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BRITISH COLUMBIA

FRUIT AND FARM MAGAZINE

Vol. VII, No. 16

JANUARY, 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. 16

Vancouver, British Columbia

\$1.00 per year
in Advance

B. C. Fruit and Farm Jottings

Cranbrook Agricultural Association reports that it is \$500 better off than if no show had been held this year. The directors report that that old bugbear common to other associations, "I won't serve on the board because So and So is on," has vanished, and the only other special difficulty they have to combat is that of finance.

When operating at full capacity the Grand Forks vegetable evaporator will employ between 60 and 70 people, it being the intention to run two shifts. About 800 tons of potatoes had been bought up to December 10, with several carloads expected from Washington.

Alexander D. Adamson, manager of the Duke of Portland ranch at Aspen Grove, is dead at the age of 52. A native of Strichen, Aberdeenshire, Scotland, he came to America when 17 years of age, living for 30 years in the United States. He lived for some years at Summerland, where he owned two fine ranches at the time of his death. He went to Aspen Grove four years ago.

Chilliwack Agricultural Society reports all expenses paid and \$275 paid on a loan as well as interest charges up till next November. Prizes were paid at the last show to the extent of \$1214 and \$255 for sports. J. T. Maynard is president of the society.

A movement is under way to establish a co-operative creamery in Armstrong. It is proposed to buy the creamery now in operation there and increase its capacity. Shares have been placed at \$50.

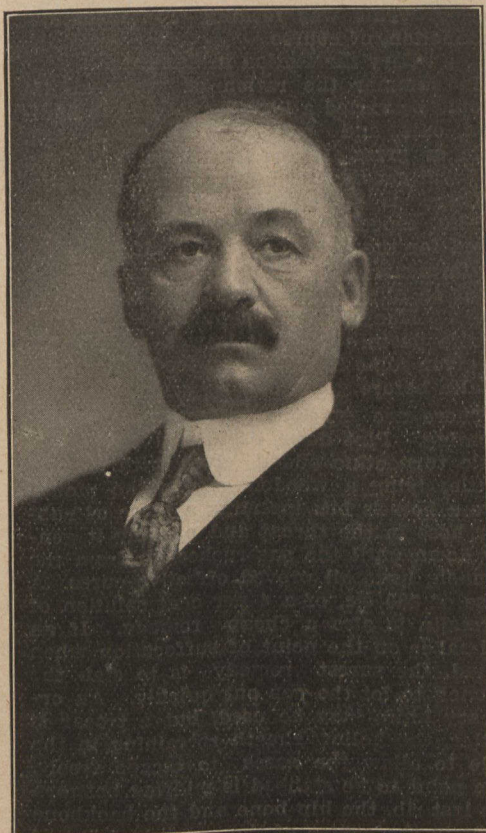
The Department of Agriculture has set Wednesday and Thursday, Jan. 19 and 20, 1916, as the dates on which the seed fair for all B. C. east of Kamloops will be held. It is to be held at Armstrong.

Mr. and Mrs. Macrae of Pitt Meadows have now four sons on active service, two fighting in the trenches and two others on their way thither. Robert and Alexander Macrae went out with the second contingent, 29th Regiment, and William and John left with the last contingent of the 47th Regiment.

Kaslo is raising more cattle than formerly. For three months now very little if any imported beef has been sold in local butcher shops. Pork is also being produced in increased quantities locally.

The shareholders of the B. C. Milk Condensing Company have disposed of their interests in the South Sumas plant to the London interests of the United States, the largest firm of the kind on the continent.

Mr. Alfred C. Flumerfelt, who will be the Minister of Finance and Agriculture in the new cabinet, is one of the well-known figures in the business circles of this province. He has large interests not only in this province but in other parts of the Dominion. He is manager of the Hastings Shingle Manufacturing Company, which concern he has supervised for many years. Mr. Flumerfelt resides at Victoria.



HON. A. C. FLUMERFELT
New Minister of Finance and Agriculture

He is of United Empire Loyalist stock and was born at Markham, Ont., on September 29, 1856. When first coming to this province, Mr. Flumerfelt assumed the management of the Ames-Holden Shoe Co. Shortly afterwards he became identified with the Granby mines and smelter at Phoenix and Grand Forks and attained great success in building up this great enterprise.

Later he became president of the International Coal & Coke Company and the Royal Collieries, and of the Marine Insurance Company, Western Mortgage Company, Hastings Shingle Manufacturing Company, and British-America Trust Company. He is a director of many concerns,

notably the Ames-Holden Shoe Company, Miner Rubber Company, Trusts and Guarantee Company, Eastern Townships Bank, Redmond & Company, Hutchinson Company, Patterson Shoe Company, Canadian Consolidated Rubber Company, and the Empire Trust Company. He is a governor of both Vancouver and Winnipeg general hospitals and has held many honorary posts in the Victoria Jubilee Hospital. He was an alderman for the city of Victoria for several terms. In 1909 he was appointed a member of the Royal Commission on Timber and Forestry. Mr. Flumerfelt is an Anglican in religion, and is a member of many prominent clubs in Victoria, Vancouver, Winnipeg and Montreal.

Potatoes for the vegetable evaporator at Grand Forks have been coming into the city very rapidly, and at certain times the crush of teams at the cannery building has resembled a blockade at an elevator on the prairies during grain-hauling time.

Recent purchases of pure bred Shropshires from the Riverdale stock farm, near Enderby, managed by Mr. Ed. Harrop, include the following: By James Emeny, ram; A. D. Stroulger, ram; Geo. W. Joyce, Pender Island ram; C. N. McLeery, Lansdown, ram; Geo. Andrews, ram and four ewes; A. W. Hunter, Armstrong, four ewes; J. A. McLeod, Armstrong, one ram lamb; lamb, and to Andrew Glen, four Yorkshire Joseph Anderson, Otter Lake Farm, ram sows and boar.

Summerland growers won twelve prizes in thirteen entries, Peachland won four prizes in seven entries, and Naramata won three prizes at the Spokane Apple Show.

Summerland is priding itself on becoming a shipping point for livestock as well as for fruit. During the year eleven carloads of horses were shipped from there which, with smaller shipments, makes 275 horses altogether. With the exception of 60 driven in from Keremeos all were gathered up in Summerland district.

A fine of ten dollars and costs was recently imposed on Creston parties on conviction of marketing apples graded higher than their quality justified. The information was laid by Dominion Fruit Inspector R. G. L. Clarke on the strength of an inspection of a car of apples at Regina some weeks ago in which several boxes of Wealthies were found which did not grade up to No. 1 standard in the matter of color. For the same offence another fine was imposed on a Grand Forks shipper. Mr. Clarke states that outside of this instance the regulations as to grade have been splendidly observed all through the province, showing a marked increase over last year.

