

BRITISH COLUMBIA
FRUIT AND FARM
MAGAZINE

Vol. VIII, No. 2

FEBRUARY, 1916



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BRITISH COLUMBIA Fruit and Farm Magazine

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

Vol. VII.—No. 2

Vancouver, British Columbia

[\$1.00 per year
in Advance

Elementary Agricultural Education in British Columbia

The first annual report which has just been issued by Mr. J. W. Gibson, Director of Elementary Agricultural Education in this province, is very interesting reading. It deals with the summer schools for teachers which were held in Victoria during the last two summers, the conferences held with the school inspectors of the province last July, the circulars issued to the teachers and secretaries of school boards, and the establishing of school gardens.

A course of lectures on "Forestry" was also presented to the second-year students in rural science by Mr. H. K. Robinson, of the Provincial Department of Forestry.

Throughout the course of the plan of combining field and laboratory studies with lectures and class discussions was followed. Numerous excursions were conducted as a regular part of the course, all of which helped to make the course more concrete and practical, as well as more interesting.

and other persons interested in educational matters in each inspectorate.

Following the adoption of a policy with respect to agricultural education in the province, an official circular was published setting forth in some detail the methods and conditions under which the work was to be carried on. A copy of this circular was sent to every teacher in the province, as well as to the secretary of every School Board. The main points



The real place to begin school-gardening. The first class of British Columbia teachers in Rural Science, Victoria, July, 1914.

Summer Schools in Rural Science.

The first summer course in rural science for teachers in the public schools of the province was given in July, 1914, in the Victoria High School. The attendance was larger than had been anticipated, no less than 171 teachers completing the course, while at the summer school of 1915 the attendance showed an increase, the first year class numbering 183, and the advanced or second-year class totalling 77.

During the last week of the summer course of 1915, Professor L. S. Klinck, dean of the Faculty of Agriculture in the University of British Columbia, gave a series of illustrated lectures, dealing with the breeding and improvement of plants, which were much appreciated by all who heard them. During the same week, Dr. Judson F. Clark of Vancouver, delivered a valuable series of lectures on "Forestry" to the teachers taking the first-year work in rural science.

Excursions were run to the Dominion Experimental Farm at Sidney and to some of the best dairy-farms, orchards, and poultry-ranches in the district. The social life of the teachers in attendance was also considered and several evenings of a social and literary nature were arranged. Once during each summer session the whole student body organized a combined excursion and picnic, which proved in each case to be a most enjoyable form of outing.

Immediately on the close of the summer school of 1914, Mr. Gibson visited a number of districts in the province for the purpose of obtaining first-hand information with reference to agricultural conditions, as well as to observe for himself the general conditions with reference to the schools of the province. He continued this line of investigation throughout the autumn months, and, in company with several School Inspectors, attended a number of conferences with School Boards, teachers,

dealt with in this announcement of the policy of the Department were as follows:

(1) Special training for teachers in rural science by means of special summer courses, a preliminary course recognized by the granting of an interim certificate, and a second or more advanced course leading to a diploma in rural science:

(2) Special grants to be allowed to teachers holding either the interim certificate or the diploma in rural science, as well as to other teachers who successfully carry on an approved scheme of work in their schools:

(3) Special grants to School Boards to meet the extra expenses in connection with rural-science work:

(4) Assistance to School Boards conditional upon certain expenditures to be made in the general improvement of school-grounds:

(5) Special grants to School Boards and teachers for organizing and maintaining

supervised home-gardens in cases where school-gardens are not practicable:

(6) School- and home-gardening work to be supplemented where possible by occasional excursions for the purpose of studying improved methods in gardening, fruit and grain growing, dairying, live stock and poultry-raising, etc.:

(7) Agriculture to be included as an optional subject in high schools, to be taught in each case by a man specially

will be seen that a satisfactory beginning has been made. In a number of cases School Boards that had no definite appropriation for this work in their regular estimates for the year went so far as to secure the necessary additional funds in order to get the work started. The number of schools to engage in the work this year would have been very much greater if financial conditions had been more normal. The present condition of financial stress

Agriculture in High Schools.

Mention has already been made of the fact that the policy of the Department with reference to agricultural education includes the teaching of agriculture as an optional subject in high schools, and the further use of the high school as a centre for extension classes in agriculture. This new move, together with a High School Course in Domestic Science and Manual Training, cannot be otherwise than beneficial to the province. It illustrates the modern tendency, which is growing stronger every year, to make the high schools serve the people in a much broader way than in the past. They are thus destined to become the most valuable educational agency in the province, in helping young people first to find their own best life-work, and then to definitely prepare for it.

This new branch of study is just now getting under way in connection with the high school at Chilliwack. Mr. J. C. Readey, B.S.A., formerly soil and crop instructor for the province, has been placed in charge of the work. He has just organized the first class of regular high-school students, numbering eighteen. They take all the regular high-school work in addition to their agricultural classes, with the exception of foreign languages, which are optional for students taking the classes in agriculture. If they so desire, they are permitted to take up the study of one foreign language as a bonus subject with agriculture. The marks secured on examinations in this subject over and above 50 per cent are credited on their general totals. They are thus given recognition for extra work done.



The first school-garden at Kaslo, B. C., made in the heart of a heavily wooded area.

qualified in agriculture, and having, if possible, approved standing as a teacher:

(8) Extension classes in agriculture to be conducted in such high schools by the agricultural specialist for the benefit of the young men of the district who are not regular students in the high school:

(9) A general supervision of the work in rural science in the public schools of the district or municipality adjacent to the high school to be exercised by the agricultural instructor in such high school, and who will be known as District Supervisor of Agricultural Instruction:

(10) The establishing of a Provincial Schools Nursery for the propagation of trees, ornamental shrubs and herbaceous perennials suitable for planting in school-grounds.

The general distribution of this circular to teachers and School Boards brought forth a large number of inquiries as well as a large number of applications for assistance in the starting of school-gardens and in the improvement of school grounds. About 100 School Boards made application for assistance, some for school-garden grants, some for grants towards school-ground improvement, and some for both. A large number of small gardens have been established during the year, and about sixty gardens that have complied with the requirements are eligible to receive grants this autumn. In about thirty schools grants will be given for grounds improvement in accordance with the conditions stated in Circular No. 1, although many other schools have accomplished a good deal of work by way of grounds improvement. From the standpoint of the amount of interest manifested by School Boards generally, as well as from the standpoint of the investments made in the establishing of school-gardens and the improvement of school-grounds, it



The Maypole dance. The modern school-ground combines beauty with utility and recreation with education.

has not been without its compensating benefits. One of these is noticeable in the changed outlook of the people. They are coming to place a higher value upon the investment of their own honest labor. Where no funds were available to pay for improvement work on the school-grounds, the men of the district came forward and did the greater portion of the work voluntarily. In so doing they were contributing to the welfare of their own community as well as to the advancement of their own young people.

An extension class in agriculture, composed of twelve young men of the district between the ages of fifteen and twenty-five, has just been organized. They will meet either in the agricultural class-room in the high school or at one of the farms in the immediate district, where a series of first-hand practical studies will be carried on which will deal with every phase of agriculture and practical farm management. A suitable class-room is being fitted up with adequate equipment for the teaching of agriculture. It is intended that these

young men who are engaged thus in the study of agriculture two half-days per week during the winter months will also meet one evening per week to further discuss the work in hand, hear special papers or addresses bearing on their work from members of their own class, as well as occasional addresses from outsiders. The evening classes will also have a definite social value, and will help to unite these young men in a common purpose as in an agricultural club.

Agricultural experimental plots have been established in the high-school grounds, and arrangements are under way for the erection of a suitable garden-house and field laboratory, which is to be planned and built by the senior boys in the Manual Training classes in the high school, under the direction of Mr. White, manual-training instructor.

During the months of May and June, Mr. Readey made regular visits to eight schools in the Chilliwack Municipality and helped very materially in organizing school-gardens at these schools, as well as having general supervision of the instruction in rural science in the public schools in both city and municipality.

There is much to commend this plan of conducting agricultural instruction, not only for regular students in the high school, but also for the young men of the district who are regularly brought together in the high school under a competent leader and instructor. Such a scheme of Extension and High School classes in agriculture affords a much-needed opportunity for boys (and girls also) to continue a line of agricultural studies in which they have become interested during the years spent in the public schools. It is intended that the High School Course shall extend over three years, and shall be so arranged that boys wishing to continue the study of agriculture in the Provincial University may be allowed credits on entering upon a more advanced course leading to a diploma or to a degree in agriculture.

AGRICULTURAL CONVENTIONS TO BE HELD IN VICTORIA.

Deputy Minister Scott Thinks Present Year Will Prove Red Letter One in History of Farming in B. C.

A series of important conventions to deal with matters affecting the agricultural industry of British Columbia will be held in Victoria in the near future, according to an announcement made last week by Mr. W. E. Scott, deputy minister of agriculture.

At some date to be fixed, and during the period when the session of legislature is in progress, delegates from all the Farmers' Institutes in the province will assemble in Victoria for an annual convention. This meeting is a yearly fixture, but it was abandoned last year, owing to the abnormal conditions prevailing generally as a result of the war. This year, in view of the opening of a season which promises much in the development of the agricultural industry of the province, it is intended to proceed with the convention, the government having arranged to pay the transportation of all the delegates. Already there is an assurance of a big attendance, this testifying

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to the healthy interest being taken in the business to be discussed, as the delegates will themselves pay all other expenses.

Similarly, during the session of the legislature, the members of the B. C. Fruit Growers' Association will assemble at Victoria in annual convention, as will also the B. C. Stockbreeders and the Board of Horticulture, at dates which will not conflict with the various sessions.

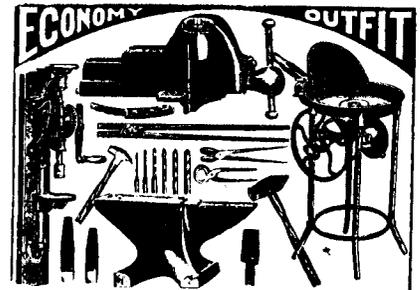
Addressing a Chilliwack audience recently, Provincial Live Stock Commissioner Macdonald said that on a dairy farm was no place for dual-purpose cattle. No high degree of success in dairying could ever be obtained with dual-purpose cattle, as the qualities developed in such cattle were entirely contrary. The specialized dairy cow was not a normal animal but a very highly developed one along its lines and the only one for marked success in the dairy business. He recommended persistent work along these lines rather than a branching off into many, as a definite purpose year in and year out was bound to mean success.

Professor W. T. Macdonald, Provincial Live Stock Commissioner, states that a pig-raising competition will be added to the crop competitions this year. The entries for these competitions have increased from 305 in 1913, to 812 in 1915, and the department proposes this year to enlarge the scope of the competitions.

Eight-dollar hogs are predicted for next March.

The secretary of the Surrey School Board has been instructed to arrange an interview with the director of rural science with a view to advancing the movement for school gardens in Surrey.

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EDITORIAL

MUNICIPAL MARKETS.

We commend to readers the article in this issue on "Municipal Relationship Between Producer and Consumer" by Mr. D. E. Mackenzie, known throughout the province as the man who, more than anyone else, has been responsible for the splendid success of the New Westminster city market. The writer of the article approaches his subject in a very broad way covering in a general way several of the problems which affect the whole national life. Incidentally, however, he touches on some essentials of a successful public market, and in this regard it will well repay those interested in municipal markets to give heed to Mr. Mackenzie.

Just at the moment there is a widespread desire to establish municipal markets everywhere throughout the province. Here is where the man who has given the better part of his life to the study of municipal markets sounds a note of warning. One of the best methods of getting producer and consumer together is through public or city markets where the geographical location and the surrounding conditions provide reasonable opportunities for success; but, as Mr. Mackenzie points out, it is a great mistake for every city or town to feel that they are in a position to conduct a successful municipal institution of this kind because of the many and varied obstacles peculiar to their individual localities which might spell failure and disaster in more ways than one.

We fancy we know the reason why attempts to start municipal markets have proven a failure, or at best a very mediocre success, in some places in British Columbia.

In the many features advanced for the public market by Mr. Mackenzie is that of the elimination of the question of commercial credit, a very good virtue of public markets of which the majority of us will no doubt confess we had not seriously thought before, nor of the definition of what commercial credit is as given by Mr. Mackenzie: "A system of which no doubt most of you have heard and with which you have had considerable acquaintance, without possibly a personal understanding and a knowledge of the fact that it is only a belief held of your ability to pay for something a long time after you have ceased to derive any benefit from it, and a gauge of your willingness to deceive yourself into the belief that you can afford to buy something because you cannot pay cash for it." Rather a neat way that of describing the reasons why men run into useless debt, isn't it?

FARM LANDS AT CITY LOT PRICES.

"The price of land must be regarded with reference to its intended use. Settlers have been paying for farm lands, the price of building lots in city suburbs and at summer resorts. The value of agricultural land must come down to a figure which will represent the capitalization at its net rental value. Land held by the speculator at fictitious prices, based upon the possibility of a real estate boom, must be avoided by the man proposing to farm."

These remarks are made by Mr. W. H. Hayward, M.L.A., of Duncan, who was chairman of the British Columbia Royal Commission on Agriculture. They uncover at once one of the principal reasons why so many settlers have found it such hard sledding in British Columbia and why the province is not being settled more rapidly than it is. During the real estate boom, recently collapsed, thousands took up small holdings near the populous centres of the province paying practically city-lot prices, and impoverishing their capital. True, there were a great many inexperienced agriculturists among the number, but we venture to say that more failures among them may be attributed to the ridiculous prices they paid for their little farms than to their lack of experience. Farming is a business like anything else at which men earn their livelihood by buying and selling. You must buy your land at a price compatible with what the markets will pay for the products off that land or you will lose heavily. There will be a lot of heart-burning in the readjustment of land prices in British Columbia, but until they are readjusted agriculture will not make the progress it should, in the older settled sections of the province at any rate.

TO INCREASE LIVESTOCK.

Last month we drew attention to the opportunity for Canada and the real necessity in increasing the livestock on account of the depletion caused by the war. The situation is one that is attracting Dominion-wide attention, and on January 20, Dominion Livestock Commissioner John Bright announced that the government is taking steps to assist Canadian breeders to obtain breeding stock with a view to meeting present requirements of their herds, and to preparing for the demand which will come to this country after the war.

It has been arranged that wherever a number of farmers in any part of Canada wish to co-operate for the purchase of breeding stock in carload lots from some other section of the country, the department will pay the travelling expenses of their duly appointed representative, and assist in the purchase and transport. Should it be desired a suitable person will be sent by the livestock commissioner to accompany this representative, and assist him as far as possible in buying and shipping the animals.

It is pointed out that there is at present an unequal distribution of livestock throughout Canada. During the past year, hundreds of young cattle from the prairie provinces have been sent to the United States as stockers and feeders, and the supply of female animals is consequently much below requirements. There is also a scarcity in the west of good draft mares, while in sections of Ontario there is an over-supply.

DOING A NOBLE WORK.

Those who have been reading the Women's Institute Section of "Fruit and Farm" for the past several months cannot help but have been impressed with the wonderful amount of work the Women's Institutes of the province are doing on behalf of the Canadian Patriotic Fund, the Red Cross and other kindred duties. No class of people in British Columbia has done more faithful, self-sacrificing work in this direction than the members of these institutes. By knitting comforts for the soldiers, by arranging collections, by baking delicacies for the front and in a score of other ways the women have been contributing their share these times to the common cause, not forgetting the fact that these same women are, the majority of them, also contributing their sons, husbands and sweet-hearts to the maelstrom of the war fields of France.

FIGHT OR PAY.

A further call has been made on the generosity of the people of British Columbia on behalf of the Canadian Patriotic Fund. More money is needed to provide the wants of the families whose bread-winners have gone to fight for the Empire. An extra call has been made on the province for more men for the colors necessitating more money for the Patriotic Fund.

It is all very well to urge our best manhood to go and fight for Canada and the Empire, but we have no right to do this unless those of us who remain behind are prepared to see that the families of these men want for nothing in the meantime.

