. The meeting opened with the roll call, which was responded to by "My Pet Economy." This proved to be very amusing, but at the same time helpful and instructive. It is wonderful, the hundred and one little ways in which women endeavor to economize in their homes. If each individual practices all the economies mentioned, husbands will need to be grateful for the organization of such a helpful institute. The roll call was followed by an excellent paper by Mrs. Switzer. Her subject was "Are Our Household Supplies Pure?" which was followed by a discussion. A very appreciative musical number (pianoforte duet) was given by the Misses Jones. The collection taken on behalf of the institutes' adopted Prisoners of War, Private Chain, amounted to \$4.70. The latter part of the afternoon was spent in making arrangements for the flower show, which is to be held in August.

### Shawnigan and Cobble Hill.

Shawnigan and Cobble Hill Institute has decided that ten per cent of the institute's income shall be set aside annually to form the nucleus of a Friendly Help fund. The whole meeting reflected the active life of the institute; not the least evidence of this life being the merriment excited by the subject for the afternoon: "My Favorite Quotation and Why." Earnest and stimulating as were many quotations, others were full of fun, and showed the excellent capacity possessed for a good laugh. Votes were given for the best design submitted for the cover of one of the seventeen scrap books made by the children of Malahat and Cobble Hill schools since Christmas. These were awarded to Fiona Hearn, Mona Neff, and Maysie Christison.

### Cowichan Women's Institute.

The last meeting of the Cowichan Women's Institute was well attended and was featured by a display by the Cowichan Girl Guides and an instructive paper on the wild flowers of Cowichan by Miss Wilson. The president, Mrs. Backwood-Wileman, introduced the subject of industries for Cowichan and said that experiments and

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inquiries were being carried on in respect of jam-making and canning.

Mrs. Morten reported for the library committee that 135 volumes had been donated at the book tea. Application has been made for a provincial traveling library. Mrs. Rushton has consented to act as honorary librarian with assistants. The meeting decided that men might have the use of the books on payment of fifty cents yearly.

Mrs. Hayward reported that the Friendly Help committee had sent a box of clothing to Ladysmith and to Victoria, and two to St. Ann's besides giving help locally. She also said that during the past three months, the Red Cross committee had sent 3,514 articles to Vancouver and had collected some \$47 for the purchase of material.

### Bird House Competition.

The judging in the Summerland Women's Institute Birdhouse Competition was held recently. Each competitor brought his or her house to school that day, and it was quite an event for the young ornithologists. There were twelve in all put up for inspection, ten juniors and two seniors. This number was very good considering that the competition was only gotten under way just one month ago, and that the idea is new to most of the children here. The judges were Mrs. W. C. W. Fosbery and Mrs. Wm. Kerr, who awarded prizes as follows: Senior—1, Warren Gayton; 1, Joe Gayton. Juniors—1, Arthur Morgan; 2, Alan Estabrook. The other competitors were Jean Moore, Frank Dickinson, Joe McLachlan, Charles Tullett, Alastair Moore, Nicholas Solly, Eric Johnson and Campbell McAlpine.

### Cranbrook Institute.

At a Red Cross shower at the April meeting, the following was obtained: 27 pair

Concluded on page 940



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Send 10 cents in silver or stamps for our Up-to-Date 1916 SPRING AND SUMMER CATALOGUE, containing over 400 designs of Ladies', Misses' and Children's Patterns, as well as the latest Embroidery Designs; also a Concise and Comprehensive Article on Dressmaking, giving valuable hints to the home dressmaker.

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Cut in 4 sizes: 6, 8, 10 and 12 years. It requires 3 1-4 yards of 44-inch material for an 8-year size. Price, 10 cents.

**1365—Ladies' Apron.**

Cut in 3 sizes: Small, medium and large. It requires 4 1-2 yards of 36-inch material for a medium size. Price 10 cents.

**1664—Ladies' Empire Night Gown.**

Cut in 3 sizes: Small, medium and large. It requires 5 1-2 yards of 36-inch material for a medium size. Price 10 cents.

**1551—Girls' Dresses.**

Cut in 5 sizes: 4, 6, 8, 10 and 12 years. It requires 3 3-8 yards of 44-inch material for a 6-year size. Price, 10 cents.

**1660—Ladies' House Dress.**

Cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches, bust measure. It requires 7 yards of 36-inch material for a 36-inch size. The skirt measures about 3 1-2 yards at the foot. Price, 10 cents.