An exchange says that an epidemic of cattle rustling is feared in Lillooet and Cariboo districts owing to the scarcity of rabbits, lean rabbit years always showing a big increase in cattle stealing, the offence being most frequently traced to home-stealers of foreign extraction. The item is interesting, but we cannot speak for its authenticity.

Mr. Geo. R. Sharp of Enderby shipped half a carload of hogs to Vancouver during December, the first shipment of the character to leave Enderby in many months.

Feeding Dairy Cows In The Most Economical Way

By S. H. HOPKINS

Alfalfa is the most valuable and nutritious roughage the dairyman can grow. Indeed, when especially well cured and ground up into alfalfa meal, it can be called a concentrate and classed along with grain foods. It is so rich that it should not be fed alone. There is so much protein in it that it is hard on the kidneys, which organs throw off all nitrogenous waste. It is unwise to bring in a cow used to range conditions and begin stuffing her with alfalfa at once, especially if exercise is not given. Any sudden change of this nature tends to upset the cow's digestive and nervous system.

Protein or albumen is the food element essential to milk production, and it is the element dearest to buy in grain foods. The great point about alfalfa is that a supply of good alfalfa hay obviates the necessity of buying much grain. If corn silage or roots can be combined with good alfalfa hay, a satisfactory milk yield can be obtained without any grain being fed. Some well known dairy farmers feed their cows only alfalfa hay and corn silage in winter, except their best cows, which get a little grain. They claim that while they do not get the maximum production, they get it cheapest. A ration of 20 pounds alfalfa hay and 40 pounds corn silage (or 55 pounds roots) will be ample for a cow giving 25 pounds of average milk daily. The silage is rich in carbo-hydrates or starchy matter, and the alfalfa in protein, so that one balances the other.

Timothy Hay Not a Good Roughage.

Timothy hay is not at all a good roughage for the dairy cow, as it is lacking in protein. It is rich in starchy or energy producing elements, so that it gives best results when fed to horses. Timothy hay contains only 3 per cent of digestible protein, compared with 8 per cent in red clover and 10 1-2 per cent in alfalfa hay. These figures give a good comparison of values of these three roughages for milk production.

A good, safe rule for feeding a dairy cow is as follows: Give her all the clover or alfalfa hay she will eat, together with 35 to 55 pounds of corn silage or roots. In addition, give her a pound of grain for each four pounds of milk produced daily. Bran, oats and corn or barley meal, equal parts, is a good grain mixture. A little linseed oil meal is also a fine thing in helping to keep the digestive organs right.

The champion cow of Canada is a British Columbia Holstein, "Pietje Canary," owned by J. M. Steves, of Steveston. She gave in one year over 24,000 pounds of milk con-

The hogs were of exceptional quality, averaging 210 pounds, and being from five to eight months old. Several farmers contributed to the shipment and the shipment brought \$7.75 per 100, and nearly \$1200 cash was paid on delivery. This is a step towards co-operation pointing to bigger things to follow. The profit to the rancher may be judged from figures supplied by one shipper, the four hogs contributed by him standing an outlay for the four months just \$12. In addition to this the pigs had the run of a clover and alfalfa patch. The four animals netted him in the neighborhood of \$65.

taining 938 pounds of butter fat (equal to 1100 pounds butter.) Her daily ration during the latter part of her test was 75 pounds mangels, 10 pounds each of ground oats and linseed meal and five pounds ground barley. This was feeding for maximum production, of course.

Vary the Ration in Summer.

In summer the ration of green alfalfa should be varied a little by feeding in addition, oats, and peas, clover, green corn, kale or grass. Cows like a little variety, and will get tired of being fed alfalfa alone.

There is some danger of bloating on alfalfa, especially when wet or when pastured for the first time. Wet alfalfa readily ferments in the paunch. Cows will not bloat on alfalfa if it is cut and brought to them. Hungry cows should be kept off alfalfa pasture when it is wet, and should be given some hay or green feed other than alfalfa before going on.

There are various effective cures for bloating. Pint doses of linseed oil with a little turpentine added, given with a wine bottle; tying a wooden gag in the mouth like a horse's bit; inserting a piece of rubber hose in the throat and pushing it gently down until the gas rushes up from the paunch, have all proved effective cures. A dose of 300 c.c. of a 4 per cent solution of formalin is also a cheap remedy. If an animal is on the point of suffocation when found, the surest remedy is to stab the paunch to let the gas out quickly. An ordinary knife may be used, but a trocar is better, the hollow sheath remaining in the hole to allow the gases to escape freely. The point to be stabbed is midway between the last rib, the hip bone and the backbone right in the center of the space in front of the hip, which is quite hollow usually. The skin is first slit for about an inch, and the paunch wall is just beneath. A bold stab is made directly through it. The paunch is an immense receptacle, and there is no danger of striking any other organ at that point. A veterinary should have been sent for in the meantime.

The Curing of Alfalfa Hay.

Regarding the curing of alfalfa hay. Over three-fourths the feeding value is in the leaves, so that ordinary methods whereby these are wilted off will not do. Alfalfa should be cut when only beginning to come into bloom, before it gets woody. Cut in the morning and partially wilted, it should be cocked in the afternoon, cured by standing thus three or four days, when it is ready for hauling or baling. Cured like this, the hay is quite green, and is nearly equal to bran in food value, weight

for weight. Alfalfa meal should be quite green also, and show no white, strawy specks, which indicate badly cured and woody hay.

In a wet season alfalfa can be put into a silo mixed with green corn or alone. It must be well tramped down to make good ensilage. A silo is nearly essential for the dairyman on high priced land. It provides the cheapest feed known. One dairyman in the Kootenay district has erected a silo 8x22 on his five-acre holding, and keeps four cows on homegrown roughage the year round, besides a large flock of poultry, by using silage and soiling crops. The silo is filled with oats and peas in early summer and again with corn in the fall. Silage and soiling mean intensive dairy farming. Silage is just as good in summer as in winter, and nearly as necessary. Soiling means cutting crops in the summer and bringing them to the cows, instead of letting them pasture. The only objection is the extra labor, but that is paid for. Winter rye, fall wheat and vetch, alfalfa, clover, peas and oats, corn, kale and silage will provide an abundance of succulent food throughout the summer. Half an acre under this system, if it crops well, will supply a cow with sufficient green food for the summer season. The small holder above mentioned has brought up his farm from a "wilderness of thistles" to producing twice as much as the adjoining holdings, by means of the large amount of manure made on the place.

The Provincial Department of Agriculture will be pleased to send printed information about alfalfa, silos and ensilage on request.