The slogan now is "Fight or Pay." Not all can fight; but all can pay something either in money or effort that will assist in raising money. If every man in British Columbia will do his duty in the matter there will be no occasion for any great concern on behalf of those administering the fund. Contributing to the fund will entail self-sacrifice, the doing without some luxuries—some necessities perhaps—but then think how much the men fighting at the front are doing without.

There's a money-raising campaign for the fund being carried on in your community. Work and boost for it.

AN INTERESTING EXPERIMENT.

As long ago as 1894 the late Mossom Boyd of Bobeaygeon, Ont., began experimenting with cattle and several buffaloes with a view to developing a hardy domesticated animal which would have all the advantages of buffalo. It proved a long, expensive and discouraging work, and when Mr. Boyd died his experiment had not reached the stage where it was certain he had produced a new breed. Now the Department of Agriculture at Buffalo Park, Wainwright, Alberta, will carry on the experiment, which, if successful, may prove to be worth millions of dollars to Western Canada. The department has obtained twenty catalo, the name by which hybrid buffalo and cattle are known. Four bulls and sixteen females were purchased and will be removed to Wainwright in the spring. It is asserted that the catalo, if successfully bred, will be hardier than the domestic animal, and like the buffalo, will winter out in the plains, foraging for itself. The experiments have shown that the hide is almost as heavy and valuable as the buffalo which would add greatly to its worth.

Fruit and Farm Notes

Dr. S. F. Tolmie, British Columbia representative of the Dominion Live Stock Commission, was in El Paso, Texas, attending the annual meeting of the American National Live Stock Association which convened there the last week in January. From Texas Dr. Tolmie goes to Toronto to attend the annual meetings of the Dominion Live Stock Association, which are being held there the first week in February. A month ago he was in Chicago in attendance at the meeting of the International Commission on Bovine Tuberculosis and also the annual meeting of the United States Live Stock Sanitary Board, at each of which matters of very profound interest to stock growers of the United States and Canada were discussed.

Manager Bone of the Graham Co. at Vernon, has notified the city council that his company is looking into the matter of establishing one or two permanent evaporating plants in the Okanagan to handle fruit as well as vegetables.

A great impetus has been given to the dairying industry in the Okanagan Valley during the past year, states Mr. W. T. Macdonald, live stock commissioner for the province of British Columbia. "Three creameries have been opened in the Okanagan district during the past season, one at Salmon Arm in the early summer and others at Armstrong and Kelowna have just recently been started as co-operative concerns," said Mr. Macdonald. "The herds are increasing rapidly in the district and several thousand pounds of butter are being manufactured each week. Most of the butter is consumed locally. Indicative of the way the farmers are taking to dairying there has been built in the Kelowna district during the past summer no less than thirteen silos for the storage of ensilage. These silos will range in capacity from 75 tons to 110 tons. It is exceptionally rich feed and particularly well adapted for a dairying herd. The farmers as yet are stocking up with grade cows, the thoroughbred animals not having been introduced to any considerable extent. This is possibly the best plan, since the grade cows are less expensive and enable the dairyman to get a grasp of the industry while he is making progress in the essentials of successful milk and butter production."

The financial statement of the Chilliwack Producers' Exchange shows that the volume of business during the second year of operation amounted to nearly \$112,000, at a gross profit of \$7,845.46. After deducting all expenses, and setting aside \$400 for interest to shareholders, there was a net profit of \$1,000. The amount paid for labor was \$4,285.52. The profit of the year was placed in reserve on recommendation of the directors. The officers elected for the new year were: E. Chilliwack, A. H. Gillanders, F. Twigg, C. J. Bolton; South Sumas, M. Hilton, J. Hepburn, F. Bennet; Rosedale, E. D. Barrow, R. Mercer, R. Francis; Sardis, Jas. Bailey, Edwin A. Wells, J. Arnold; Chilliwack, A. W. Keith, E. A. Orr, C. E. Eckert.



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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 at 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.

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Agricultural Problems in British Columbia

By W. H. HAYWARD, M.L.A.

I will deal first with some of the difficulties in the way of the success of the farmer in B. C.

The principal drawbacks are, I think, these: First, Lack of Capital; second, Social Barrenness; third, Lack of Political Power.

Clearing, draining, irrigation, the making of roads, are costly to a degree unknown in most other countries.

It is only mixed farming that promises success, and to get properly started in this the settler must have buildings, implements and live stock, and a sufficient area of cleared land to afford pasturage and food, as well as for the cultivation of marketable crops.

There is not the opportunity, or the disposition shown here for co-operation in the ownership of implements, etc., which is found in some other countries; hence every man must have practically a complete plant before he is ready to do successful work.

Second, The Social Problem.

Farm life is lonely, isolated, restricted. Men and especially women are cut off from social intercourse, from contact with the life of the world, from the facilities which city people have for recreation, amusement and instruction.

Third, The Political Problem.

The life of the farmer does not tend to breadth of view. The farmer has little time to travel, little time for conventions or public meetings, little time or opportunity for consultation and political co-operation with his fellow farmers.

The platforms of the political parties are made in the cities; candidates for parliament are generally professional or commercial men.

Minor Problems.

Amongst minor difficulties I mention particularly the artificial and conventional system under which our lands have been surveyed. The rich lands have been given to the few; the hills to the many.

The quadrilateral system of land survey, well adapted to prairie conditions is out of place in B. C. The land has been surveyed without reference to the topography of the country.

This vicious system has militated against close settlement, has led to the location of many settlers upon areas which afforded no arable land, has scattered settlers.

Good roads, graded schools, co-operation in marketing, co-operative creameries, canneries, etc., are only possible where there is density of population.

Some Suggestions.

First, Cheaper Money.

In some European countries this need is met by local co-operation. The property of an entire community becomes security upon which money for agricultural loan is raised.

But these are communities where families have lived for generations upon the same land. Every farmer is acquainted with every other farmer. The loans are made at the discretion, and under the supervision of local boards. It is useless to suggest a similar system here.

In accordance with the findings of the Agricultural Commission, of which I have had the honor of being a member, we have now upon our statute book provision for long term loans to farmers. This legislation may be brought into effect at any time by order-in-council. The government announce it is their intention to withhold action until the close of the war.

In the meantime there is no reason why, in conformity with one of the resolutions which you have upon your order paper, here, the preliminary work of the organization of the commission to be charged with the operation of the scheme might not be proceeded with.

The members of the Agricultural Commission traveled to many countries and examined the practical working of many schemes, in preparation for the formulation of the plan which is now to be put on trial in B. C.

The money to be loaned is to be secured by mortgage upon the properties for the improvement of which it is to be used, and these mortgages backed by the endorsement of the province, are to form the security for the bonds upon which the money is to be raised.

This we regard as the best arrangement that can be made within the province, but it is not in my view ideal.

Money can be raised more cheaply by the Dominion than by the provinces, and the interests affected are so vast, and the end sought so important, that it becomes a matter well within the purview of the Dominion government.

What is needed is a revision of our banking system, to permit of loans for long or short periods to farmers, upon such security as farmers have to offer.

For such a system the backing of the Dominion would be necessary.

Co-operation.

The members of the commission were greatly impressed with the showing made in accumulation of wealth, by Denmark, within recent years. Naturally not a very rich country, Denmark has become third amongst the nations of the world in per capita wealth.

We consider this result to be almost entirely due to co-operation amongst farmers.

The Danes co-operate in raising money, they co-operate in production, they avoid unnecessary duplication of farm machinery.

They co-operate in buying, securing seed and implements and fertilizers and merchandise at wholesale rates.

They co-operate above all in the marketing of produce. Every thing a farmer produces finds its way to market through the medium of the co-operative society. Co-operative dairies sell nine millions sterling worth of butter per annum. The egg societies export \$2,180,000 worth of eggs.

Other societies concern themselves with the slaughter of hogs and the curing of bacon.

Others with improvement of stock, the keeping of bees and the growing of fruit.

The effect has been little less than a revolution. The results of science have been brought within reach of the peasant, it has transformed a great part of farm work into a factory industry, increased the yield of

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the soil, improved the position of the farmers and drawn rich and poor together.

The farmer in British Columbia in common with unorganized farmers everywhere, continually buys in the retail, and sells in the wholesale market. He parts with his product, and receives for it a price fixed by the purchaser, minus all charges that accumulate against it.

Until this fundamental defect (the lack of organization in buying and selling) can be cured there is little hope of general agricultural prosperity.

Price of Land.

The price of land must be regarded with reference to its intended use. Settlers have been paying for farm lands, the price of building lots in city suburbs and at summer resorts.

The value of agricultural land must come down to a figure which will represent the capitalization of its net rental value.

Land held by the speculator at fictitious prices, based upon the possibility of a real estate boom, must be avoided by the man proposing to farm.

This principle must be applied in the matter of taxation.

Farm improvements should pay no taxes. Lands held for purposes of speculation, should be taxed upon speculative value. Farm lands upon productive value only.

Taxation should be imposed such as will offer a premium to the man who will farm.

We indulge in dreams as to the future prosperity of B. C. In order to have substantial and enduring prosperity we must stop the influx of enormous sums now going out of the province for agricultural productions.

Every acre of land under production is an asset of the province.

How B.C. Apples Stood the Test.

Panama Exposition Commissioner Makes Report on Canadian Fruit on Exhibit at San Francisco.

The commissioner in charge of the Canadian exhibit at the Panama Pacific Exposition who, since the close of that exposition goes on to San Diego with the Canadian exhibit, has requested Chief Dominion Fruit Inspector Clarke of Vancouver, to arrange to send another big shipment of apples for the San Diego fair.

It will be remembered that at the opening of the Panama Exposition Mr. Clarke forwarded a thousand boxes of British Columbia apples for the Canadian exhibit for exhibition purposes. These apples made a splendid impression and were generally commented upon by fruit growers the world over who attended the fair. Now that Canada will exhibit at the San Diego fair, which will be quite a pretentious affair in itself, another thousand boxes are wanted from this province.

The apples have already been secured by Mr. Clarke, 600 boxes from the Okanagan and 400 from Keremeos. They are held in storage in Vancouver awaiting favorable opportunity for shipping them south.

The commissioner in charge of the San Francisco exhibit has made a report on the British Columbia shipment sent last year which will be of interest to fruit growers of the province. It reads as follows:

- McIntosh Red—Very good until July.
- Jonathan—Shot rot so bad that we had to dump what we had after April 1.
- Winter Banada—Excellent exhibition apple, and kept well till July 31.
- Grimes Gilden—Very good until July.
- Wagener—Fair until June.
- Yellow Bellefleur—Good exhibition apple if sent when new season's crop is in.
- Spitzenberg—Fair, but scalded badly after July.
- Home Beauty—Good till August, then spotted.
- Newton Pippin—Good till end of July, then showed scald badly.
- N. Y. Winesap—Very good keeper till August (good exposition apples).
- Gano—Excellent; kept till December.
- Ben Davis—Good till August; showed scald after that time.
- Arkansas Black—Good exposition apple; kept well till December.
- Delicious—Excellent exposition apple; kept well till December, showing very little waste.
- Lawyer—Good exposition apple; kept till November.
- Canada Baldwin—Good till October; fair size.
- Salome—Good exposition apple; kept well; showed scald after September.
- Missouri Pippin—Good exposition apple; kept well till July.

Reports have been presented on apples from other provinces of the Dominion and it is noteworthy that the British Columbia apple holds its own with the best of them, there being less defects found after several months than in those from other provinces.

Americans After B. C. Growers' Market.
That American fruit growers are doing their best to make an impression on the British market is indicated in a letter which Chief Dominion Fruit Inspector Robt. G. L. Clarke of Vancouver has showed Fruit and Farm from Commissioner Johnson, reading as follows:

"A number of shipments which have gone to the Old Country have not made very well owing to the fact that the apples were of larger size. Mr. Forsyth-Smith advises that the mediums, from 125 to 165, are in much better demand than larger ones. It would appear that there is a considerable quantity of boxed apples accumulated in the Old Country market at the present time largely due to the marketing associations in the Northwestern States who have their representatives there and who are pushing hard for trade.

"The three carloads of apples shipped by the Okanagan United Fruit Growers arrived in good condition and reflect great credit upon packers. The fruit car which consisted of good winter varieties, was wholesaling at prices varying from \$2.50 to \$3.00. They would all have cleared out at this price had it not been that the other two cars of Jonathans (one of which was No. 2) were shipped on to the same dealer, and as they were somewhat overripe, were forced on the market and were selling at \$1.50 to \$1.75 wholesale.

"Several carloads of British Columbia apples have also arrived in Toronto and I believe have given very good satisfaction.

"D. Johnson."

No Action This Session.

According to advices just received from Dominion Fruit Commissioner Johnson at Ottawa, no action will be taken at this session of the house on the matter of standardization of packages as requested by the fruit growers. It has been agreed that the session of parliament will be essentially a war one with nothing introduced but that which refers to the war. For this reason there is little hope of anything being done in this matter this session.

Vancouver Island Resident Would Plant Nut-Bearing Trees.

That the hills and slopes of Vancouver Island could be profitably planted with nut trees and that a great industry could be developed, especially in the cultivation of filberts, is the opinion of Mr. Alex. Ledingham, a pioneer farmer of Courtenay, B. C., who has experimented successfully with nut-bearing trees. While walnuts and almonds can be grown, the climate and soil of Vancouver Island hills is especially suited for the production of filberts is Mr. Ledingham's statement, and he hopes to see a considerable acreage planted with these in the near future.

In order to take care of the 1916 Kootenay-Boundary fruit crop, estimated at about \$200,000, the committee appointed at the meeting of growers held at Nelson last month, has reported advising that local associations be formed under the provisions of Part 3 of the Agricultural act of 1915 and that these be represented at a district exchange with head office at Nelson. The district exchange would maintain a general sales agent having his head office at Calgary, the expense of such an official and his office to be paid for out of an estimated 5 per cent commission collected by the district exchange on the fruit sales of the local associations.

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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 advise, the outcome of technical training and practical experience. Address letters to the Editor.—B.C. Fruit and Farm Magazine.)

Snow on the ground and a temperature hovering around zero are scarcely conditions likely to generate thoughts of seed sowing, but I hope and expect, by the time this appears before you that the winter will be over and we will be able to go gardening again. Whether conditions are suitable for seed sowing or not, it is time at least to be looking over the seed list and selecting the different things you intend to grow with an eye to placing your order at the earliest possible date.

Owing to the war seeds of certain kinds are likely to be scarce, therefore if you expect your order to be filled to the letter get it in early.

Usually about the middle of February we have spells of bright, sunny weather when it is possible to get the soil into first rate condition for sowing seed.

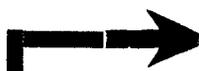
On the arrival of such a spell fork up the surface soil to a depth of three or four inches; this breaks the continuity of the capillary tubes, no more water rises from below and the action of the sun and wind soon dries out the loose surface. When the soil has reached a degree of dryness when it does not stick to the rake when worked or to the boots when trod on, it is in a fit state to sow seeds in.

The above preparation of course only applies to ground that has already been dug and manured, otherwise those two essentials will require attention first, when, especially if the soil is of a heavy nature, some of the advantage of fall or winter digging will be apparent by their absence.

Although I advocate early sowing, there are only a few things which it is safe to sow in February in the open, and so that none may be misled, I had better mention those few which are peas, broad beans, (notice, not kidney or pole beans which are tender) onions, leeks, parsley, parsnips, and among the flowers, sweet peas.

For pears an early round seeded variety such as Sunrise ought to be selected, and at least a quarter of a pound of seed should be sown so that a dish large enough for a family may be obtained at one picking. The above quantity of seed will sow a row 25 feet long; the depth to sow at this time being two inches. Windsor is a good broad bean to sow at this time, half a pound will be required for a 25-foot row; draw out a wide drill with the hoe about two inches deep and place the seeds in a double row alternately four inches apart each way.