**1666—Ladies' Dressing Saque.**

Cut in 3 sizes: Small, medium and large. It requires 2 yards of 42-inch material for a medium size. Price, 10 cents.

**1688-1686—Ladies' Costume.**

Waist 1688, cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. Skirt 1686, cut in 6 sizes: 22, 24, 26, 28, 30 and 32 inches waist measure. It requires 9 yards of 36-inch material for a medium size for the entire dress. This calls for TWO separate patterns. 10 cents for EACH pattern.

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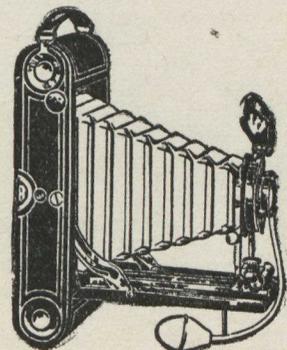
A Mail Order Special that should attract considerable attention. A thoroughly reliable Carpet Sweeper and Vacuum combined. This machine has been pronounced as the most efficient Vacuum Sweeper on the market, and we can state positively that our own experience with the machine has been highly satisfactory. In this sweeper there are duplex bellows which create a continuous suction, and it has a sweeper combined which can be used separately if desired.

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## WOMEN'S SECTION

Continued from page 938

### Cranbrook Institute

sox, 12 suits of pyjamas, 7 surgical shirts, 10 hot water bottle covers, over 3000 mouth wipers, over 200 wash cloths, one blanket, and some old linen. These will be turned over to the I. O. D. E. for shipment.

### Chilliwack Women's Institute.

The March meeting of the Chilliwack Women's Institute was held in the spacious home of Dr. and Mrs. Davies, and the meeting, which was an open one, was very largely attended. Trustee F. B. Stacey gave an address on the subject of "The Teacher, Trustee and Parent." Principal T. V. Clarke of the public school, followed, and dealt with the question more particularly from the teacher's view point. Trustee Jno. Robinson took up the question of salaries and school efficiency, and presented some interesting comparisons taken from the recently published provincial report on education, and which placed Chilliwack in a very favorable light. In results obtained Chilliwack stands second to none in the province, while in regard to cost there are many similar schools where the average salary is higher than that which prevails here. Mr. J. C. Ready in a brief and pithy way emphasized the importance and place of the study of agricultural science in its relation to the other studies, to the child, to the community and the state. Mrs. C. P. Chamberlain spoke briefly and in complimentary terms from the view point of the parent. Judging from the manner in which the subject of education as discussed was received by the members of the women's

institute, they would regret any action that the local authorities might take which would interfere with the present scope and efficiency of matters educational in Chilliwack. A number of important current events were tersely related and commented upon by C. A. Barber. The musical numbers of the evening, a piano solo by Miss Norma Toms, and a vocal solo by Miss Irene Knight, were greeted with hearty applause. A social cup of tea or coffee and light refreshments brought to a close one of the most successful meetings of its kind yet held by the institute.

### HOW TO DO THINGS

Gentle woman, don't wear yourself out house-cleaning.

The deposit which forms in the bottom of the teakettle can readily be removed by boiling vinegar in the kettle.

If the cupboard is dark, this condition can be improved by painting the walls, ceiling and shelves with white enamel paint.

Small articles may be kept safely from moths by putting them into glass preserve jars and screwing the tops tightly on.

A small square of velveteen is excellent to use as a polishing cloth, and is cheaper than chamois.

When using flavoring extracts of any kind in cake-making, put the desired quantity of extract in either the milk or water used in the cake. By doing this the flavor is more equally distributed.

In papering do not, if you can help it, put the new paper on top of the old—peel off every bit of the old. Wet the wall with a brush to soften the old paper.

Scrape it off and then put on the new paper. The paste used for wall paper should be well cooked.

A simple way to can rhubarb is to cut the tender rhubarb stems into half-inch lengths without peeling. Pack them in cans. Then pour in cold water till the can overflows. Seal it tightly and treat it the same way as any kind of fruit. This is fine for pies or sauce in winter.

To prepare muslin walls for painting or papering, dissolve a pound of pulverized glue in a pint of cold water, then add five quarts of boiling water until dissolved. Put on with a brush. It will make the muslin firm and tight and give a smooth surface, which will make the paint stand out better.

In decorating the home, have all the rooms that are closely connected tinted in harmonizing colors. For instance, there is a jar on coming from a living room with subdued blue tints, into a dining room arrayed in bright red paper. Even though the rooms cannot be thrown together, they are too intimately associated to admit of discordant jars in color.

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