NEW ORGANIZATION FOR AGRICULTURISTS

The British Columbia Agricultural Organization Association is the latest thing in agricultural matters in the province. Mr. J. L. Pridham of Kelowna, is the chairman of the organization committee and has sent Fruit and Farm the following letter:

"We have formed here The British Columbia Agricultural Organization Association. The paramount purpose of this association, which is non-partizan, is to draw into one comprehensive organization all the bona-fide farmers only of the province, both men and women, and to bring about by their mutual study of their mutual problems common action of them all for the solution thereof, and to promote the interest of the farming community in an honorable and legitimate way, and, knowing something of the magnitude of the problem which we are facing, have decided that local organizations of bona-fide farmers only should be established throughout the province at all points where an interest can be created, and then locals should each send delegates to a convention where a central executive representing them all should be elected.

"A campaign to organize local associations throughout the province has been started and local associations are already formed and officers duly elected. As this work has to be undertaken by voluntary workers, and it is impossible to do it throughout the whole province by the individual efforts of the organization committee, we would be glad if every active farmer in his district would appoint someone to represent them to communicate with the organization committee at Kelowna.

"We shall be grateful to you if you will kindly insert this letter in your next issue."

In subsequent correspondence Mr. Prid-

ham writes that at present he is not in a position to send details of the association further than what is contained in the above letter, but that information is being sent those wishing to form an organization in any particular district which it is not thought necessary to give to the press as yet. Mr. Pridham writes that the matter of organization is being taken up over the province as numerous applications for instruction have been received from those desirous to form locals.

He adds that the association is to be a practical body and must, therefore, take hold of practical everyday affairs and it is proposed to deal with every practical problem affecting the farmer both in business and legislation.

English Walnuts

That the English Walnut will do well in the North as well as the South has been proved by its success here already, for the trees have not only grown robust but have produced the finest nuts, particularly of the Vrooman Franquette type. Realising the tremendous interest that is now being taken in the culture of the Persian or English walnut, the material for this article has been gathered from a large number of trustworthy sources—accuracy and brevity are aimed at and it is hoped to furnish just the practical information which it is felt has long been desired.

Viewed as a comparatively new industry, the culture of the English walnut is making remarkable strides. Owners of farms and suburban estates everywhere are becoming interested in the raising of this delicious article of food, thousands of trees being set out every year.

There are two important reasons for the rapidly growing enthusiasm that is being manifested toward the English walnut. First, its exceptional value as a food property is becoming widely recognized; one pound of walnut meat is equal in nutriment to eight pounds of steak. Secondly, its superior worth as an ornamental shade tree is admitted by everyone who knows the first thing about trees. For this purpose there is nothing more beautiful. With their wide-spreading branches and dark green foliage, they are a delight to the eye. Unlike the leaves of some of our shade trees, those of this variety do not drop during the summer, but adhere till late in the fall, thus making an unusually clean tree for lawn or garden.

In addition to all this, the walnut is particularly free from scale and other pests.

There are records of single trees bearing as much as 800 pounds of nuts in one year.

In 1895 the United States produced about 4,000,000 pounds, and more than 16,000,000 pounds of English walnuts in 1907, with a proportionate annual increase each year to the present. But when it is known that the United States is consuming yearly about 50,000,000 pounds of nuts, with the demand constantly increasing, thereby necessitating the importation annually of something more than 25,000,000 pounds, the wonderful possibilities of the industry in this country, from a purely business view point, will readily be appreciated, and, of course, the market price of the walnut is keeping step with the consumption, having advanced from 15 to 20 cents a pound in the past few years.

In California the nut industry is becoming a formidable rival of the orange; in fact, there are more dollars' worth of nuts (all varieties) shipped from the United

States now per year, than oranges. One grower is shipping \$136,000 worth of English walnuts a year, while another man with an orchard just beginning to bear, is getting about \$200 an acre for his crop.

No standard estimate can at present be placed on the yield per acre of orchards in full bearing, but the growers are confident that they will soon be deriving from \$800 to \$1600 per acre, these figures being based on the number of individual trees which are already producing from \$90 to \$120 a year.

The success of the nut in California can be duplicated in the East and North, providing the right variety is planted, and in the few instances where orchards have been started in the east, great things have already been done, and still greater things are expected in the next few years in our "northern" part, where owing to the climate, the quality and whiteness of the nut brings a higher price on the market.

Everything depends upon the planting and cultivation of English walnuts as indeed it does of all other fruits from which the very best results are desired.

For orchard planting the trees should be placed forty feet apart and by staggering the rows a greater distance is gained between individual trees. Any other small fruits may be planted in the orchard between the walnut trees or any cultivated crop can be raised satisfactorily on the same land, many orchardists gain triple use of the soil in this way. Besides the cultivation of the earth in proximity to the walnuts proves of great benefit to the trees. Walnut trees require little or no pruning after coming to bearing age.

An alkali sap keeps scales and pests from the trees. Blossoms are immune from late frosts, as they start late.

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at same time, in this variety, insuring perfect fertilization and productivity. Bears more regularly than other nut trees. Bears heavier crops the older it becomes.

In Spain and Southern France there are trees believed to be more than 300 years' old which bear from fifteen to eighteen bushels of nuts each annually.

In Whittier, California, is a famous tress which has been leased for a term of years at \$500. Orchards seven and eight years' old bring all the way from \$1000 to \$2000 per acre and are a fine investment, yielding from 15 to 125 per cent. according to age. The total cost of producing and harvesting an English walnut crop is about one and a half cents per pound. English walnuts are used for making pickles, catsup, oil and other culinary products.

In England the nuts are preserved fresh for the table where they are served with wine.

After the taproot reaches the subsoil moisture, it is well able to take care of the tree, and both cultivation and fertilization may then be stopped. In fact, by this time practically no further care is needed in the nut orchard with the exception of that required at the harvesting time, and this is a pleasant and easy occupation especially in the northern and eastern districts where the frost opens the shuck and the nuts drop free upon the ground, where they may be picked up and put in sacks of 110 to 120 pounds each, ready for the market. Just before the first frost, it is a very good idea to remove all leaves from the ground so that when the nuts fall they can be readily seen and gathered. An excellent means of accomplishing this, is by means of a horse and rake. The nuts may be left on the ground to dry or may be removed to any convenient place for that purpose.

Things An Amateur Gardener Should Know.

By Provincial Botanist Davidson

Gardening was the subject of an interesting address by Provincial Botanist Davidson of a botany class lecture in Vancouver recently. Mr. Davidson in the course of his remarks touched on so many elementary essentials of successful gardening that a portion of them are worth the attention of Fruit and Farm readers interested in the fascinating study.

Many gardeners work by "rule of thumb," said Mr. Davidson, without considering why certain methods should be adopted or what actually takes place during their operations, yet many of the general public believe that gardeners have the power of charming plants in some mystical way to bring about the results they sometimes produce.

Suggestions made to amateurs sometimes result in an answer such as: "I couldn't do that, it would require an expert gardener."