The main crop of onions may be sown now in drills one inch deep and 18 inches apart for the large growing sorts, nine inches apart for the pickling varieties. Before giving the ground for onions its final raking it is well to tramp it well first; firm ground tends to produce firm bulbs; loose ground produces "thicknecks" which are



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useless for winter keeping. One ounce of onion seed will sow 250 feet of row.

Leeks require similar treatment to onions, but tramping is not needed for them; they may also be sown a little thicker so as to take up less room, as they have to be transplanted later and a little crowding in their early stages is not harmful.

Sow parsley in a row one inch deep, and as 10 or 12 feet of row will yield enough parsley for the average family very little seed will be required; one ounce will sow 300 feet of row.

Parsnips ought to be sown on ground that has been deeply cultivated and manured in the fall; it isn't logical to expect 18-inch roots from ground that has only been turned over a few inches deep. Sow in rows 1 1-2 inches deep and 1 1-2 feet to two feet apart; one ounce of seed will sow 200 feet of row.

Sweet peas have been grown to great perfection in the neighborhood of Vancouver within the last few years, and great pains are taken in their cultivation.

Towards the end of the month is a good time to put in the first sowing, which will commence to flower early in June.

The roots of sweet peas penetrate to a surprising depth and three feet is none too deep to move the soil, and to get the best results is actually essential.

Few of us have gardens with a 3-foot depth of good soil, so it may be necessary to remove the soil entirely and replace it with good soil from elsewhere. At least it will be necessary to give some additional plant food in the shape of well decayed manure and a liberal dusting of bone meal.

Where it is deemed the soil is good enough if given a dressing of fertilizer the best plan is to throw out a trench three feet deep and one and a half feet wide, throwing the soil well clear of the hole where it can be thoroughly mixed with the fertilizers by means of turning it with the spade; to each cubic yard of soil give a

good barrowload of well decayed manure and from two to three pounds of bone meal. And after mixing thoroughly return to the trench again treading it firm but not hard.

Wood ashes, if available, are very good as a fertilizer for peas of all kinds and may be used at about double the rate of bone meal. By wood ashes I mean the dust that comes from a wood fire, not the cinders of charcoal; charcoal is worse than useless in the soil; it will absorb acids to its capacity then lie inert and sour, a very objectionable substance. It will not be wise to sow the seed directly in the soil you have mixed the fertilizers in, as seeds do not germinate well in contact with organic or artificial fertilizers; it is better to draw out a drill four inches deep, fill it half way up with soil from alongside the trench, sow the seed on this and fill up with soil from the same place.

Where a good row of sweet peas for garden and house decoration is the object aimed at, sow at the rate of one pound of seed per 100 feet of row; but if exhibition blooms are desired much less than this will do as the plants will have to be thinned out from 10 to 12 inches.

With the aid of a hotbed there are several other seeds that may be sown towards the end of the month. I have at different times given details of how to make and manage a hotbed and deem it unnecessary to do so again on account of limitation of space.

Those interested in the use of hotbeds and cold frames ought to write the Dominion horticulturist, Central Experimental Farm, Ottawa, Ont., for Exhibition Circular No. 16 on "How to Make and Use Hotbeds and Cold Frames," no postage being required.

Tomatoes, celery, early cauliflower and onions for exhibition purposes may be sown at one end of the frame and pricked out later when large enough at the other end. Be sure the temperature of the bed has



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dropped at least to 80 degrees before sowing the seed, and keep the plants as hardy as possible by giving air on every favorable occasion. It is hard sometimes to keep the atmospheric temperature within reasonable limits at this time, the days being usually sunny when the temperature runs high, and the nights cold when it runs low; a strip of cheese cloth laid on each sash while the sun is at its brightest, and a covering of sacks at night, will help to regulate matters, but the plants must not be coddled too much but given all the light and air possible without roasting them alive or chilling them with draughts.

All pruning and spraying of fruit trees ought to be completed now as soon as possible; for spray, using Bordeaux mixture or lime and sulphur.

After severe frosts of January quite a bit of pruning will be required amongst the ornamental occupants of the garden; at time of writing it is already apparent that laurels have suffered badly. Trees and shrubs that have been so unfortunate ought to be carefully looked over and have all the dead wood removed; dead wood is a convenient breeding ground for fungoid diseases from which they may rapidly spread to healthy parts of the tree.

VANCOUVER EXPORTS SHOW INCREASE.

According to figures supplied by Mr. R. C. Abbott, Coast Markets Commissioner, Vancouver is changing its position as an importer and exporter of fruits and vegetables. In the importing and exporting of apples, pears and potatoes, for example, this city during the year 1915 was in a much better position than in the year 1914. During the year 1914 the imports into Vancouver of apples, pears and potatoes were of the value of \$182,289, which had shrunk to \$171,387 for 1915. And the exports, which are the means of bringing money into the province, and which only amounted to \$38,239 in 1914, has grown to \$134,301.60 for the year past, showing a great increase.

Apples and potatoes show the greatest gain in the export column. In 1914 apples to the value of \$37,264 were exported to foreign countries, but in 1915 this amount had advanced to \$70,187.30. Potatoes, of which in 1914 only 40 tons, to the value of \$800, were exported from Vancouver, showed a gain of exports to 2204 tons in 1915, to the value of \$62,568.

The imports of pears showed a decrease from a value of \$25,689 in 1914 to \$17,265 in 1915, while only 53 tons of potatoes were imported in 1915, as against imports of 129 tons in 1914. The imports of apples did not show a large decrease, only to the amount of \$1,000, but it has afforded much gratification to those interested in the growing exportation of British Columbia produce that the exports are now getting to where they more nearly balance the imports, and it is predicted that in a year or two the balance of trade in garden and field products will be in favor of the province.

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CATALOGUE AND GUIDE FREE OF CHARGE

Municipal Relationship

By D. E. MACKENZIE,

municipal market clerk of the City of New Westminster. Mr. Mackenzie is the head of the market clerks of British Columbia besides being in control of the most successful market in the province. Both from the producing and marketing ends he knows his subject thoroughly.

The cultivation of our lands is of benefit to the province only as those who perform that labor are able to thrive, are able to achieve not only an existence but a measure of independence. They thrive when, under normal conditions, they are able to sell their production at a price substantially in advance of their cost of producing it. They exist so long as there is any margin between the price they realize and the cost of production. They cease to be an asset and become a liability to the province when under normal conditions the price their crop brings is less than what it has cost them to produce it.

British Columbia's prosperity and happiness therefore rests upon agricultural productions first, and, as the responsibility of increased production rests heavily upon the producer, and to which problem his best energies must be directed, it is only reasonable to expect he is entitled to every assistance and encouragement from a marketing point of view, from some source where a constant study is being made along these specific lines. The farmer, as a rule, is not slow to recognize a condition of affairs that places him at a disadvantage; while, on the other hand, he is just as ready to realize when he is assisted and encouraged, and in most cases appreciates the same by reciprocal relations, which means for the advancement and prosperity of both the town and the country. Concurrently with this movement, however, must come increased and improved machinery and facilities whereby production may find a profitable outlet. One of the most important and far reaching from a mixed farming point of view is to get the producer and the consumer as closely together, and as well acquainted as possible, and one of the best methods to bring about this result is through public or city markets under municipal control in cities and towns where the geographical location and the surrounding conditions provide reasonable opportunities for success. In my opinion it is a great mistake for every city or town to feel that they are in a position to conduct a successful municipal institution of this kind because of the many varied obstacles peculiar to their individual localities which might spell failure and disaster in more ways than one.

The municipal public market should be a place where the producer and consumer actually get together for the express purpose of purchase and sale, and where no middle-man or non-producing-profit-taker should be allowed to operate at the expense of either one. Investigation has proven too that for many years past municipal markets made up chiefly of rows of stalls occupied day in and day out by small dealers have failed to provide the domestic economy, or the local productive development intended, or to extend the educational relationship between the producer and the consumer whereby an adequate reduction in the cost of living is obtained sufficient to justify municipal administration:

Elimination of Commercial Credit.

It is estimated the outlay for food is from 40 per cent to 60 per cent of the bread

winner's earnings in the ordinary family among the masses; therefore the most widespread reduction in the cost of living can be obtained from cheaper prices for food. A properly conducted and successful city market could establish a solid primary basis for the conditions of the food-stuffs trade with consequent staple and un-manipulated retail prices. Therefore, it should be the first and greatest consideration over all other projects for reducing the cost of living. In attempting to do so, however, it is not intended that through the conduct of its market the city should become either a purveyor of foodstuffs or a landlord for commercial undertakings, both of which should be entirely without the bounds of civic administration and are legitimately intended for private enterprise under municipal license and regulation, as neither of which bring about the conditions intended, for the simple reason that the primary aim of a city market is entirely lost if it fails to bring the actual producer and consumer together.

There are many features of a municipal market which appeal both to the producer and consumer, and which tends to promote happiness and contentment. One of these features is to entirely eliminate the question of commercial credit, a system which no doubt most of you have heard of and with which you have had considerable acquaintance, without possibly a personal understanding and a knowledge of the fact that it is only a belief held of your ability to pay for something a long time after you have ceased to derive any benefit from it, and a gauge of your willingness to deceive yourself into the belief that you can afford to buy something because you cannot pay cash for it. If it were not for the extent to which this commercial credit has grown and encompassed the entire world, we would not have such depraved and frenzied conditions, both commercial and financial, even in the face of the present war. If everybody paid cash there would be nothing but plain every day living, and a closer and more faithful friendship both socially and commercially, and a successful municipal market helps wonderfully to educate both the producer and the consumer of a community in this direction.

There is also the economical advantage, both to the producer and the consumer, the former becoming better acquainted with what is most required from a marketable point of view, and in a practical way with little or no expense, while the latter by frequent attendance readily discovers the most economical methods of purchase, as well as to acquire the ability of selection to suit the individual tastes and requirements with a minimum amount of waste, and with the satisfaction of personal dealings with the actual producer, minus the cost of the middle-man.

The "Buy Home Products" Feature.

A properly regulated city market where only local or B. C. production is offered for sale by the producer has the effect of unconsciously educating the thoughtless and indifferent consumer to "Buy home products," whereas if the same person patronized a dealer in both domestic and foreign

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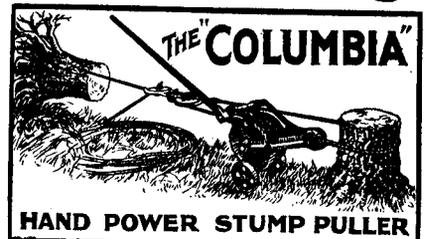
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On Wholesale Row

By WALTER J. HARMER.

This Is a Story of the Wholesale Side of the Marketing Problem As Seen By Reporter Who Makes the Rounds of the Street Daily

produce, without giving the question of "home consumption" a moment's thought the purchaser would in many cases innocently and unintentionally choose against the local product. This in itself is of incalculable value to the cause of increased production and consumption, and one which richly merits municipal encouragement through market facilities. A well equipped and successfully patronized market engenders an acquaintance and friendship between town and country, which leads to a more healthy and staple relationship than could be otherwise realized.

Market days bring a change in the ordinary routine of both country and city life as well as commercial and agricultural livelihood. It provides a clearing house and bartering place for hundreds of producers where thousands of dollars worth of food-stuffs change hands by agreement and for future direct delivery, besides the ordinary household purchases, and for which the market may get no direct returns, but by it the city reaps the commercial benefit to which it is justly entitled for the administration and maintenance of a public utility of this nature within its borders.

Some Features to Consider.

There are many factors to be considered in the make-up of a market, and it must not be decided for a moment that the responsibility for the successful outcome of it rests with the city alone. Would time only permit me to enlarge upon these features as a part of this paper I feel sure you would all be interested; however, I will simply mention some of the most important, such as:

Standardization of each and every individual product,

Carefulness in measure and weight,

Attractiveness in package and display,

Neatness and cleanliness in appearance,

Capacity of container according to variety of product,

Proper grading of all production,

Most marketable varieties of production,

Careful study of the condition of supply and demand.

As well as prompt and regular attention on the part of the producer and vendor.

The location, size variety, quality and arrangement of buildings, cold storage and warehouse facilities, accommodation and convenience, conditions and regulations and methods and extent, on the part of the civic authorities are matters of individual and specific consequence, all of which are closely interwoven with each other, and of vital importance to the success of the market as a whole. Each one of these individual items merits the co-operation of the provincial and federal governments in their respective spheres, and which should be augmented and assisted by them in many ways and through various channels, outside of the ability, scope, and authority of either the farmer or the municipality, but which include and go to make up the "market's facilities" required, and which is the most direct and permanent road to increased production and consumption. In other words create the conditions whereby the productions of the country can be successfully and profitably marketed, and the "Back-to-the-Land" problem will look after itself, and the secret of increased production will be readily solved.

The editor had something up his sleeve, I think, when he asked me for a story on the Row. I believe he thought I might thoughtlessly let the cat out of the bag with regard to the wonderful profits the dealers down there are reported to make.

Speaking of profits on the Row reminds me of a story. I know a fruit man—not in the fruit business today—who has had a world of experience in the game. He has worked it from every angle, from planting to eating. "When I started on a fruit ranch I wondered at the small returns we got at times," he said. "I decided the fault lay with the man who came to buy our fruit—the jobber. In time I came to work at that end of the business and I found the abnormal profits did not exist there. I decided then it must be the wholesaler who was getting suddenly rich.

"Well I finally traced these supposedly huge profits down the line and when I had at last finished my investigation of the retailer I was more than ever at sea. Today I don't know. Knowing the game and its many difficulties I'm less anxious to express my opinion."

So you see the editor missed it. There'll be no startling disclosure.

That is in brief the story of the Row. A place of supposedly abnormal profits but in reality a street where men of one work gather for mutual benefit; to be near the wharf and tracks and, by locating alongside another in the same business, to get a crack at the other's trade.

Yes, it's the truth, there is real, slashing competition among the dealers. Wholesale Row has been accused of combination in restraint of trade and united price manipulation more often than all the other so-called trusts put together. Yet if you want action for your money just start in at that work.

As to the profits made by the dealers it is not fair to make comparisons with those of the man who wholesales dry goods. There is no shrinkage in dress goods for instance. They don't depreciate from 10 to 50 per cent if kept a day too long, as much of the fruit does. The small dress goods house doesn't keep from one to three or four men busy day in and day out sorting and re-packing stocks and discarding in the course of the make-over the equal of the total costs of many another business.

If you were to show me unquestionable proof of where a dealer had bought something from you for a song and had sold it on the following day to some retailer for a small fortune, I could only say—that's human nature, what would you have done if you had had the same opportunity?

There has been a lot said at times about the integrity of the man on the street. Men have come to me with rumors of the returns made to some farmer for produce—fruit or vegetables—shipped on a commission basis. There is not a question of doubt as to whether or not such affairs have been staged on the Row. Nor is it surprising that such is the case. The point

Concluded on page 851

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The Company has in its Land Grant many thousands of acres of excellent land eminently suited for Fruit growing and Mixed Farming.

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Land Agent, E. & N. Rly.

VICTORIA, B. C.

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TAKE 20 YEARS TO PAY if you wish. The land will support you and pay for itself. An immense area of the most fertile land in Western Canada for sale at low prices and easy terms, ranging from \$11 to \$30 for farm lands with ample rainfall—irrigated lands from \$35. Terms—One-twentieth down, balance within twenty years. In irrigation districts, loan for farm buildings, etc., up to \$2,000, also repayable in twenty years—interest only 6 per cent. Here is your opportunity to increase your farm holdings by getting adjoining land, or secure your friends as neighbors. For literature and particulars apply to **ALLAN CAMERON, Gen. Supt. of Lands Desk 31, Department of Natural Resources C. P. R.**
CALGARY ALBERTA

POULTRY SECTION

PROVINCIAL POULTRY SHOW GREAT SUCCESS THIS YEAR.

Great success attended the fifth annual provincial poultry show held this year at Chilliwack. Well-known poultrymen claim the show was the best in every detail yet held by the association. There were over 1200 entries. Rhode Island Reds was probably the largest class in the show. Barred Rocks, Wyandottes and Orpingtons were also heavy in every class, while, as usual, the Leghorn varieties were much in evidence.