The most successful gardener is a thoughtful student of Nature who knows his own limitations and who has passed beyond the stage of the conceited beginner who imagines he knows all about the cultivation of plants. To this latter class of individual I can offer no assistance. Experience alone is his best teacher.

Kindness That Kills.

When an amateur begins to grow plants in a greenhouse the usual rule is to pet and coddle his plants so much that they die. His kindness is killing. If he would have patience and allow Nature to do her share he might have some results, but he expects to see leaves one day, flowers the next, and fruit the next. He waters the plants morning and evening and gives them a sweat-bath during the night by maintaining a mid-summer temperature in the middle of winter, so much so, that the plants are at a loss to know what planet in the universe they happen to be on.

Plants in the greenhouse should be grown under some kind of natural conditions, and the principal points to attend to are the following:

The temperature should be higher during the day than at night; it should be gradually increased and decreased according to the intensity of the daylight, and should be highest when the light is brightest.

Air should be freely admitted. Oxygen is as necessary for plants as for animals. Plants use up their own CO_2 during daylight but at night this gas is as injurious to them as it would be to animals.

The absorption of raw material and the formation of food depends largely on the condition of the atmosphere in the greenhouse during daylight. If it is close and humid, less food is formed, because the atmosphere prevents the free evaporation of moisture from the plant. If the evaporation of water from the leaves is hindered, a corresponding check is given to the organs of absorption.

Therefore, when the greenhouse has plenty of daylight and heat, the atmosphere should be sufficiently dry to encourage free evaporation of water by the

leaves. This results in free absorption by the roots, and finally the desired formation of food by the leaves and other green parts.

A dry atmosphere is not required at night, because the plant does not form food then. At night the plant uses water to dissolve all the food formed during the day, and this food in solution is transported from the leaves to the growing tissues and to the organs for storing reserve food supplies, so that the cells of the leaves become free to form new supplies next day. This accounts for the more rapid growth during the night than during the day.

Plenty of Air Necessary.

The free admission of air to the greenhouse also encourages the formation of cuticle—a thick protective skin—on the surface of the plant. This makes it more difficult for the spores of parasitic fungi to attack plants, and such spores germinate more readily in a warm moist atmosphere than in a comparatively dry one.

Water—The over-enthusiastic amateur probably ruins more plants by the indiscreet use of the watering can, or hose-pipe than by any other means. It must be borne in mind that oxygen is as necessary to the roots as to other parts of the plant. This oxygen is obtained from air in the soil and if the soil is kept too wet, it results in an insufficient supply of air and a corresponding diminution in the formation of absorbing organs—root-hairs, if a little water is supplied at a time there is likelihood that the top soil will be moist, while the soil in the vicinity of the root-hairs is dry and the air in the soil more or less stagnant.

By giving the soil a thorough soaking, the stagnant air is expelled, then by allowing the soil to become almost dry a supply of fresh air replaces the water as it is absorbed; this fresh air encourages the free formation of root-hairs and when the plant is watered again they are brought into full action.

Light.—Too strong sunlight destroys chlorophyll, but many plants have the power of protecting themselves by forming coloring substances in their cells, which act as a shade. When a greenhouse is exposed to the full action of the sun in summer, care should be taken that the temperature does not become too high. Plants grow well, up to a certain temperature, after that temperature passes the optimum they suffer.

Free evaporation should be encouraged, but if plants show signs of over-evaporation—which is indicated by the drooping or wilting of the leaves—the floors and staging may be sprayed with water; this will cool the atmosphere and increase its humidity, thus lessening the transpiration and allowing the leaves to obtain a sufficient supply of raw material to elaborate into prepared food.

If the plants are not given enough light they will try to get it themselves. Plenty of light results in short, sturdy plants; insufficient light results in long, lanky plants, owing to their efforts to reach the light.

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BRITISH COLUMBIA FRUIT and FARM MAGAZINE

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of the Man on the Land

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The Message of New Year's

At New Year's time we wish one another "A Happy and Prosperous New Year," and if wishing could accomplish everything we would all have a happy and prosperous year during 1916. The best wishes of your fellows help but there is a bigger essential before our wishes are realized—and that is our own individual efforts. After all each one of us to a very large degree has the making or unmaking of our own fortunes. We all make mistakes—mistakes wilful and mistakes of laziness, and the mistakes of work without purpose. If the New Year season means anything it means a time for housecleaning one's ideas; the elimination of conceptions that are of no avail; the adoption of new ideas, new resolves—the results of the experience of the year past. New Year is stocktaking and restocking time for each individual. The professional man, the commercial man, the farmer, may all look back and see where he has made mistakes and where he can improve in the year coming. If he can't do that he hasn't much of a grip on his affairs. In no avenue of common activities is greater progress being made at the present moment than in farming. Agriculture has now been reduced to a business, the success of which is determined by the business capacity of the farmer. We mention this fact as of particular interest to readers of "Fruit and Farm," and if there is one message we would give our readers at this festive time of good wishes it is that to a large extent we all have the making of our own Happy and Prosperous New Years.

Wishing You All a Happy and
Prosperous New Year,
"FRUIT AND FARM."

FRUIT AND FARM IN 1916

While the times are not conducive to profits in journalism, "Fruit and Farm" has endeavored to maintain its standard during the year just closed. Few have escaped the influence of the financial depression and the war, and the publishing business is not one of those that has. A firm belief that there is a real need for such a publication as "Fruit and Farm" and confidence that ultimately we shall reap the rewards of perseverance and our endeavor to be of some real benefit to the agricultural interests of the province has been responsible for the continuance of the magazine. A growing appreciation on the

part of our readers has strengthened us in the desire to aid them, and for the coming year we have planned further improvements. We shall pursue the policy of giving our readers the agricultural news of the province supplemented by monthly contributions from experts in their particular lines that cannot fail to be beneficial. We thank our readers for their support during the year and trust that we will be able to accomplish the ambitions we have set for "Fruit and Farm" during 1916.

THE NEW CABINET

Quite the most important thing that has transpired in provincial affairs since the last issue of "Fruit and Farm" has been the announcement of the retirement of Sir Richard McBride from the Premiership of British Columbia and the taking up of the office by Attorney-General Bowser, with the appointment of Mr. C. E. Tisdall to the lands portfolio and Mr. A. C. Flumerfelt to that of Minister of Finance and Agriculture. Politically, Fruit and Farm is not concerned with what party is in power at Victoria. This journal has no politics. All that concerns it is the advancement of the agricultural interests of the province and in this connection the cabinet shift has its greatest interest in the announcement in the manifesto issued by Hon. W. J. Bowser just after assuming office in which he stated that the Department of Agriculture was to be separated from the duties of the Minister of Finance, with a Minister of Agriculture in charge. This is a matter of legislation, of course, and cannot be effected until a meeting of the legislature, if one is held, before the general provincial elections. That section of the new premier's manifesto which deals with this matter will at least be popular with all engaged in agriculture. It is not only a recognition of the importance of the agricultural interests of the province, but is a promise that hereafter those interests are going to receive more attention from the government with a more intelligent effort put forth for the solution of the many problems of the farmer in British Columbia. A Minister of Finance, no matter how excellent a man he may be, cannot be expected to be a man with a wide grasp of agricultural affairs. By the very nature of his appointment as a man of financial ability he is a man who must necessarily devote a lot of his time to his desk and the study of such matters as leave him little, if any time, to devote to such a wide subject with so many details as agriculture. There are many conditions peculiar to farming in British Columbia that require skillful and scientific treatment. We have heard a lot about getting people on to the land in B. C., but not so much about seeing that those who have settled in the province have an opportunity to make a success of their venture. The many officials of the provincial agricultural department are spending much money, devoting a lot of attention and doing considerable good work throughout the province. These men, however, can only go so far as their particular branch of the work for which they are qualified will allow them. Beyond this there is the general interests of the farmer to consider in the way of the successful marketing of his product which he may grow as the result of the technical advice of the agricultural experts sent out by the government. This question resolves itself into that much used and little understood word "Co-operation." We submit

this is one of the great issues before the agricultural interests of the province. Its successful solution depends largely on the administrative ability brought to bear on it, and for that reason we are glad to see that the government is going to make a separate portfolio of agriculture. The new Minister of Agriculture, whoever he may be, will find much work awaiting him, and the manner in which he prosecutes it will have much to do with not only the prosperity of the farmer but of the whole province.

COMMANDEERING THE WHEAT

No, "Fruit and Farm" has no opinion to offer on the action of the Dominion government in commandeering twenty million bushels of wheat for Empire purposes. We have read a score of editorial views from the daily press and notice practically the same narrow, partisan spirit running through the majority of them—fulsome praise from government organs for taking such prompt action in seeing that the needs of the Empire in this time of stress are met, and sweeping condemnation from Liberal papers who see in the circumstance only a desire to serve political exigencies. The great pity of Canadian national life and a condition that has done more than almost anything else to retard the fullest growth of that great national sentiment without which no nation attains her greatest achievements, is this petty, party spirit manifested on all times and occasions. When Canadian criticism is based on national rather than party welfare, then Canada will have gone a long way towards driving out of Canadian public life many of those conditions that have so besmirched the record of 1915 in the matter of war grafts and such incidents as the revelations in the late Manitoba government. In the meantime, as regards the commandeering of the prairie wheat, we prefer to believe that the government has been actuated by a real desire to be of assistance to the Empire in a most critical time, is possibly acting under Imperial government suggestion, and in any event we trust has taken a course that will ultimately prove to have been the right thing to have done.

ANOTHER ORGANIZATION

The British Columbia Agricultural Organization Association is the latest organization to which farmers are asked to give their support. A brief outline of the movement appears in another column as it was received from Mr. Fridham, chairman of the organization committee. We do not know enough about the movement yet to pass any opinion upon it, but if we were asked to say anything we would be of the opinion that the promoters appear to be inspired with good intentions and at the same time would point out, as other publications have, the danger of a multiplicity of agricultural organizations. There are excellent mediums existing now through which farmers may promote their own interests. The trouble has been not that there are not enough organizations but that the organizations that exist now have not been taken advantage of by the farmers to the extent they should. This condition is not limited to farmers either, for in every activity it will be found that the work of general public endeavor is invariably left to a few. If the British Columbia Agricultural Organization Association will point out to the farmers the need of co-operation,

the necessity for every farmer associating himself with some organization working for the mutual benefit of all the members and taking more than a passive interest in whatever particular organization he is a member of, then it will have performed a great work for agricultural interests in British Columbia. In the meantime we do not wish to be construed as being opposed to the new organization and would be glad to hear more of its aims and plan of procedure.

THE BEEF INDUSTRY.

In another column we publish an article on the beef industry of British Columbia, by Dr. Tolmie, which does not hold out much encouragement that there will be any great immediate development in the industry in British Columbia. Are British Columbians in this respect missing a big opportunity?

Since 1908 there has been an almost steady decrease in America in the number of beef cattle raised. While prices are high and promise to be a great deal higher due to the immense wastage taking place in Europe, the Canadian farmer finds his marketable stock at the lowest point it has been in 14 years. While the population has increased the cattle available for consumption in the most thickly settled province has declined in five years by over 40 per cent. The falling off in British Columbia in five years has been most marked. The shrinkage for all Canada during the last six years was 27 per cent.

Where are the beef supplies to come from? The United States shows a lamentable falling off—has now barely enough for her own use, taking more and more from Canada. And with an embargo against Argentine, Canada could practically have this immense market to itself. After the war there will be the tremendous demand from not only the Allies but from Germany as well.

It would appear that the stockman who takes advantage of the situation has a profitable investment. A noted United States authority says: "Those farmers and stock raisers who are fortunate enough to have on hand a sufficient supply of breeding animals, especially well-bred cows, to form a basis for future herds and will provide proper sires, give them all good care and remain steadily in the ranks of live stock producers, will find themselves a few years hence in the foremost ranks of the continent's most prosperous citizens, with their herds and flocks growing in value, their acres growing in fertility, and their bank accounts growing steadily with the combined growth of live stock and increasing crop yields."

The whole situation is worth the serious consideration of British Columbia stockmen.

A RECORD ACRE.

Yields Over One Thousand Dollars' Worth of Spuds.

GRASS VALLEY, Cal.—Nowhere in California is there an acre of potatoes that can equal the acre of tubers on the Charles Parsons ranch near Banner, say experts who have viewed the patch. The total yield of the one acre was 41,565 pounds. Thirty thousand pounds are seed potatoes and brought five cents a pound, the price fixed by the grower. This brought \$1500. Three tons were sold for table use and

brought two cents per pound, making \$1620 for all potatoes sold. The total cost of production was \$275.75. Thus, Parsons, who is contesting for the prize offered by the state commissioner of horticulture, netted \$1344.30 from the one acre.

FIND IT PAYS TO THIN POTATOES

Uniformly Good Sized Tubers Result From One Stem to Hill

A new and highly profitable method in the cultivation of potatoes has been worked out by Professor O. B. Whipple, horticulturist of the Montana State Experiment Station, during the last few years is a result of certain discoveries made in the process of seed selection for improving the standard of the potato crop. This is a process of thinning, which can be applied without much expense and with a very great gain in the uniformity and high quality of the potato crop. Professor Whipple has written a bulletin describing the experiments in detail, and this bulletin is now in press and will be distributed by the experiment station within a few days.