In the White Wyandotte class the principal winners were Mr. R. V. Robinson, Vernon; Mr. F. W. Frederick, Phoenix, and Mr. Brown of Vernon. Messrs. R. N. Clerke of Vernon, and Reid and Greenwood of Victoria, took most of the money in the Rhode Island Reds. J. S. Sinclair, Central Park, was a strong exhibitor in White Rocks, having the best male in the American class, while for Barred Rocks, Mr. Waby of Enderby and Mr. A. H. Anderson, Port Haney, were strong contenders. Rev. C. McDiarmid, Vancouver, captured first place for Golden Laced Wyandottes. In the Partridge Wyandottes there was strong competition. Most of the ribbons went to Messrs. Orr & Slater, Chilliwack, with Mr. J. Brogan, Victoria, a strong contender. Mr. Alfred Notley, Kelowna, and Mr. H. Ismay, Victoria, shared honors in the Silver Campines. Mr.

D. Marriott, Chilliwack; Mrs. R. Lovatt, Kamloops, and Mr. W. H. Moyes were close contestants with Buff Leghorns. Ancona honors were shared by the Vancouver Ancona Yards and Mr. R. S. Ramsden, Nelson. In White Leghorns, White Hope Yards, North Vancouver; Messrs. Orr & Slater, Chilliwack; Mr. E. Osborne, Mission City, and Mr. J. J. Dougan, Cobble Hill, V. I., were the strongest rivals. Buff Orpingtons were a large class, with Messrs. J. Crowther, Vancouver; H. A. Ismay, Victoria; C. W. Robbins, and R. E. Broadhead, Chilliwack, sharing the premiums. Mr. A. H. Turvey, Chilliwack, captured the best in White Orpingtons; Shelly's Poultry Farm, Parksville, second. Dr. Tanner, Victoria; Mr. R. S. Sweeting Vancouver, and Mr. Charles Parker, were all strong in the Black Orpington class. In Blue Orpingtons Mr. Parker carried off premium honors, with Mr. W. H. Vanraum of Victoria contending. There was a good showing of Dark Cornish, Messrs. J. Lock, Victoria; J. Thurston, Vancouver, and C. W. Robbins taking the honors in the order named. White Cornish honors were shared by Messrs. J. A. Thurston and J. Brennan, Kamloops. There was also a big class of Black Minorcas, and the best of the ribbons went to Mr. R. J. McIntosh, Chilliwack.

The winners in the utility classes were: Wyandottes—Mr. George Adam, Victoria; Mr. A. Unsworth and Mr. W. A. Cox, Chil-

liwack. Orpingtons—Messrs. H. A. Hincks, Langford, H. Ismay and C. W. Robbins. White Leghorns—Messrs. J. S. Miller, J. O. M. Thackeray, Chilliwack, Orr & Slater, and Hincks. Rocks—Messrs. A. H. Anderson, J. Nicholson, North Vancouver; Mr. V. H. Wilson, Vancouver; Mr. D. Gibbard, Mission City. Best pair in show: White Rocks—Mr. J. S. Sinclair, Central Park. Best pen: White Leghorns—White Hope Yards, with Mr. J. Crowther a close second with Buff Orpingtons. Best bird in American class: Rhode Island Reds—Mr. H. D. Reid. Best bird in English class: Black Orpington—Dr. Tanner. Best hen in English class, J. N. Lack. There were good exhibits of ducks, bantams and pigeons.

BRITISH COLUMBIA EGGS STOOD TEST BETTER.

J. R. Terry, of the poultry division of the agricultural department of the provincial government considers there is no ground whatever for the assertion that British Columbia eggs are inferior for cold storage purposes to prairie eggs and ventures to state that local infertile eggs can more than hold their own against the best produced outside the province. At the request of the B. C. Poultry Association he conducted experiments this past season.

Eggs were secured from a government farm on the prairies and also from the Cow-

1916 Promises to be a Most Profitable Year For Poultry Rearers.

BUY A HEARSON'S

Today and Start on the Right Road to Profitable Poultry-Keeping.

Those who are making money out of poultry rearing will confirm the statement that to be successful you must use an incubator.

TWO HARD FACTS about the HEARSON'S.

1. Wherever the machine has been placed in competition with other makers it has always hatched out the highest percentage.
2. At every exhibition in which it has been entered for competition the Hearson's has always been awarded the highest honors.

Every manufacturer claims to have the best, but as all hot water incubators are imitations of Hearson's, such statements should be accepted with reserve.

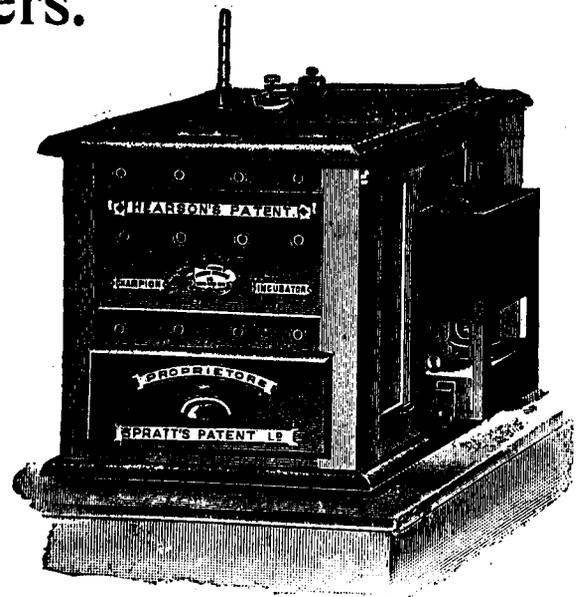
Always bear in mind that the essentials of an effective incubator are: **PERFECT UNIFORMITY in Temperature, Humidity, Ventilation and Durability.**

HEARSON'S INCUBATOR will Hatch Every Fertile Egg, they are substantially made and will last upwards of 20 years. Think what this means as an investment compared with a machine that is liable to fail in maintaining an even temperature, making valuable eggs useless and resulting in disappointment. The loss of one sitting placed in an unreliable machine will make the Hearson's cheaper than the cheapest.

THERE IS ONLY ONE PERFECT INCUBATOR and it is fully described in "The Problem Solved," a copy of which will be cheerfully mailed you, upon request.

REMEMBER, your outlay is substantial, therefore follow our advice and investigate before pledging yourself. You cannot afford to experiment, Hearson's Incubators and Foster Mothers have been established for over fifty years. They are used by the most successful breeders and poultry raisers in all parts of the world.

We carry a good assortment of Hearson's Incubators and Foster Mothers in Vancouver, B.C., and are prepared to make prompt shipment through our agents.



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Catalogues and Prices Furnished Upon Application.

ichan district. Both lots were laid during the same period and all were infertile. After being placed in cold storage in Vancouver for a period of five and a half months, they were taken out, carefully examined by means of candling and some were given to various persons, who cooked and tasted both kinds. No information was given out as to where the eggs were produced.

The concensus of opinion was unanimously in favor of the local eggs, as regards flavor, taste and "set-up." The eastern eggs were much stronger in flavor and contained a larger proportion of watery contents when candled.

PREPARING FOR HATCHING.

For poultry work we certainly need to be prepared ahead of time.

Eggs that are to be hatched should never be laid on the side, until they go in the incubator or nest; they lie that way long enough. Put in a cool place, says the Pacific Rural Press, where the temperature is not likely to be lower than 50 or higher than 70. Place in clean fillers in a dry airy place and keep covered. Some place them in bran, but they do very well if kept dry in the fillers. Dampness is not good for them, any more than changes of temperature. If it is handy to turn the case over, so that the eggs rest one day on the large end and next day on the small end it may be a little improvement, but I have done both ways and never noticed the difference.

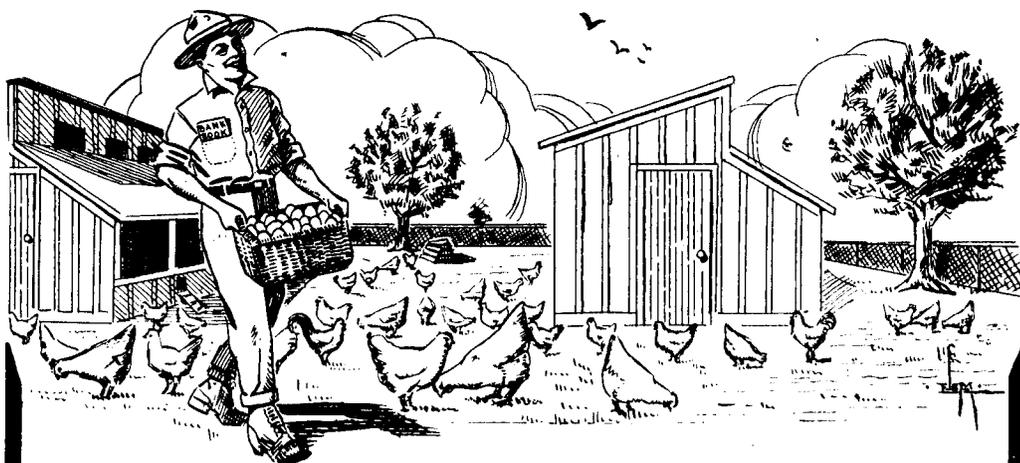
Don't keep the eggs too long, and always remember that while eggs will hatch after being kept three weeks, you will get a bigger hatch and stronger chicks from eggs one week or under.

Circumstances sometimes force us to hold eggs over, but the fact to bear in mind is that the fresher the eggs, the stronger the chicks, all other things being equal.

Disinfected Incubator.

Now for the incubator. If you cleaned it thoroughly when you last used it and it has been in a clean, dry place it will need but a little spraying with creolin and water, a tablespoon to a quart of rather hot water, and see that all parts get some. If the incubator has been laid away dirty, doors open and damp and dust in the air, it may be that mice have made it their home. Open up the doors, take out all the trays, drawers, smoke pipes, and everything movable and examine them for mouse nests, spider nests, etc., then spray with the creolin and water, leave it to dry a day or two, then spray again if it does not smell right.

Clean your lamp burner, put in a fresh supply of good oil; never try to incubate with cheap oil. Some incubators will run with it, but the fumes are likely to get in your egg chamber and damage the hatch. Put a fresh, clean wick in the lamp and start it up, let it burn and run several days in case there is any smell, then spray again, and by the time that is done, not before, your incubator is fit for the eggs. There are more eggs ruined by dirty incubators than any one knows of and it could all be avoided.



YOU CAN GET MORE EGGS FROM YOUR HENS

Good foods produce more eggs—this has been demonstrated again and again. Hens require a strengthening food. Help your hens out with any of the following

DARLING'S BEEF SCRAPS

An excellent egg-producing food. Absolutely free from useless fat and moisture. Try this.

RED STAR BRAND ALFALFA MEAL

Best green food for winter use. Clean—no fibre—made from leaves and blossoms.

OYSTER SHELL

Contains lots of lime. Clean—no dirt—no waste.

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POULTRY RAISING PROVES PROFITABLE.

According to figures compiled by J. R. Terry, director of the department of agriculture at Victoria, and the man who was in active charge of the egg-laying contest held during the past year at the capital, the net profits of the competition, over and above cost of feeding, was \$549.37.

During the year the 240 birds laid 39,757 eggs, realizing a cash value of \$1,976.75. Cost of feeding was \$527.38. An average price per dozen of 32.5 cents was secured, and the average cost to produce a dozen eggs was 15.9 cents. Each bird maintained an average of 156 eggs, and per hen of six the grand average was 993.9. It cost \$2.19 to grand average was 993.9. It cost \$2.19 to feed each bird and per pen the cost of feed totalled \$13.18. A profit on each pen over cost of feeding of \$13.73 was maintained, or an average per bird of \$2.23. The birds were divided in weight and no-weight classes, but the yield of eggs was practically similar, the figures being: Class 1, 1341 eggs; Class 2, 1342.

An egg of unusual size was laid by a Wyandotte hen belonging to M. Dowling, Vancouver. It weighed 4 1-4 ounces. A case of these eggs would weigh 95.6 pounds. Four or five other eggs of similar size have been laid by this same hen.

DOES THE COLD AIR HURT YOUR TEETH?

Pain is nature's warning of physical trouble. You should give your teeth attention at this first warning, thus saving both pain and expense.

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Here every operator is a licensed dentist, qualified to administer ANALGESIA, our private formula which does away with all pain from dental operations.

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TONICS

Add to Profits in Poultry Business

To get the best results from the poultry yard great care must be used to protect chickens from the diseases induced by changes in the weather, by poor ventilation, exposure to drafts and other things. One means of securing such protection is the use of tonics. A tonic of tried quality is suggested by N. E. Chapman, poultry specialist of the agricultural extension division of the Minnesota College of Agriculture. It is made as follows:

Magnesium sulphate, 10 ounces; magnesium oxide; 1 ounce; iron sulphate, 2 ounces; ground ginger, 2 ounces; sulphur, 3 ounces.

One tablespoonful of this mixture in moist mash is a dose for twelve birds. Such a dose should be given each morning for three morning and then discontinued for a week or ten days. Permanganate of potash may also be used in the drinking water—as much as can be piled on a ten-cent piece, in a gallon of water.

Apparently chickens are subject to much the same ills that afflict human beings at this season of the year—colds, catarrh, bronchitis, pneumonia, diphtheria and roup.

The careful poultryman will visit his roosts at night and look and listen for signs of cold. He will at once remove any birds showing symptoms of disease, in order that the rest of the flock may not be infected. Labored breathing, wheezing, rattling in the throat, gaping and sneezing are symptoms to be looked for. The bird showing these symptoms should be treated at once with one of the following mixtures: Zenoleum and kerosene, equal parts; sweet oil and kerosene, equal parts; or chloroform, one part, and cottonseed oil, three parts. The head of the chicken should be immersed in the mixture for a moment, or a small amount of the mixture should be injected through the nostrils and mouth. This should be supplemented with the tonic already recommended, or with epsom salts in moist mash—one teaspoonful to each bird. The bird should then be kept in dry quarters and fed bread soaked in milk and cabbage leaves.

If the roup develops, with a fetid odor, infected birds should be killed and burned, and all birds and chicken houses should be thoroughly disinfected.

EXERCISE

Inactive Hen a Poor Producer.

The success of egg production depends largely upon the activity of the bird, says the Independent Farmer. The reason the Leghorns excel in egg production is largely because they keep themselves in good physical condition. They exercise. The hen that is inactive and shows long toe-nails is seldom a good producer. The hen that is first off the roost in the morning, keeps busy during the day and is last to go to roost at night is the profitable hen. Some birds have the dispositions to take exercise; others have to be forced. This especially is true of the heavier breeds. Strains of Rocks and other breeds are inclined to be lazy and in a short time get so fat they can not produce eggs in satisfactory quantities. The circulation of blood to the ovary is restricted by the excessive fat. This unquestionably interferes with the normal functioning

of the ovary and reduces egg production. Exercise can best be encouraged by not overfeeding. The poultry house should be bedded with a foot or more of straw and the grain buried in this. The skill of the poultry feeder is tested by the manner in which he compels the hens to exercise. Overfeeding causes inactivity, which will be manifested by two holes being dug in the straw. Egg production is quite largely dependent upon keeping the birds in condition. In summer it can be encouraged by sowing in the yards and letting the hens dig up the grain.

The British Columbia Poultry Association held its annual meeting at Chilliwack during the month.

One of the principal items dealt with was the draft of an egg marks act for the purpose of protecting the British Columbia producer against unfair competition from foreign importations in the hands of unscrupulous dealers. The draft was adopted and provides for the stamping of all imported eggs with the word "foreign."

The next convention will be held at Nelson.

The officers elected were: President, H. D. Reid, Victoria; vice-president, J. A. Thurston, Vancouver; executive, W. M. Higgs, Victoria; E. A. Orr, Chilliwack; Dr. Price, Cowichan; secretary-treasurer, J. R. Terry; assistant secretary, H. E. Upton; auditor, F. W. Lang; official stenographer, Mrs. W. M. Higgs.