The process, briefly, is to reduce the potatoes to one stem for each hill. The thinning is done to advantage when the plant is about six inches high. One potato plant growing without disturbance from the roots of other plants close by will produce from three to six good sized, uniform potatoes. As potatoes are ordinarily planted however, in a large number of cases, from two to five plants will start from an ordinary piece of potato with the frequent result that none of the potatoes can attain full growth and the number of small potatoes unfit for use in such a field is very large.

Professor Whipple first undertook the thinning of potatoes with a view of securing a large number of hills with one plant for comparison in the selection of seed. The experiment resulted in such a fine and uniform crop of potatoes that the idea was at once suggested of applying it throughout the field.

The result of two years' experiment on a considerable scale seems to prove that by thinning according to the plan suggested the total yield of the field is not reduced at all in quantity and is greatly improved in quality and uniformity. By this same method Professor Whipple expects to be able to supply a specially large and fine quality of potatoes for baking.

This method of thinning potatoes has proved successful on irrigated land and is also of particular value on dry land where in certain seasons the proportion of culls is very high.

The expense of applying this treatment is small, as one man can thin potatoes at the rate of one acre per day. The reduction in the quantity of unmarketable potatoes is very large. In one case it was reduced from 2700 to 500 pounds per acre.

This is the first time that experiments have been made for the improvement of the potato by thinning, though corresponding methods are in use with many other vegetables.

At the convention of the Western Canada Irrigation Association, held at Bassano, Alberta, on Tuesday, Wednesday and Thursday, of last week, it was decided by unanimous choice that the 1916 convention should be held at Kamloops.



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.

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

Ten head of pure-bred Shorthorns were recently purchased by Mr. Griffith Hughes, Cobble Hill, V. I., at Portland. They are beef type and strain, not dual-purpose. After a re-test has been made they are expected here next month. Mr. Hughes had the benefit of the advice of the Live Stock Commissioner, Prof. W. T. McDonald, who was at the sale.

What B. C. Fruit Growers Are Doing.

GRADING AND PACKING STANDARD RAISED IN 1915

Dominion Fruit Inspector Clarke thinks it is little short of marvelous that the standard in the grading and packing of B. C. fruit, especially apples, has been raised this year notwithstanding the fact that a large proportion of the young men who have been employed in the various packing houses have enlisted.

The high quality of grade and pack is shown in the reports of the increasing quantity of our exports apples, which are outclassing all others in the markets of Australia, New Zealand, South Africa, South America, as well as in Asia and Europe.

That more and better facilities for taking care of the surplus and low grade or overripe fruit is essential to the success of our fruit industry is Mr. Clarke's conviction. Of this he is more assured than ever. From observation he is convinced that apple and prune evaporators can be operated to good profit. Jam and vinegar plants are also valuable. Instead of shipping apples of lower grades in crates as was done this season, they should, he thinks, be kept off the market entirely and put through an evaporator, or manufactured into some other by-product.

Speaking further on the subject of fruit packages, Mr. Clarke says that the time has come for a general movement for the standardization of packages. As an instance of the variety in packages Mr. Clarke stated that prunes were shipped this year in crates 11x18, varying from 3 1-2 to 4 1-2 inches deep. Four or five different sized apple crates appeared this season, too. He would have the sizes of all packages fixed by law, and insist that all imported stuff be packed in these legal sized containers.

An evaporating plant run in connection with a South Idaho co-operative fruit shipping association, and which had come under the notice of Mr. Clarke, was cited by him in support of his suggestion that growers must make use of such methods to use up culls, etc. Its cost was about \$3000, and the fruit put through it netted the growers better than one cent a pound. There was approximately a shrinkage of 50 per cent in weight by evaporating.

EVAPORATION PLANT PAYS OUT \$60,000 PER MONTH

There are now about 130 hands employed at the Evaporation plants of the Graham Company in Vernon, and Manager Bone states that the company will pay out for vegetables and wages this winter a sum amounting to approximately \$50,000 per month. In addition to the large building erected at the power house site, the company have now four units installed in the S. C. Smith Lumber Company's factory. In the main building onions alone are at present being treated, while in the other plant carrots occupy the attention of the men and women employed in this section.

According to the Vernon News, the management now has under consideration plans which may result in the industry being made a permanent one here. It was proposed when it was started to run it for about eight months, during which time it will be employed in evaporating onions, car-

rots, potatoes and other vegetables; but Mr. Bone is of the opinion that he may extend the business next season and put in a plant for the evaporation of prunes, apricots, etc. It would require but little additional equipment to carry on this work, and the company will probably develop along these lines next year.

Up to this week four cars of desiccated onions have been shipped from the evaporator, and this output will be considerably increased from now on.

THE GROWTH OF THE FRUIT RAISING INDUSTRY IN KOOTENAY

Figures compiled by E. Norman, manager of the Kootenay Fruit Growers' Union, with the purpose of illustrating the necessity for forming a co-operative marketing organization in time for next season's operations, are a striking illustration of the growth of the fruit growing business in this district. This year in the Kootenay, lower Arrow and Slocan lakes sections alone, despite the small crop, an exportable surplus of 41 carloads of apples and small fruits has been produced. Of this total 31 carloads have been shipped. Four years ago, in a year of heavy production, the total for the same districts was 13 carloads. Mr. Norman places the 1915 crop at 25 per cent of normal. In addition, it must be remembered that the district is now supplying large quantities of fruit which were formerly imported.

COLDSTREAM ORCHARDISTS FORM FRUIT PROTECTIVE ASSOCIATION

A well-attended meeting of fruit growers in Coldstream district was held during the month to discuss constitution and bylaws of an association called the Coldstream Fruit Protective Association as drawn up by the provisional committee authorized at a previous meeting. The principal discussion centered on the point as to whether Lavington district should be included or not in the operations of the association. Mr. Palmer pointed out the advantages of having a separate organization for that district and stated arrangements had already been made for a meeting to be held there later. This was acceptable to the meeting. Officers were elected as follows: President, A. T. Howe; vice-president, Russell Venables; secretary-treasurer, R. W. Paton.

GOOD PRICE PAID FOR BRITISH COLUMBIA APPLES

The probability of a fair sized market for British Columbia apples being developed in South Africa is dealt with in a report of the government by W. J. Egan, Canadian trade commissioner at Capetown, who says:

"The first shipment of apples from Canada for this season arrived on the S.S. Kwarran, October 15. They were all from British Columbia and consisted mostly of Wealthys with some Gravensteins. The packing was of the very best and the shipment was healthy, being almost free from scale. The apples were of good size, but did not come up to the requirements of the South African market in color, and unfortunately a large percentage of the shipment was frozen in cold storage. The fruit which was carried without freezing realized from 15s to 17s a box. On the Johannesburg market prices ranged from 19s to 24s or \$4.55 to \$5.75.

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The Jaeger Co. produce a greater variety of dainty woolen garments for infants and children than any other maker that we know of.