In connection with the convention, Mr. Ault of the Dominion department of agriculture, gave an address on egg circles, and the advantages accruing therefrom to the producer, and strongly advocated their general adoption in this province. The speaker cited the splendid success attending the circles in Prince Edward Island. Mr. Kuhn of Agassiz Experimental Farm addressed the convention on the proper feeding of poultry, giving interesting results of experiments conducted at the farm at Agassiz.

WHAT IS PHYTOPHILINE?

Phytophilline is an insecticide and more. It is also a plant tonic and so besides destroying all insects and fungous diseases on everything that grows, it actually stimulates the growth of the plant. It is even more—Grade No. 3 is used for all kinds of vermin on poultry, birds, cats, dogs, cattle, etc., and in their houses, cages, stables, and also for moths on furs, so there is practically no limit to its use as a deadly enemy to insect pests. Perhaps it is not too much to say that quite as important as its properties as an eradicator of pests, is the fact that it is absolutely non-poisonous to man and the higher animals. The fact that it has to be blown over plants through a very fine spray makes it not only efficacious but economical. There are three grades of Phytophilline, No. 1 taking care of practically everything in the insect line; No. 3 is for mildew and rust and also for spider and woolly aphids and for purposes named above, for poultry, etc.; No. 2 being for very tender plants, for spider and woolly aphids, and this grade is largely used by greenhouse men on cucumbers, crotons, heliotrope, orchids, etc. These wonderful preparations also destroy the eggs and larvae of insects as well. Phytophilline has been awarded two gold medals, one Grand Prize and one Honorary Diploma.



**300-500 Chicks=One Flock
One Heater=One Building**

**BUY OR HATCH 300 to 500
Chicks all at one time.**

Put them with one Candee Colony Brooder, all together in one building. Attend the coal fire once or twice a day.

Set the Automatic Temperature Regulator when you start the Brooder and it keeps a correct heat continually, requiring adjustment only when the chicks get older and need less heat. A turn of a screw does it.

RESULT. Chicks and buildings always safe from fire. The largest possible number of birds brought to strong maturity. Much time, labor and fuel saved and greater profit at the end of the season.

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Satisfy yourself that this is the safest, surest and most economical way to raise the most of your chicks.

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Provincial Hotels Co., Ltd., Proprietors

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The Short Horn as a Dual-Purpose Breed.

By S. H. Hopkins,
Continued from last issue.

In a treatise of this nature it would be wrong to omit the name of the late George Taylor. For ever thirty years his Cranford herd stood for the milk and beef characteristics of the Shorthorn breed, and the records of this herd have attracted worldwide fame. On a recent visit to Cranford, not far from London, about 150 head were seen pasturing together in a rich English meadow. One could not help being struck with the remarkably good Shorthorn character of the entire herd. The deep, wide frames, straight tops, sappy appearance and fine carriage, together with the capacious and well-shaped udders stamped the herd as a triumph of the breeders' art. Although the giving of large quantities of milk had considerably reduced their bulk, yet the cows possessed a peculiar bloom which evidenced a propensity for the laying on of fat when the strain became less.

Good Breeding Secret of Success.

Last year the milk sold from Cranford averaged about 7,000 lbs. per cow, besides that consumed by over seventy calves reared. For the first week these calves suck, and after that a considerable quantity of whole milk is fed, so the amount consumed must have been considerable. At the sale in 1911, 32 cows were offered, which had to their credit an average milk yield of over 10,000 lbs., a truly fine record. One of Mr. Taylor's cows, Darlington Cranford 5th, has a record of over 10,000 lbs. of milk per year for ten years and has produced 11 calves in this time. The farm itself was run on a commercial basis. Good breeding was the secret of Mr. Taylor's success, with the keeping of milk records and proper rearing of heifers.

This breeder was always a lover of the true Shorthorn type, as are all breeders of pedigree dairy Shorthorns. Constitution was never lost sight of, and bulls of Scotch breeding were extensively used in recent years, animals of Cruickshank, Marr or Duthie blood. Beau Sabreur, a bull used for a number of years at Cranford, and the sire of many of Mr. Taylor's 10,000-lb. cows, was sired by the noted bull, Leonidas, a straight Cruickshank bull. Beau Sabreur in 1899 won second prize at Birmingham, where the largest collection of young Shorthorn bulls in England is annually shown. This should convince the most skeptical of the dual-purpose character of the shorthorn breed.

Further proof is furnished though by the herd of Lord Rothschild at Tring Park. While the cows are not forced in any way, the average for 74 cows is over 6,000 lbs. per year. In this herd also a large amount of Scotch blood is evident. When the writer inspected this herd, some magnificent young bulls were to be seen, bulls with dairy blood, that would honor any herd of Shorthorn anywhere.

Mention should be made of the herd of R. W. Hobbs & Sons, Kelmescott, Gloucestershire. This farm lies in the upper Thames Valley, and a large herd of 500 dairy Shorthorns supplies milk to London city. Besides capturing numerous prizes for dairy cows every year, Messrs. Hobbs also take many prizes for fat steers and baby heifers.

Concluded on page 852

What Is Auto-Intoxication--- And How to Prevent It.

By C. G. Percival, M.D.

Perhaps the best definition I have ever noted of Auto-Intoxication is "Self-Intoxication, or poisoning by compounds produced internally by oneself."

This definition is clearly intelligible because it puts Auto-Intoxication exactly where it belongs; takes it away from the obscure and easily misunderstood, and brings it into the light as an enervating, virulent, poisonous ailment.

It is probably the most insidious of all complaints, because its first indications are that we feel a little below par, sluggish, dispirited, etc., and we are apt to delude ourselves that it may be the weather, a little overwork or the need for a rest—

But once let it get a good hold through non-attention to the real cause and a nervous condition is apt to develop, which it will take months to correct. Not alone that, but Auto-Intoxication so weakens the foundation of the entire system to resist disease that if any is prevalent at the time or if any organ of the body is below par a more or less serious derangement is sure to follow—

The ailments which have been commonly, almost habitually, traced to Auto-Intoxication are: Languor, Headache, Insomnia, Biliousness, Melancholia, Nervous Prostration, Digestive Troubles, Eruptions of the Skin, Rheumatism, Neuralgia, Kidney Disturbance, Liver Troubles.

There are several conditions which may produce Auto-Intoxication, but by far the most common and prevalent one is the accumulation of waste in the colon, caused by insufficient exercise, improper food or more food than nature can take care of under our present mode of living.

I wonder if you realize how prevalent this most common cause of Auto-Intoxication really is—the clearest proof of it is that one would be entirely safe in stating that there are more drugs consumed in an effort to correct this complaint than for all other human ills combined—it is indeed universal, and if it were once conquered, in the words of the famous medical scientist, Professor Eli Metchnikoff, "the length of our lives would be nearly doubled."

He has specifically stated that if our colons were removed in early infancy we would in all probability live to the age of 150 years.

That is because the waste which accumulates in the colon is extremely poisonous, and the blood, as it flows through the walls of the colon, absorbs these poisons until it is permeated with them. Have you ever, when bilious, experienced a tingling sensation apparent even above the dormant sensation which biliousness creates? I have, and that is Auto-Intoxication way above the danger point.

Now, if laxative drugs were thorough in removing this waste, there could be no arraignment against them—

But they are at best only partially effective and temporary in their results, and if

persisted in soon cease to be effective at all. Their effect is, at best, the forcing of the system to throw off a noxious element, and they therefore "jolt" nature instead of assisting her.

There is, however, a method of eliminating this waste, which has been perfected recently after many years of practice and study, which might be aptly termed a nature remedy. This is the cleansing of the colon its entire length, at reasonable periods, by means of an internal bath, in which simple warm water and a harmless antiseptic are used.

This system already has over half a million enthusiastic users and advocates, who have found it the one effective and harmless preventive of Auto-Intoxication, and a resulting means of consistently keeping them clear in brain, bright in spirits, enthusiastic in their work and most capable in its performance.

The one great merit about this method, aside from the fact that it is so effectual, is that no one can quarrel with it, because it is so simple and natural. It is, as it is called, nothing but a bath, scientifically applied. All physicians have for years commonly recommended old-fashioned Internal Baths, and the only distinction between them is that the newer method is infinitely more thorough, wherefore it would seem that one could hardly fail to recommend it without stultifying himself, could he?

As a matter of fact, I know that many of the most enlightened and successful specialists are constantly prescribing it to their patients.

The physician who has been responsible for this perfected method of Internal Bathing was himself an invalid twenty-five years ago. Medicine had failed and he tried the old-fashioned Internal Bath. It benefited him, but was only partially effective. Encouraged by this progress, however, he improved the manner of administering it, and as this improved so did his health.

Hence, for twenty-five years he has made this his life's study and practice until today this long experience is represented in the "J. B. L. Cascade." During all these years of specializing, as may be readily appreciated, most interesting and valuable knowledge was gleaned, and this practical knowledge is all summed up in a most interesting way, and will be sent to you on request, without cost or other obligation, if you will simply address Chas. A. Tyrrell, M. D., Room 896, 257 College street, Toronto, and mention having read this article in The Vancouver Fruit and Farm.

The inclination of this age is to keep us far away from medicine as possible, and still keep healthy and capable. Physicians agree that 95 per cent of human ailments is caused by Auto-Intoxication.

These two facts should be sufficient to incline everyone to at least write for this little book and read what it has to say on the subject.

Beekeeping

BY WILLIAMS HUGH

The organization of British Columbia's beekeepers, was inaugurated the last weeks in December, when a provincial committee was formed to draw up a constitution and bylaws. The meeting was held in the office of Fruit and Farm Magazine, Yorkshire building, which had been kindly placed at the disposal of the committee.

Mr. D. Mowat, of McKay, occupied the chair. Messrs. John Brooks, F. E. White, W. C. Gillam, W. M. Smith, B. A., J. P. Markey and Hon. Secretary Williams Hugh were present. A constitution was drawn up

25, was received, we thought it rather high, and thinking that there might be some mistake, we wrote the Rev. Father Joseph, and received the following reply:

ST. NORBET, Oct. 30, 1915.

"Our report is correct. One colony has given 420 lbs., and more than ten colonies have given 300 lbs. each. But I must tell you:

"First, Our hives are 12 frames.

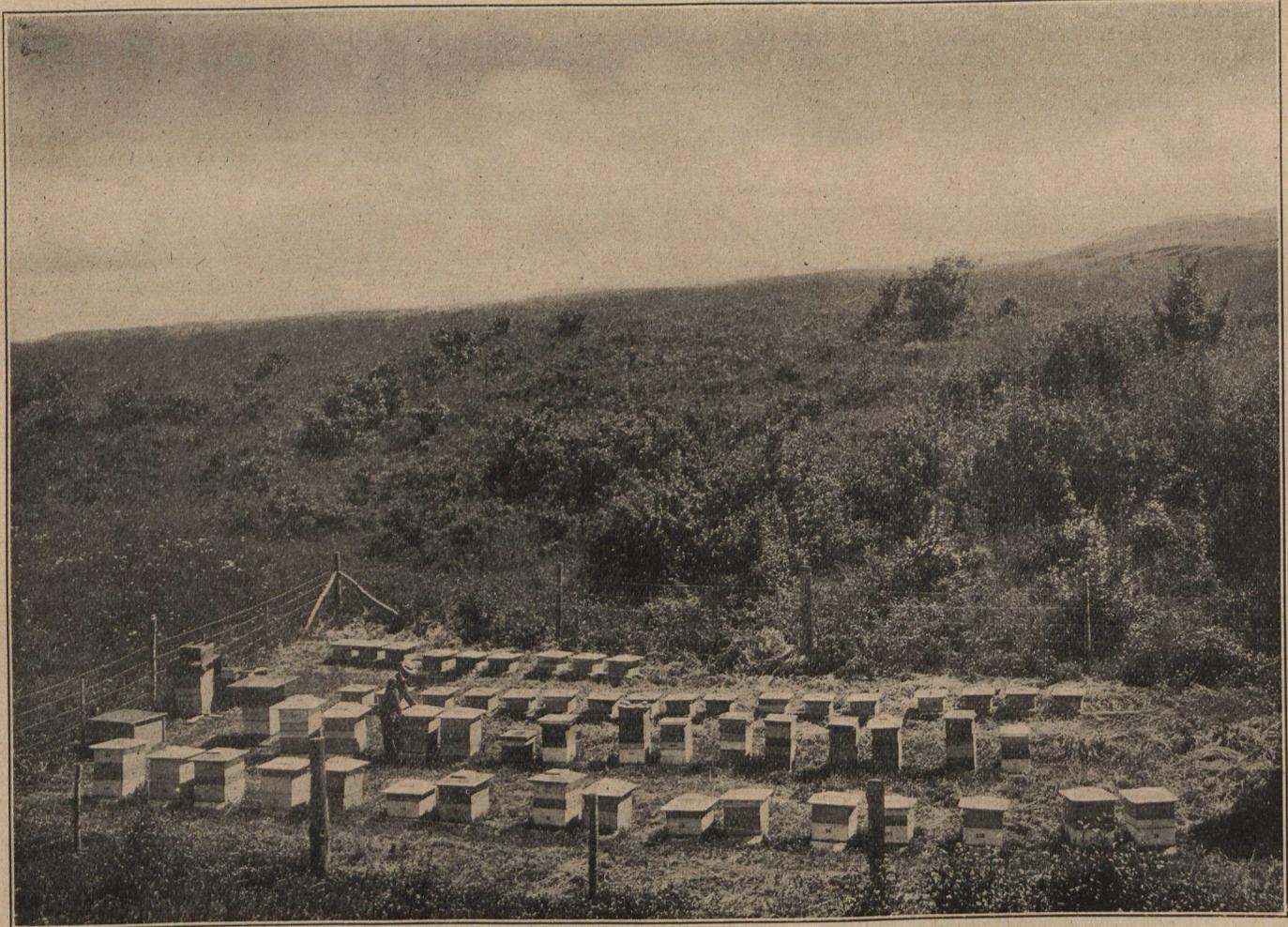
"Second, We extract all the honey we can, as we find artificial winter feeding cheaper and healthier."

Mr. R. P. Treherne, of the Experimental Farm, Agassiz, is the honorable secretary.

OVERCOATS FOR BEES.

Too Much Winter Protection Almost Impossible.

Uncle Sam's bee sharps, as a result of experiments, are now contending that there need not be the common losses and weakening of bee colonies during the winter season. Lack of sufficient insulation to protect the bees from prolonged cold and sud-



THE COMING INDUSTRY OF BRITISH COLUMBIA. AN APIARY IN THE OKANAGAN VALLEY.

and will be submitted to a general meeting in Vancouver February 2 for ratification. The association proposes to work along cooperative lines both in securing supplies for beekeepers at reduced rates, and assisting members in selling their produce. The association will be incorporated under the Agricultural Associations Act.

Ezra Mecker states: "In March, 1856, he received the first shipment of bees delivered on Puget Sound, Wash." That was the first introduction of beekeeping into the state; he sold two colonies at \$125 each. When were the first hive bees imported into B. C.?

The annual convention of Manitoba beekeepers will be held in the Agricultural College, February 15-16.

Mr. R. M. Muckle, of the agricultural department, Winnipeg, writing in the January issue of "Canadian Beekeeper," upon the production of honey in Manitoba, when the honey crop report of 10,500 lbs. from 41 colonies, spring count, with an increased of

It would be interesting if we knew the kind of flora the bees gather so much honey from. Have any of our B. C. beekeepers had any experience in B. C. with the long hive?

To beekeepers residing in districts where there is the possibility of warm days and early spring: Watch your colonies; feed, if necessary, over the brood. The beginner will learn to appreciate early attention to his bees. Provide water with cork floats near your hives and where pollen cannot be had. Try pea flour sprinkled over shavings, placed in a box, where the sun can shine upon it; watch the merry time your bees will have among the flour.