Garments of this brand are made of the most refined yarns and are absolutely non-irritant to the most sensitive skin, and this quality coupled with warmth, provides comfort in a complete degree.

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B. C. FRUIT WINS PRIZES

Two citizens of Naramata sent small exhibits of choice apples to the Spokane Exposition with the result that three prizes were awarded to their four exhibits. Mr. Cook got first in the single box display of Jonathans and second in a five-box exhibit of Grimes' Golden, while Mr. R. H. King captured first place with a five-box display of winter bananas.



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"The shipment of 1160 boxes is the first or record to consist of Canadian fruit only. Although this shipment was unfortunate, dealers now admit that a suitable apple can be procured for the early sailings as well as for the end of the season. As they are all prepared to purchase Canadian fruit, they are now advocating that it alone should be carried in the cold storage of Canadian steamers during the limited season of delivery, from October to December 15. Under normal conditions they can dispose of 35,000 to 40,000 boxes of a good hardy, medium sized, well colored apple."

FRUIT PACKING SCHOOLS.

The Department of Agriculture will again offer fruit packing schools during the coming winter. While the supply of packers was nearly equal to the demand last year, there was a shortage in many districts this year owing to the enlistment of a number of former packers, and it is hoped that advantage will be taken of this opportunity to supply the deficiency. As in previous years, the local administration of the packing schools will be placed in the hands of a responsible body such as the Farmers' Institute, the Fruit Growers' Association or the Board of Trade. The number of pupils must be not less than twelve and not more than fifteen and the fee of two dollars each will be charged for the twelve lessons. In districts where it is impossible to secure the above number of pupils, a three-day packing school may be arranged for with a minimum of eight and not over twelve pupils, at a fee of one dollar per pupil, to take six lessons of two and a half hours each.

FAVORS MUNROE'S FAVORITES.

Mr. T. R. Skelton, Hulcar, has been experimenting with Munroe's Favorites and Jubilee apples in his orchard. He is now convinced that the variety known as Munroe's Favorite is the apple to raise in Hulcar district. It reaches perfection in sizes and color and flavor, and there has always been a demand for more than the available supply.

B. C. FRUIT GROWERS' PROBLEMS.

Memorandum From Mr. Winslow Handed to Secretary of Economic Commission.

The secretary of the Economic and Development Commission at Ottawa has had placed in his hands a memorandum of the disabilities labored under by the fruit growers of British Columbia in respect to marketing conditions. R. M. Winslow, secretary of the B. C. Fruit Growers' Association, represents in the memorandum that at a meeting of the fruit growers and consumers held at Calgary in July last a strong and unanimous resolution was passed urging the government to appoint a commission of inquiry into the whole fruit situation.

In reply to this resolution Hon. Martin Burrell, Minister of Agriculture, announced that as it was the purpose of the government to appoint a royal commission to investigate all questions relating to production, marketing, immigration, it would not be possible to appoint a separate commission for fruit matters.

It is expected that the new commission will discuss the fruit question at an early date. The members of the commission discussed the question at some length on the first day of the recent sitting, and it was decided that any investigation into the difficulties facing fruit growers in regard to marketing conditions would have to be dealt with in the broadest possible way, as those

representing the industry will have an opportunity to formally express their views. The commission expects to meet shortly in the West to discuss this and other important questions.

FRUIT-MARKETING PLAN

OFFERED BY MR. A. LINDLEY

In an effort to arrive at a solution of the marketing problems confronting Kootenay growers, A. Lindley of Creston has made a suggestion, details of which are given in the following statement made public in the papers of the fruit belt:

"Having had several years experience in the prairie cities selling fruit and vegetables in carload lots, I have come to the conclusion that it would be folly on the part of the growers of B. C. to start up a few wholesale houses, because the houses already established there are so thoroughly entrenched that they can work serious hardships on any organization in B. C. Having come to the above conclusion it becomes necessary to think out a solution that would not create any hostility between the established houses and ourselves. I suggest the following solution: That each of the fruit growing centers in the Kootenay and Boundary districts form themselves into local organizations, each having local autonomy. That is, each local having its own local officers and offices, selecting its own manager and secretary, keeping its own books, collecting all moneys for fruit and produce sold and seeing to the proper distribution of same among its members after commissions have been taken from such sales.

"However, all locals should be centralized in selling with the head selling offices at (preferably) Calgary. The reason for this is: 1. The production of fruits, etc., from the Kootenay and Boundary districts has become so large that personal representation for the growers on the prairies is now absolutely essential. 2. Without doubt Calgary is the hub for all Alberta and Western Saskatchewan.

"The centralized selling houses should be controlled by a district committee, the members of which should be elected from the locals who are members of such centralized selling houses; no local should have more than one member and each local entitled to a member should have at least \$3000 worth of produce to dispose of.

"To finance this scheme it would be necessary to reserve five per cent for the office at Calgary, which with a consolidation of all growers into locals in the two districts, would more than meet all expenses for this selling office.

"It would be necessary to have the selling office opened about May the first. Therefore as the sale of fruit in any quantities does not commence until soft fruits are ready for market which is the month of June, and collections for soft fruits are not extensive until about July 20, it would be necessary to raise sufficient funds to carry on the selling office for May, June and July. This sum could be considered a loan to the selling house and made payable back to the parties at the end of the season from the total commissions earned.

"The staff necessary at Calgary would be sales manager and bookkeeper-stenographer, both of whom should be on salary.

"This is a broad statement of a scheme, the details of which should be worked out by parties appointed from a convention that should be held in Nelson sometime in the month of December. The reason for holding such convention in the month of Decem-

Concluded on page 819

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CANCELLATION OF RESERVES

NOTICE IS HEREBY GIVEN that the reserves existing upon Crown lands situate in Delta municipality, Richmond Municipality, Lulu Island, North Vancouver Municipality, Texada Island, the islands within the boundaries of New Westminster District and generally all vacant Crown lands within the said New Westminster District, which said reserves were established by notices appearing in the British Columbia Gazette, respectively on December 17, 1908; May 18th, 1911; December 17th, 1908; June 9th, 1910; July 13th, 1911; and October 19th, 1911, are cancelled in so far as the same affect the acquisition of the said lands under the provisions of the "Coal and Petroleum Act."

R. A. RENWICK,

Deputy Minister of Lands.

Lands Dept. Victoria, B. C., 3rd January, 1916

NEWS FROM FARMERS' INSTITUTES

N.B.—All Subscriptions (or renewal subscriptions) to FRUIT AND FARM, which are forwarded through secretaries of Farmers' Institute will be accepted at the reduced rate of 75c. per annum, instead of \$1.00

CONVENTION IN JANUARY.

A convention of Farmers' Institutes will be held at Victoria during the month of January. Owing to the very unsettled condition of affairs, as a result of the war, it was abandoned last year.