When I am sure of settled weather, I provide a small quantity of thin syrup daily for my bees; this induces the queen to start laying early. Try it, and see your hives boil over with bees ready for the harvest.

The Entomological Society of British Columbia will hold its annual meeting in Victoria during the latter part of February.

den changes of temperature is the main cause of bee losses.

Many experiments conducted by the experts show that sufficient insulation of the hives is hardly ever supplied, and that too much protection of this kind is almost impossible, providing ventilation is furnished so that the bees will always be insured fresh air.

The kind of insulating material is unimportant—chaff, shavings, dry leaves, paper, broken cork and sawdust each answers the purpose well. The insulation layer should be made from six to twelve inches thick, according to the severity of the climate.

One insulation plan that has worked well in the latitude of the Middle States is the following: Three inches of chaff, dry leaves, or the like was placed beneath the hives, eight inches on the sides and ends, and twelve inches on top. An opening eight inches wide and three-eighths inches

high was constructed like a tunnel through the packing to the entrance. This was found to furnish abundant and proper ventilation.

Protection from the chilling effects of strong, cold wind was found to be an important safeguard even when the hives were well insulated.

Proper protection by means of generous insulation of the hives has shown that the winter losses of bees need not exceed one per cent when the bees are free from any contagious disease.—Farm and Fireside.

BROOD DISEASES OF BEES.

While the ordinary beekeeper may not, off hand, be able to tell what is wrong with his bees when he finds them inactive, under conditions he should ordinarily find them the very reverse, there is no reason, in view of the lavish assistance given by the Provincial and Dominion governments in the way of literature and lectures covering the problem of bee diseases, why he cannot, immediately he finds a suspected case of American foul brood, set to work and apply the suggested remedy. It has been shown repeatedly that by careful handling and close observation the disease can be held in check if taken in time. We must exercise the greatest care in preventing robbing of a hive, wherein is the slightest trace of foul brood. Honey is a grave source of infection, in fact the most common and prolific source. Bees go in and out other hives than their own more frequently than most people imagine. You have only to keep goldens and blacks to see to what extent bees will enter other hives. B. C. imports a large quantity of section honey from Oregon and California; both states have American and European foul brood. This honey can be seen in almost every grocery store in the province. The cells are uncapped and the sections are nearly always uncovered. One would think, for sanitary reasons alone, food of this nature should be covered or shown in a glass case. One bee coming home with a sack full of stolen honey from the corner grocery is sufficient to pollute a whole neighborhood. Upon returning from her subsequent trips, she will occasionally drop into the wrong hive; she is gladly welcome, for is she not filled with honey? Others follow her example and gladly accompany the resourceful one; in fact, it is soon a day off with the bunch.

Bulletin No. 69, issued by the Experimental Farm at Agassiz, B. C., page 29 will give sufficient information that will enable any beekeeper to cope with A. F. B. and save his bees and appliances from the fire and prevent the spreading of disease.

There are several methods of treating bees infected with American foul brood. The local way is the shortest and quickest: Burn the lot and bury the remains. In some cases this may be the best way, but I have my doubts. Then we have the McEvoy method. This system has been used in the States and Ontario with considerable satisfaction during the past twelve years, and last year in Manitoba the same plan was used in the treatment of foul brood. While the plan attributed to the old inspector of Ontario, Mr. Wm. McEvoy, may be new to a good many beekeepers, it was known in Europe as far back as 1769, when Schirach suggested removing bees from infected combs. But the credit rightly belongs to McEvoy as the one person who pushed the merits of the shaking system throughout Ontario and the United States. In my next letter I will describe the system.

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ROYALITE OIL GIVES BEST RESULTS

VANCOUVER ISLAND SHEEP BREEDERS WANT BETTER PRICES.

The Vancouver Island Flockmasters' Association has set itself the task of securing better prices to the farmers for their wool.

The following circular letter has been sent to every member and person interested in sheep:

The V. I. F. A. propose to hold a wool sale during the spring of 1916 on the lines of the one conducted last year by the Alberta Sheep Breeders' Association at Calgary.

This association held their first sale in 1914, when they handled less than a carload at an average price of 19 cents per pound.

In 1915 they handled 95,490 pounds, securing nearly 28 cents per pound for their members.

The wool was shipped to a common centre, graded by an expert supplied by the Dominion government, and sold by the association by tender.

In order to receive similar assistance it will be necessary to submit figures to the department of agriculture at Ottawa as to the quantity of wool available, and for this purpose we beg to enclose a circular and to ask the sheep breeders of Vancouver Island and Island Districts to fill out and forward the same to the secretary at Duncan.

The suggested scheme is outlined as follows: The sale will be conducted by the Vancouver Island Flockmasters' Association, who have been promised every assistance from the Provincial and Dominion departments of agriculture.

No commission will be charged. Only the bare expenses of handling, carting, baling, insuring, etc., of the wool will be deducted from the selling price.

Each lot will be graded separately and the owner paid according to grade.

The wool being collected and graded the buyers are saved the expenses of collecting by means of the usual peddlers and can afford to pay a better price. They accept the grade of the department without question, and it is confidently expected that the farmer will get in touch with a new class of buyer altogether.

Each contributor must be a member of the association, the membership fee being \$1.00 yearly.

A central point or points will be selected as may be found most convenient.

As it will take some little time to make the necessary arrangements we would ask our members to fill out the forms and return as soon as possible, and if they can furnish the names of any owners of sheep to whom this circular has not been sent they will confer a favor to the society if they will send them in to the secretary, Mr. A. C. Aitken, Duncan.

The form to be filled out gives details of the number of sheep to be shorn in 1916, estimated clip, and shipping point. It also gives particulars of the sheep shorn last season and the price then realized.

The response to this scheme is very gratifying. Already 1,145 fleeces have been promised to be shipped for grading. They come from owners in Cowichan, Metchosin, Cedar Hill, etc., in fact the whole of southern Vancouver Island and the Gulf Islands.

Dr. S. F. Tolmie, livestock commissioner for the Dominion government, Victoria, states that he will send in his wool and congratulates the V. I. F. A. for taking up

Concluded on page 852

B. C. FRUIT AND FARM



or in the barn, "eating their heads off". One means profit—the other means loss. When a horse goes lame—develops a Spavin Curb, Splint, Ringbone—don't risk losing him through neglect—don't run just as great a risk by experimenting with unknown "cures". Get the old reliable stand-by—

KENDALL'S SPAVIN CURE

Mr. F. Winters, Fort William, Ont., writes—"I have cured one spavin with your Spavin Cure, and am now trying it on another with good results". Be ready for emergencies, keep a bottle of Kendall's in the barn. Then, if a horse goes lame, you have the remedy on hand to cure the trouble quickly. \$1. a bottle—6 for \$5. at druggists. Ask yours for free copy of book—"Treatise On The Horse" or write us direct. 98

Dr. B. J. KENDALL CO., . . . ENOSBURG FALLS, VERMONT, U.S.A.

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The Kirstin way of land clearing is the easy, sensible, practical, economical way. Small investment to start with—no extra cost for help, because one man alone operates the Kirstin with ease, pulling out the biggest, toughest kind of stumps in less time than by any other method. With brush, hedges, small stumps, saplings, etc., you "yank 'em out" in bunches. Clear an acre from one anchor.

The "KIRSTIN" Improved Double Leverage Model

has enormous strength and power. Until you see a Kirstin at work you cannot realize what wonderful power is developed by our system of compound leverage. The work positively is easier, to say nothing of being quicker and cheaper than with the cumbersome hand power pullers or the big horse-power pullers that require a team and two or three men to operate. Our Quick-Detachable Connections, Auto Release, Non-Twisting Cable and other special patented features put the Kirstin in a class by itself. Endorsed by Government and State officials. Used by the thousands all over the world. Holds record for lowest land clearing costs.

Used Anywhere Hills, Swamps, Rough Ground or Thick Timber

Write Today For Big New Catalog which explains all about the Kirstin, tells best way to clear land, describes Kirstin Service, Liberal Try-out Offer, Easy Payments, etc. Get this book before you buy a stump puller. Write today—now. Agents Wanted



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Test Edison's wonderful instrument, The Phonograph at your own home--at our expense.

Music—Such as you have never heard unless you have been fortunate enough to hear the world's great artists at first hand—and right at your fireside—that is what we want you to hear and at our expense. Send for particulars regarding this offer by filling coupon below and forwarding at once.

Remember that you can get this or any Edison instrument and records at the same price that you would pay for it at the factory—as low as these machines are ever sold—and on easy terms.

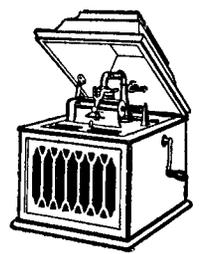
Here is an instrument that brings the greatest music of the world to your fireside. Get particulars today.

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Opposite Drysdale's

Try This Edison Free.

Send the below coupon and receive free full particulars of our five day approval plan by which you may get this Edison—New Model No. 30—shipped to your home on trial. This will give you an opportunity to test for yourself the marvellous tone of the Edison Phonograph. The model shown here plays Edison Amberola indestructible records. It is fitted with the Edison diamond point reproducer and is an exemplar of the great Edison Tone. It will be forwarded to you with twelve indestructible records of your own choosing for



48.40
\$8.50 Down and \$5 Per Month

Please forward me postpaid, particulars of your 5-day approval plan by which I may secure Edison Phonograph subject to approval; also catalogue of machines and records and the new book "Edison's Life."

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Name

Address

Prospects Bright for Hog Raisers in 1916.

In spite of repeated advice from reliable authorities to stay in the hog business and reap the benefit of the high hog prices which would inevitably recur, many farmers were discouraged in 1915 and abandoned this industry for something which appeared more hopeful.

Conditions, however, are now such as to justify the optimists of last year. Crops have been very good. The price of hogs is again high and there is plenty of grain at a reasonable price. There is moreover a remarkable increase in the export demand both overseas and to the United States, and it is reasonable to suppose that during the duration of the war this demand will increase.

Suitable Feeds for Hogs.

Of the various feeds suitable for hog feeding, wheat and barley undoubtedly stand at the head of the list, writes an Exchange. They cannot be produced in such bulk, and as cheap as corn, but for the production of choice, well-flavored bacon, they exceed corn in value. As a producer of fat, corn is superior to either barley or wheat, but the market as a rule favors the lighter sides, and hams furnished by the bacon hog, as opposed to the soft, fat pork furnished by the hogs of the Central Western States where corn feeding is followed almost exclusively. The bacon of Denmark, Canada and Great Britain owes much of its popularity to the use of barley, in particular. Wheat is not so generally fed on account of its comparative scarcity and higher price.

If barley is fed alone some difficulty may be experienced in getting the hogs to eat it readily, but if it can be mixed with wheat, frosted or otherwise, no difficulty will be experienced. On fact, barley lends itself exceptionally well to use with other grains. Owing to the probable availability of low-grade wheats in the west following a heavy crop year, wheat may be more suitable for mixing with barley than corn which would have to be imported, and probably at greater cost.

Wheat, alone, will not form as good a hog feed as barley alone, owing to the fact that it is so concentrated as to often cause digestive troubles. It gives very good results when mixed with other grains. As a general rule, feeding high-grade wheat is out of the question, owing to its relatively high price. If low grades are available at a reasonable price, wheat will pay fairly well when used in conjunction with whatever other grains may be available. Frozen wheat, when mixed with middlings or some similar mixture, has a feeding value about equal to barley and middlings, although the relative feed value will depend largely upon the degree of maturity and the extent to which it has been injured by the frost. Low-grade wheat and wheat screenings will also be found good hog feed their value depending also upon the character of the sample. Wheat middlings, or ground wheat mixed with sifted ground oats will form the basis for the feeding of very young and growing pigs. If milk, and alfalfa or clover, became a part of the ration the young pigs will develop much more satisfactorily than if too heavy and fattening a ration were fed. Barley may be added to the ration after the first month

or two, but corn should not be used to any extent, at least during the earlier growing periods. Dependence should be placed upon wheat, wheat middlings, and barley, preferably.

Corn, as stated before, makes a good feed for finishing, especially if used as part of a mixture with barley and wheat. But the quality of our bacon output will be sure to suffer if too great a proportion of the ration is corn. A soft fat is not conducive to good bacon, and corn alone is incapable of putting on a hard fat in proper proportion to the lean. It is very rich in starch and fat, and deficient in protein and ash. As muscle cannot be developed without protein, nor bone without ash, it is logical to conclude that corn does not furnish a balanced ration in any sense of the word. With corn delivered to any point in Western Canada, at a right price, its judicious use, however, as a part of the fattening ration can be made a profitable undertaking.

Feeds Occasionally Used.

There are other feeds which can often be used to advantage. Buckwheat, speltz, linseed meal and cottonseed meal, can often be substituted for some of the common grains which may be scarce and costly, but with the exception of speltz, not more than one-fifth of the full ration should be composed of any of these feeds. They are exceedingly valuable when fed in such moderation, but have objectionable features in their concentrated nature that make it inadvisable to feed in larger quantities. If they can be purchased at a reasonable price they may be used to the aforesaid limited extent to strengthen the mixture to be fed, otherwise they should be avoided.

Feed Early Grown Roughages.

Contrary to the usual belief, hogs can be fed such feeds as alfalfa, clover, and corn fodder in the winter when pasture is not available. Of course these feeds should be run through a cutting box or ground into meal. The former treatment will answer quite satisfactorily. If these feeds are thoroughly wet with hot water ten or twelve hours before feeding a good quantity will be eaten with the eagerness of a good appetite. The results will be to lessen the cost of grain in a manner similar to pasturing, and the hogs will be kept on concentrated meal mixtures. It is an effort to inject summer conditions into the feeding operations, and experience has proven that it works out well in practice.

The Telephone Takes The Miles Out of Distance

When you want to phone to Vancouver Island, to the Kootenay, or down the coast, use the telephone right beside you. Every telephone is a long-distance telephone.

There is no difficulty in hearing the party at the other end.

So when you want to telephone long distance, do so from your own house or office.

You get your party, or you don't pay. That means you get your answer. And all in a few moments, too.

British Columbia Telephone Co.

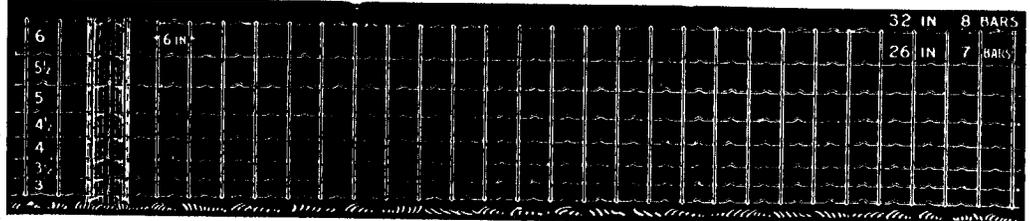
Children's Potato Competition.

Through Mr. William Kirkland, secretary of the Central Park Farmers' Institute, the School Board was recently in receipt of a communication from Mr. W. E. Scott, Deputy Minister of Agriculture, intimating that on account of the success of the "potato competition" held in 1914 under the supervision of secretaries of farmers' institutes, it was now proposed to form boys' and girls' clubs or junior farmers' institutes. These clubs or institutes may be formed anywhere under any public official. The deputy minister also intimated that the children will be allowed to choose from potato, corn, pig raising, poultry, and market and flower garden competition. Prizes will be offered to the winners of the local competition, and sweepstake prizes will be offered to the provincial and district winners.

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B. C. Dairymen's Convention

The unusual weather conditions of January mitigated against the attendance at the annual meeting of the B. C. Dairymen's Association which was held in New Westminster. Despite this, however, there were 75 members present.

William Duncan was the unanimous choice for the presidency, and in fact all of last year's board were again chosen, the only change being the addition of Mr. J. A. Pringle of Cranbrook, who was added to the list of directors. The full list of officers is as follows: Hon. president, A. C. Wells, Sardis; president, Wm. Duncan, Sandwich, V. I.; vice-president, Edwin A. Wells, Sardis; directors (lower mainland), Messrs. John Barry, Murrayville; J. M. Steeves, Steveston, and P. H. Moore, superintendent of Dominion Experimental Farm, Agassiz; (Vancouver Island and Gulf Islands), G. S. Harris, Moresby Island; E. Raper, Victoria; N. Grimmer, Pender Island; (Upper country), J. A. Pringle, Cranbrook; W. H. Townsend, Armstrong; M. Hereron, Kelowna and Salmon Arm districts.

According to the constitution of the association the secretary of the organization must be an official connected with the department of agriculture and in this respect Mr. T. A. F. Wiancko, provincial dairy instructor, will succeed Mr. Henry Rive, chief dairy instructor, in that office, as Mr. Rive is resigning in order to enlist for active service with an artillery unit at Victoria.

The directors' report submitted by Acting Secretary Wiancko, showed a comfortable balance on the right side of the ledger, although the directors pointed out that the year 1915 had not brought about the increase in dairying which would have resulted under normal circumstances. Drought was largely responsible for the scant pasturage which obtained even in the early summer months, and it militated against the industry. The high price of concentrates and of feeds also combined to make the condition rather keenly felt throughout the province.

Augmented by subscription funds and the annual dues of \$1.00 per member, the government grant of \$3000 at the beginning of the year allowed, after all expenditures were accounted for, a cash balance at the end of the year of \$1,770.67. At the present time there is still a balance of \$876.52.

Results in the dairy farm competition for 1915, a competitive event which extends over the entire season each year, were made public showing that the association's silver cups, awarded in the two classes of competition, were in each instance won outright by Messrs. E. Raper and W. S. Hawkshaw respectively, they having procured the highest number of points three years in succession.

In arriving at the following results, two competent judges at stated intervals during the summer visit the dairies of all competitors and according to the quality of the milk, local conditions and sanitary arrangements, set down the percentages of points as they compile them. The competition is divided into two classes—those having heads of 20 cows or more and those under that figure. In Class 1, the following were the competitors and the points they individually received: E. and T. Raper, Victoria, 1292; Shannon Bros., Cloverdale, 1250; John W. Berry, Langley, 1114; H. W. Vanderhoof, Huntington, 1053; W. H. McCutcheon, Chilliwack, 1036. Class 2 (un-

der 20 cows)—W. S. Hawkshaw, Chilliwack, 1238; W. Farrell, Eburne, 1172; J. Chaplin, Agassiz, 1007.

Registered Seed Prize Winner

Winners in the first provincial seed fair competitions were also announced as follows: Fodder corn—1st, O. C. Lane, Surrey Centre, with variety "Quebec 28"; 2nd, H. Wells, Sardis; 3rd, O. C. Lane; 2nd and 3rd prizes won with "Northwestern Dent" varieties.

Potatoes, senior—P. Jackman, Dennison, B. C.; 2nd and 3rd, W. S. Hill-Tout, Abbotsford, B. C.

Potatoes, boy or girl—1st, J. Manley, Cobble Hill, Victoria; 2nd, Eva Crankshaw, Sardis; 3rd, C. W. Webber, Chilliwack.

Oats—1st, W. S. Hill-Tout, Abbotsford.

In his opening address, President Duncan paid particular attention to the necessity for active and thorough co-operation to effect the best results in dairying, and he said the benefits to be derived from feeding ensilage was never better evidenced than during the past season, which was a particularly dry one and had enabled the farmer, who had ensilage, to feed it at a time when the pastures were absolutely barren. It would be hard to accurately gauge the advantage to be derived by dairymen from summer fed ensilage, especially during the months of July, August and September.

The best methods of feeding from the practical dairymen's standpoint provoked an interesting discussion.

Fresh grass and mixed chop during the summer, together with a judicious admixture of cotton seed meal and linseed oil during the time when the ground grass was coming on in the spring and a grain feed mixture of oats, bran, vetches, peas, clover and corn, procured good results for Mr. E. A. Wells, and for winter feeding he found kale an excellent medium. He sold his milk in Vancouver and never received a complaint of taint from the kale, perhaps because he always fed it immediately after milking in the morning and never left the milk in its vicinity. Red clover, alfalfa, roots and ensilage all made excellent winter fodder, he said, and cows should, of course, have access to salt at all times.

Speaking on "Seed Production in B. C.," Mr. H. O. English, head of the crop and

soil branch of the department of agriculture, reviewed the history of the department's efforts during the past four years to make the farmer see the necessity of obtaining only the best grades of seed. He said the department did not propose to carry on this programme of seed contribution any longer, as it was proving too expensive. Their new plan was to give generous prizes for annual competition in seed fairs and so induce the farmer to himself grow seed second to none in the country.

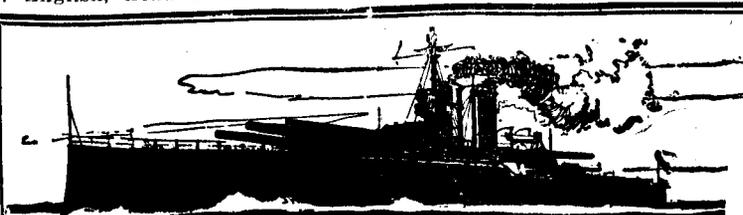
The requirements of the coast markets in regard to butter; the manner in which the creameries of Alberta and Saskatchewan were endeavoring to meet the competition of New Zealand butter and the sudden liking that the public showed for the New Zealand product were told. Lack of uniformity and of keeping qualities has been the weakness in local butter in the past, but the manufacturers of it had no difficulty in selling it within a couple of days of making it and therefore did not trouble about that feature of their product. The warning was sounded at the convention that the time would come when there would not be the same expansive market for their milk and that more attention would have to be paid to the production of butter.

In a general review of agriculture in the province, Mr. W. E. Scott, the deputy minister of agriculture, produced figures to show that since 1913 the home production of butter and milk in this province had increased by \$1,347,000 and the importation of butter and milk had decreased by \$1,590,000. In 1915 the importation of agricultural products had decreased by \$8,000,000, due to increased production in the province, a large decrease in population, and reduced spending power of the people. But in spite of the critics, agriculture was making excellent progress throughout the province and not only was there a bright future before the dairymen, but there was a splendid opportunity before stock raisers generally as a result of the ravages of war in Europe.

In 1913 the home production of butter and milk was \$2,085,000. In 1913 the importation of butter and milk was \$5,505,000.

In 1914 the home production had increased to \$3,012,000. In 1914 importations of butter and milk decreased to \$4,489,000.

In 1915 the home production had increased to \$3,432,000. In 1915 importations had decreased to \$3,495,000.



BRUCE'S DOMINANT SEEDS

Just as the British Fleet dominates the World's waters, so "BRUCE'S SEEDS" are the dominant ones with the planter whose living depends upon "Real Seeds."

It will be even more apparent at this time, when many seeds are in short supply, that there will be more stocks offered by unreliable and inexperienced growers than in the past, and that houses with long established reliable connections such as we possess will have an incalculable advantage.

Why take a chance, when you can buy "The Best Seeds that Grow"—BRUCE'S—for very little more than so-called "cheap" seeds?

It costs as much to plant and care for poor seeds as good ones, and you have very meagre, unsatisfactory results to show in return for your labor.

CHEAP SEEDS ARE DEAR IF YOU GET THEM FOR NOTHING.

Send for our 128 page Catalogue of Seeds, Plants, Bulbs, Poultry Supplies and Garden Implements, full of valuable information, which is now ready and will be mailed FREE to all applicants.

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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 75c. per annum, instead of \$1.00

Creston Farmers' Institute.

Reports presented at the annual meeting of the Creston Valley Farmers' Institute show that 1915 has been the most satisfactory year in the organization's history in every department. During the 12 months the business done in trading department totalled \$26,730, an increase over 1914 of almost \$10,000—due in some measure, of course, to the higher prices that prevailed on all commodities handled. The chief items in this statement are: Feed, \$21,014; hay, \$1,140; sugar, \$2,932; powder, \$11.23; coal oil, \$520. The membership, which includes the country from Boswell to Yahk, is now up to 236, an increase of nine over the previous year. This year's officers are as follows: President, James Cook; vice-president, Andrew Miller; secretary-treasurer, J. A. Lidgate; auditor, W. S. Watson; directors, W. A. Peace, P. G. Ebbett, Thomas Goodwin, James Adlard, A. D. Pochin.

South Kootenay Farmers' Institute.

The annual meeting of the South Kootenay Farmers' Institute was held in the school house on Saturday, January 8. S. Brewster was in the chair. The institute sold 11 cars of flour and feed during the year, and did business to the extent of \$9,000. It also handled spray and seed grain and other seeds, such as potatoes, mangels and corn. The estimated saving to the members was about \$600. The treasurer's report showed a credit balance of \$445.30. The number of members during 1915 was 106. The following officers were elected: Hon. president, J. H. Schofield, M. P. P.; president, M. Hill; vice-president, Charles A. Archibald; secretary-treasurer, E. G. Groutage, Columbia Gardent; directors, S. Brewster, W. H. Dunton, I. McColm, John Grieve and M. J. Vareveld; auditor, A. McDowall.

Chilliwack's Good Year.

Chilliwack institute had a gain of 42 members during the year and has now 152 members on the roll. The boys and girls' competitions have been very successful, and financially, things are satisfactory. The directors elected for 1916 are: Messrs. Jas. Bailey, Edwin A. Wells, J. A. Coatham, J. R. Walker, E. D. Barrow, M. F. Gillanders, H. Well, and J. A. Evans. Messrs. Wells and Baily are delegates to the convention in Victoria. Mr. Jas. Baily is president, and Mr. H. Webb, secretary.

Much Land Clearing.

At the eighth annual meeting of the Shawnigan Farmers' Institute the following officers were elected: W. H. Stuart, president; W. H. Lowe, vice-president; A. Nightingale, secretary-treasurer; Messrs. H. B. Wingate-White, D. Barry, J. McTaggart, W. H. Nott and C. Hogg, directors; W. J. Hagan and G. E. Bonner, auditors. During 1915, 104 certificates were issued to members for stumping powder, being a total of 994 boxes, i.e., 49,700 lbs. All of this powder has been used for land clearing purposes, which is sufficient evidence of the progress of the settlement. The number of communications handled by the institute during the past year was 735.

Supplying Seed.

The agricultural department of the provincial government is distributing among the various farmers' institutes different varieties of standard seed, with the idea of encouraging the farmers to grow a standard quality. Practically all the seed has had to be imported into the province in past years and the department is desirous to have British Columbia seed for British Columbia in the future. To further this aim the department held such fairs during the month.

Secretary Enlists.

Mr. R. J. Anton, secretary of the Strawberry Hill Institute, has resigned and joined the 72nd Highlanders, Vancouver, for overseas service.

Summerland's Farmers' Institute.

At the annual meeting of the Farmers' Institute, Mr. Hilborn, president, advised the growing of early tomatoes in limited quantities in spite of the poor success met with last year. He said he felt that the very unfavorable results obtained last season were unusual. He expressed dissatisfaction with the Okanagan United Growers' quotation of three cents a pound on cantaloupes, stating it as his belief, that this price was entirely too low. The secretary reported four meetings held in 1915 with an average attendance of 67. Elections resulted as follows: President, J. L. Hilborn; vice-president, E. R. Simpson; secretary-treasurer, J. Tait; directors, R. V. Agur, C. H. Tate, R. H. Helmer, R. Johnston and P. G. Dodwell; auditor, T. H. Riley; delegate to annual convention at Victoria, John Tait.

A Necessity or Luxury on Farm?

Is the automobile a luxury on the farm? That is a live question and there are champions for and against it. That the automobile is a necessity to the merchant in his business is conceded by all; not so to the farmer. When a farmer buys an auto there are always some wiseacres who shake their heads and begin to figure if he can afford the luxury. They are ready with the prophecy that Mr. So and So will soon be on the road to Poorville. In truth it all hinges on what one considers a luxury. If everything that makes one's tasks lighter and saves time in doing it is considered a luxury, then the automobile must be put in that category, not otherwise. Years ago the telephone was considered a luxury; now it is a necessity, and the farmer would not be without it. He finds that he can make good use of it in his business. I think it is the same with the automobile. Many practical farmers say, that properly used, the cost of the automobile is saved in the first year. They put it to practical use. They bring in it their butter and eggs and many other things to market; with it they hurry to town to get the needed repairs for implements and machinery. They need not take the horse from the plow or the binder and waste a whole day. When on Sunday morning the farmer and his family go to church his horses are resting and are fit for hard work on Monday morning.

Then there is a social side to the question. Work on the farm isolates man more or less

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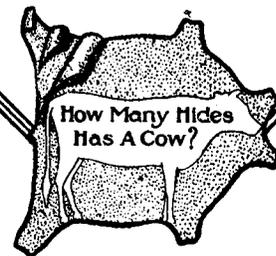
Coated splits, weak and irregular in quality, durability and price, cannot be standardized.

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from his fellow beings. There is little chance to exchange ideas, yet that is what we all need. The automobile brings the farmer and his family closer to his neighbors and permits him to enjoy sociability. The farmer's wife, his sons and daughters need not listen to the time-worn reply: "We might go, but the horses have been worked all day and I must work them again tomorrow," when they have planned to attend some social affair. The automobile has come to stay until supplanted by a more practical thing, and it has its place also on the farm.

WOMEN'S SECTION

British Columbia Women's Institutes

Motto—"FOR HOME AND COUNTRY"

Give \$900 to Red Cross.

The West Saanich Women's Institute have sent \$900 to the Red Cross headquarters and at the weekly sewing meetings a great deal of work has been accomplished. The officers for 1916 are: President, Mrs. Parsell; vice-president, Mrs. E. Crocker; secretary, Mrs. R. Petch; treasurer, Mrs. A. E. Grey; Red Cross convenor, Mrs. R. Lindsay.

Willow Point Institute.

The council meeting of the Willow Point Women's Institute was held on January 11 in Crystal hall. In her address the president, Mrs. Gilroy, complimented the members on the progress made during the second year of the institute's existence. Much was owing to the kindness of the provincial government and Deputy Minister Scott and to the advisory board. She briefly reviewed the work of the past year. The committee on Red Cross work, library and market had all done excellent work; the flower show which would be an annual event in future, had been a great success and the members had had the privilege of attending a most interesting series of lectures on first aid provided by the provincial government. She dwelt upon the excellent work done in connection with the war, saying that other and large institutes confessed themselves inspired by it. A hearty vote of thanks to the retiring directors and the secretary was passed. Mrs. Cross was re-elected secretary, and the following directors were elected: Mesdames Bayley, Campbell, Gilroy, P. Thompson and Townshend. From among them Mrs. Gilroy was chosen president and Mrs. Campbell vice-president.

Had Busy Year.

Shawnigan Institute during the past year sent over 4,000 garments and other articles to the Red Cross Society. There was collected from various sources over \$500 and travelling libraries for the use of members were installed at Cobble Hill and Shawnigan Lake, and children's libraries in the three schools of the district. Some of the other work of the year included the organization of several entertainments by the recreation committee in aid of the Red Cross and other good objects, for which forty-seven rehearsals were held; two successful flower shows, one for wild flowers collected by the school children and one for the members, besides many other useful undertakings. In addition to the passing, with applause, of hearty votes of thanks to the retiring officers, the members sent their warm thanks to Mrs. Hagan and Mr. Silverside at Cobble Hill, through whose generous kindness a delightful Christmas tree was given to all the children round, when the Women's Institute provided tea and arranged games for the little folk on December 29. The following ladies were elected directors for the year: President, Mrs. Frank Elford; vice-president, Mrs. Wingate-White; Mrs. Kingsley, Mrs. Eardley Wilmot and Miss Eva Dann. Miss Alice Ravenhill was re-elected secretary-treasurer, and was presented by the members with a handsome suitcase, in token of their

affectionate appreciation of the services she had rendered to the institute since its organization.

Hatzic Elects Officers.

On Thursday, January 13, 1916, the annual meeting of the Hatzic Women's Institute was held in the Hatzic hall. Owing to the stormy weather the attendance was not so good as usual. After a very interesting valedictory address from the president, Mrs. Manson, and the reports from the secretary-treasurer and auditors had been read and accepted, the election of officers for the next year was proceeded with. Four directors were elected by ballot, and they, in turn, elected their president and other officers as follows: Hon. president, Mrs. Manson; president, Mrs. Richardson; first vice-president, Mrs. Henry; second vice-president, Mrs. Barr; secretary-treasurer, Mrs. Fripp; auditors, Miss Ritchie and Miss McEwen.

Much Patriotic Work.

Fifty-five members attended the annual meeting of the Nelson and District Women's Institute. Considerable activity in patriotic work was reported by the secretary, Mrs. Hector McKenzie, including a linen shower held at the summer home of Mrs. G. A. Hunter, as a result of which several bales of linen for hospital work were turned over to the Red Cross Society; two cots in Clivedon hospital were endowed and money voted to their support; the members took charge of the refreshment booth at the rose show and netted \$45.05; the refreshment booth at the fall fair was also in charge of the members of the institute and the sum of \$229.75 was realized. Christmas hampers were sent to local soldiers at the front and a number of other individual and collective efforts were reported.

Tynehead Women's Institute.

At the annual meeting of the Tynehead Women's Institute, the following officers were elected: Mrs. Bothwell, president; Mrs. T. W. Atchison, secretary-treasurer. The directors for the year are Mrs. Charles Flumerfelt, Mrs. C. Richardson and Miss Olive Atchison. The financial report shows a balance on the right side, with receipts of \$95.92 and expenditures of \$85.65.

Mrs. J. M. Robinson has been elected president of the Naramata Institute.

The following are the officers of the Creston Women's institute for the year: President, Mrs. H. B. Downs; vice-president, Mrs. Henderson; directors, Mrs. Forrester, Mrs. James Maxwell and Mrs. McKelvey.

Harrop Institute's new officers are: President, Mrs. R. Hill; vice-president, Mrs. C. D. Ogilvie; secretary-treasurer, Mrs. J. J. Wilson; director, Mrs. W. J. McConnell. The receipts were \$191.15 for the year with expenditures of \$166.57.

The annual meeting of the Langley Fort Women's Institute was held in the Town hall on January 18, the following officers being elected: Mrs. James Allen, president; Mrs. Haldi, vice-president; Mrs. R. Rennie, secretary-treasurer; Mrs. C. Hope, director; Mrs. McLean, director; Mrs. Kent, librarian;

A Watch Should Keep Time

Buy your watch from us and we will see to it that it does keep time. We are official watch inspectors for the Canadian Northern and the Great Northern Railways, so are in a position to give you better protection in a watch purchase than any one in the West.

We have one of the largest stocks in Vancouver to choose from. Come in and look them over. Our watch repair department is under the personal supervision of Mr. Paull.

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22-KARAT GOLD CROWNS \$4

These crowns elsewhere would cost from \$7 to \$10 each.

I want you to see these \$4 Crowns actually being made, or talk with my patients who are wearing them. Ask them how they fit, how satisfactory they are, just what money they saved by coming to me.

My LOW PRICE is due to the efficiency of the "PRECISION SYSTEM" in making them.

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BRIDGES, PER TOOTH \$4

No matter how much more you pay it is a physical impossibility to get more satisfactory Crowns than these.

Drop in and see for yourself.

Teeth examined FREE. Painless operations without harmful after-effects.

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Mrs. McIntosh and Mrs. Stone, auditors; Mrs. H. Morrison and Mrs. Allen, delegates for the conference.

The 1916 officers of the Langford Women's Institute are: President, Mrs. Dewar; vice-president, Mrs. Simpson; directors, Mrs. Gibson, Mrs. Saltmarsh, Mrs. Espley; treasurer, Miss Pimlott; secretary, Mrs. J. H. Waterhouse.

The election of officers of the Surrey Women's Institute at the annual meeting, January 4, resulted as follows: President, Mrs. Whiteley; vice-president, Mrs. Currie; directors, Mrs. R. D. MacKenzie, Mrs. J. Touey; secretary-treasurer, Mrs. Croft.

BURQUITLAM WOMEN'S INSTITUTE.

The Burquitlam Women's Institute had a most successful year in 1915. The receipts from various sources during the year totalled \$79.20, which with \$18.50 balance from 1914, made a total of \$97.70 available for the work of the institute. Of this \$94.35 was expended, leaving a balance on hand of \$3 35. During the year the institute, which has 44 members, has collected for Red Cross purposes \$165.35, and expended \$118.25, leaving \$47.10 on hand for future work.

The advisory board of the Women's Institute will meet at the Parliamentary buildings on February 2 to make recommendations to the provincial government. Mr. Scott is superintendent of this body as well as of the Farmers' Institutes, and as a result of the meetings gets very valuable assistance in his suggestions to the minister of agriculture which form the basis of the legislative programme for that department.

Mr. Scott expressed the opinion that there was every promise that the present year would prove a red letter one in the history of agricultural production in this province. Those engaged in the industry had successfully ridden out a storm of stress and trial, had laid a firm foundation for future success. As there was a constantly broadening of markets for British Columbia products there was an assurance that the industry was about to enter upon a new era of progress and development.

ON WHOLESALE ROW

Continued from page 839

to remember is that it takes all kinds of people to make a world, and certainly the Row will draw its share of them all.

My advice to you if you are a shipper, is to meet personally some of the men with whom you might want to do business. If you knew men and find one to your liking—stick with him. The man in the country who ships perishable stuffs to a dealer in the city must always, under any system, lean largely on the honesty of the consignee. Do business with a man you have faith in. There are honest men there. I know, for I have met them.

As the reporter for a newspaper I am on the Row every day. My commanding officer in the room where copy is made has laughingly suggested at times that I must be in with the wholesalers. I seemed to take their view of things, he thought. Well, I'm not. I know how little the producer receives sometimes for his labors. And I have wondered if there may not be some solution of the problem. But I also know the problem has two sides. One cannot broadly say that Wholesale Row is where the profits go.

I have seen the juice trickling like water from a car of soft fruit, just spotted on the tracks behind the wholesale house to which it was consigned. You would have needed a sponge to eat the fruit it contained. So you see such things do happen. I have seen fruit packed in soap boxes, in fact in every kind of a box and package imaginable with no grading or sorting whatever done, shipped to a wholesaler who was expected to get a good return for it. While on the same train there might come to that wholesaler another consignment of the same kind of fruit, properly packed and graded and sufficient to last the dealer for the length of time such fruit would keep. Whose fruit would be sold? The consumer, you know, wants fruit 99 per cent perfect—and therein lies one of the reasonable answers to the problem of tracing the big money paid by the consumer for fruit. The big money the producer pays is largely eaten up in the long process of keeping that fruit 99 per cent perfect.

As for Wholesale Row, self-styled solvers of the problem of the high cost of living have many times arisen to say they had a system to take its place. A long and thorough investigation last year by the government of the United States resulted in the final announcement that Wholesale Row was essential to business. There are improvements possible. But they will not come with a sudden flurry. There will be no elimination of the wholesaler for some time to come at least. That you have just complaints at times with the blot on the system than a simple indictment of an individual.

Have your name on our Mailing List. We issue a Monthly Mail Order Review and would be glad to send you one each month.

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"FOR HOME AND COUNTRY"

The members of Women's Institutes of British Columbia are no doubt interested in the improvement of their home surroundings and we wish to suggest that there is nothing in the way of outside adornment that will give more lasting pleasure and satisfaction than the planting of ROSES and ORNAMENTAL SHRUBS on the home grounds.

In order to assist and encourage the making of beautiful homes in our beautiful Province, we are prepared to offer to our Women's Institutes all the newest and best varieties of ROSES as well as FLOWERING SHRUBS, etc., at POPULAR PRICES.

We believe the humble home as well as the stately mansion should be surrounded with well-planted lawns and gardens. It adds distinction and elegance. In travelling through the country, one sometimes sees a fine house standing in an open field, and he naturally exclaims "What a beautiful house," but on passing a much smaller house, surrounded with lovely trees and shrubs, he just as naturally exclaims "What a beautiful Home." IT IS THE TREES AND SHRUBS THAT MAKE THE "HOUSE" INTO A HOME."

IF THE SECRETARY OF YOUR INSTITUTE will drop us a card we will at once forward copies of our General and Rose Catalogues with SPECIAL TERMS to Women's Institutes.

WE WILL GIVE A PRIZE OF A DOZEN ROSES to the First Institute to send in its order and a second prize of six roses to the next.

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Using Canadian Products

By R. M. Winslow, Provincial Horticulturist.

The people of Canada, as purchasers and consumers, have a patriotic and practical duty with respect to Canadian products. Our producers, fruit growers included, are doing their share in increased production. Their efforts, in considerable measure, will be in vain, unless the consumer does his part and co-operates in the great movement by demanding Canadian products.

In nothing is this more true than in respect to fruits. This country has an important fruit industry, and our fruits are of high quality. The industry is not nearly as large and as prosperous as it should be, however, because consumers, by failing to insist on Canadian fruit, are paying each year from \$3,000,000 to \$4,000,000 for imported fruits, of kinds produced in Canada. The following table shows the quantities, and value, (including duty paid, but not including freight or distributing costs) imported in 1913 and 1914:

		1913	
		Quantity	Value, Incl. Duty but not Freight
Blackberries, gooseberries, raspberries and strawberries	6,939,470 lbs		\$ 712,789.00
Cherries	971,619 lbs		122,470.38
Currants	30,071 lbs		2,726.42
Peaches	14,579,147 lbs		476,390.33
Plums	151,650 bu		313,074.80
Quinces, apricots, pears and nectarines, etc.	13,445,837 lbs		441,601.90
Apples	320,325 bbls		957,174.75
			\$3,026,227.58
Grapes	6,247,527 lbs		505,743.29
			\$3,531,970.87
		1914	
		Quantity	Value, Incl. Duty but not Freight
Blackberries, gooseberries, raspberries and strawberries	7,104,745 lbs		\$ 816,955.80
Cherries	1,084,797 lbs		142,092.94
Currants	19,214 lbs		1,825.28
Peaches	12,137,209 lbs		474,854.50
Plums	123,531 bu		353,619.10
Quinces, apricots, pears and nectarines, etc.	11,040,871 lbs		502,137.51
Apples	330,907 bbls		1,236,664.80
			\$3,508,149.93
Grapes	7,712,447 lbs		644,326.24
			\$4,152,476.17

All of these fruits are produced in large quantities in Canada. It rests entirely with the consumers to diminish the imports and establish a bigger outlet for our fruit growers, by preferring the home-grown products.

Any thing which reduces imports is just as effective in restoring a proper balance to Canada's foreign trade as an increase in exports. It is impracticable, with respect to most fruits, to develop a considerable export trade, and the consumers' co-operation is essential in enlarging the domestic market for Canadian fruits.

The producer of fruit can be guided by a few general rules:

1. The grading, packing, grade-marks, and the sizes of fruit packages, in Canada are governed by a Dominion law, enforced by the fruit inspection service. The requirements of the law are very generally observed by fruit growers. In consequence, the consumer has the maximum of protection in buying Canadian fruit.

2. Canadian summer fruits are usually later in maturing than imported fruits, owing to our cooler season. When southern fruits of any kind are on sale, Canadian fruits will follow shortly.

3. The retailer usually knows in advance value when Canadian fruits are to be had.

4. The retailer likes to meet the customers' wishes.

5. It will particularly help if consumers will wait for Canadian-grown preserving fruits.

6. Canada produces each year far more apples than are imported. It is sound, practical patriotism to demand always Canadian apples.

7. Look on the package for the address of the grower. Insist that it be CANADIAN.

8. The year 1916 promises large crops of fruit of all kinds in Canada. It is a good year for a good resolution—to buy Canadian fruit.

Sheep-Breeders Want Better Prices.

Continued from page 846

the co-operative handling of wool, which, he writes, "is certainly a move in the right direction."

Mr. H. F. Arkell, assistant livestock commissioner, Ottawa, writes expressing his pleasure that the V. I. F. A. is planning to take advantage of the assistance offered by the livestock branch in affording the stock-breeders and farmers of Vancouver Island an opportunity to market their wool next season.

He feels that, from the information he has received, it will warrant sending the V. I. F. A. an officer of the branch to assist in organizing a wool growers' association, and also a wool grader when the wool is centralized and ready for classification. An officer of the sheep and goat division will be on the coast soon and will call on the V. I. F. A. and give what assistance he can.

As a result of correspondence between Commissioner Cuthbert, of the Victoria and Island Development Association, and the federal government in regard to obtaining sheep and Angora goats for breeding purposes on Vancouver Island, assurances have been received that the government will send experts to assist the farmers in buying animals, provided the expense is arranged for on the island. Commissioner Cuthbert is confident the industry could be established there and would ultimately prove a most important one, especially in conjunction with the woolen manufacturing industry, to establish which the association has done much preliminary work.

In order to encourage the growing of wool, it is likely that a new department, in which prizes will be offered for wool in the fleece, will be initiated by the Vancouver Exhibition Association this year. This step was taken into consideration upon the reading of a letter from Mr. John Bright, live stock commissioner at Ottawa, at a recent meeting. The commissioner suggested that this would tend to encourage the production of wool, and would be appreciated by breeders. He stated that he would be willing to place at the disposal of the association an expert wool man to judge the fleeces.

THE SHORTHORN AS A DUAL-PURPOSE BREED,

Continued from page 843

American Interest Increasing.

On the American continent interest in the dual-purpose character of the Shorthorn is increasing. Many of the experiment stations have small herds of which the milk records are kept. These animals have official yields averaging 6,000 lbs. per year. The milk contains from 3.6 to over four per cent fat, and in color and size of fat globules ranks next to the Channel Island breeds, between them and the Holstein and Ayrshires.

A movement is on foot in both the United States and Canada for the taking of official records of performance at the milk pail. The Dairy Shorthorn Breeders' Association of America was organized in 1910, and the interest is spreading annually.

At the St. Louis World's Fair in 1904 the Shorthorns competed against Jerseys, Holsteins, and Brown Swiss. Twenty-four cows averaged 4,152 lbs. of milk, and 153 lbs. of fat in 120 days.

Some very creditable records have been made by breeders. The private records of a herd in Pennsylvania show an average for 38 cows of 9,031 lbs. of milk per year, and for 52 cows and heifers of 8,515 lbs. This herd has produced the champion dairy Shorthorn of the world, Rose of Glenside, whose record for one year is 18,075 3-4 lbs. of milk, and 625 lbs. of butter fat.

Recently the Ontario government imported 12 dairy Shorthorns from England. While these are far from the extreme dairy type, they have produced remarkably well so far, several giving over 1,000 gallons in the year. The western provinces of the Dominion—Alberta in particular—bought a large number of dual-purpose Shorthorns in Ontario, almost buying up some herds outright. Thus the merits of the Shorthorn as a dual-purpose breed are being recognized officially.

The growing scarcity of good beef creates a need which only the Shorthorn can fill. The good old Shorthorn cow has shown that she can fill the pail besides, but she is not the cow for the specializing dairyman. She is the cow for the general farmer who wishes to produce both beef and dairy product and has the requisite fodder and facilities. Such farmers are demanding pedigreed animals to improve their stock. It rests with the breeders to provide these animals of true dual-purpose type, sacrificing nothing of constitution, but endeavoring to bring the average milk production of cows up to at least 7,000 lbs. annually, and retaining the straight-topped, level fleshed character with the gay carriage and gait so dear to the heart of every lover of Shorthorns. But the man who wants milk, and only milk, had best leave the Shorthorn cow alone.

Mr. R. C. Abbott who opened a Markets Commissioner's office in Vancouver last year, and who since that time has secured a large amount of data dealing with marketing problems on the coast as well as the most suitable products for the coast markets and the way to place them on the market to the best advantage, has been holding a series of meetings on the lower mainland under the auspices of the Farmers' Institutes in order that this information may be placed before the growers.