CRANBROOK F. I. MEETING

The officers of the Cranbrook Farmers' Institute for the ensuing year are: B. Palmer, president; P. Woods, vice-president; I. Bassett, secretary-treasurer; A. B. Smith, delegate to annual convention. The delegate to the convention was instructed to present the following resolution: "That the Central Institute request the Governor-General-in-Council and Legislature to so revise the reading of the Animals Act, Clause C, as to define the restricted districts rather than as at present defining the open districts for wild bulls." The delegate will be allowed \$3 per day expenses for all the time absent from Cranbrook. The meeting recommended the directors to consider Institute prizes at the next fall fair for cured pork, bacon and hams.

HELD ANNUAL MEETING.

The annual general meeting of Langley Farmers' Institute was held in the town hall, Langley Fort, Saturday evening. There was a fair attendance, and Mrs. Coulter, Mrs. Gay, Mrs. Taylor and Mrs. Stone were present for the purpose of conferring with the directors regarding this year's social, an event which is held jointly by the Farmers' and Women's institutes every January, and which is probably the largest and most important social gathering held in Langley throughout the year. Mr. J. J. Mead of East Langley was returned to the presidential chair, and Mr. T. Ormrod was appointed vice-president, while Messrs. Geo. Simpson, R. A. Wilson, R. Rennie, W. B. Bodlay and John Hunter were elected directors. The services of Mr. Jas. Allen, Langley Fort, were retained for the secretaryship. President Mead was appointed chief delegate to the convention in Victoria.

It was decided to hold a meeting on the third Saturday of each month with the exception of three or four months in the summer and to mail advice to that effect with a program of the year's work, to all the members, thus cutting out the expense of advising members prior to every meeting.

A committee of five—Messrs. T. Ormrod, J. Allen, G. Towle, C. E. Pallot and A. McIvor—was appointed to carry out the arrangements with regard to the social.

The subjects chosen for this year's government lectures were "Dairying" and "Small Fruits."

ELECT DELEGATE.

A meeting of the Salmon River Valley Farmers' Institute was held on Monday, December 13th. Owing to inclement weather the attendance was not large. Some correspondence was dealt with and the meeting was called upon to elect a delegate to

the convention at Victoria. The choice fell upon the secretary, E. Gillis, who will accordingly be called upon to represent Salmon River.

SEED SHIPMENT REGULATIONS.

Deputy Minister of Agriculture W. E. Scott, has notified all secretaries of farmers' institutes as follows:

"We should be pleased to have you note the following points with reference to the shipment of seed requisitioned by members of your institute.

1. We propose to consign all the seed requisitioned by members of your institute to you for distribution among the members.

2. In the event of your institute district being large and embracing two or more shipping points, you may appoint a man at each station to whom we will consign the seed and who will take charge of the distribution of the seed to members of that immediate district.

3. If you have not retained a duplicate of the amounts of seed requisitioned by members of your institute, we will forward a list of same to you prior to the distribution.

Note—Each individual order will be weighed out and labelled with the name of the member to whom it is to go, and the only inconvenience suffered by you will be the storage of the seed until called for by the member ordering same.

"The wheat, oats, corn, mangel and alfalfa seed will be sent out at the same time thus insuring early receipt of all seed requisitioned.

"If the above proposal is not feasible owing to local conditions, we will be pleased to receive detailed instructions from you re the consignment of seed requisitioned by your members.

"Address all communications re Seed distribution to Soil and Crop Division, Department of Agriculture, Victoria, B. C.

NICOLA OFFICERS

For the third year Mr. R. Whittaker, of Lower Nicola, has been elected president of the Nicola Farmers' Institute. At the annual meeting of the Institute held recently, the other officers elected were: Vice-president, Mr. John Manning (of Dot) whose election was heartily supported all round the table; secretary-treasurer, R. Dodding; directors, R. L. Clarke, W. B. Jackson, H. S. Cleasby, J. Blackwell, L. P. Guichon, J. H. Collett, James Smith. Reporting on the operations of the institute during the past year, President Whittaker said that for the use of members the secretary had purchased at favorable prices, 2000 feet of fuse, 2000 caps, 24 boxes of powder, 8280 lbs. of seed wheat, 100 lbs. of Indian corn, 4928 lbs. of oats, also mangel and alfalfa seed. Two lectures had been given on topics of interest to farmers. The membership for the year was 90. There were eighteen entries in the crop competitions, twelve for potato crops and six for oats.

We recently heard of a firm requiring a large quantity of asparagus roots. Anyone having these would do well to advertise them.

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HOW TO MAKE AN OIL WATERPROOF CONCRETE

A Bit of Information From an American Experimental Station Which Farmers Should Find Useful.

In making watering troughs, cisterns, silos, basement walls and floors, a waterproof cement is desirable. This has been solved by mixing a little mineral oil in the concrete. The United States Department of Agriculture has found that one-tenth as much oil as cement can be used without lessening the strength of the cement and, at the same time, make the concrete waterproof at a small water pressure such as in a watering trough or in a basement wall or floor. Five per cent. oil is usually found to be enough, or about 2 1-2 quarts to each sack of cement. To make oil concrete, says a bulletin issued by the North Dakota Experimental station, first lay down a layer of sand and on it the cement. Mix thoroughly, dry, and then add water and mix to a mushy mess. Add the oil and mix till the oil disappears. Then add the gravel which should be wet, and mix thoroughly.

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Beekeeping.

By WILLIAM HUGH

B. C. HONEY HARVEST FOR 1915.

The report of Mr. F. Dundas Todd, foul brood inspector, just issued by the Department of Agriculture is not quite as encouraging as we had hoped, possibly owing to the fact that we expect too much from our honey gatherers, or probably it is owing to only 326 out of 1,160 beekeepers in the province sending a report of the result of their honey crop to the inspector. The result of the returns show 2417 colonies in April. 57,245 pounds of honey averaging 23 pounds per hive. The inspector states: "Assuming that those reporting are fairly representative beekeepers, a little calculation will show that the total honey crop of the province in 1915 was probably about 100 tons." Here are a few excerpts from the report: "The oldest beekeepers in the province are unanimous in stating that the season of 1915 yielded the poorest honey crop in their experience. Our oldest beekeeper, the most successful in the Lower Fraser District, has kept bees for thirty years, and he considers his crop as being only one-third of an average, and as being the poorest in his time." "We all know how unseasonable the weather was during the spring and summer months, and so must attribute the poor crop to weather conditions. The warm weather of April had a most extraordinary result in the bush country at Matsqui, where soft maples abound. On April 15th the writer found an average of 75 pounds a colony of delicious maple honey, all sealed in the supers, a record worthy of note, and clearly indicating the importance of strong colonies early in spring." "The most noticeable feature of the reports from the inspector's point of view, was the fact that nearly everybody had at least a little honey, a marked contrast to previous years, when a very large percentage had no crop at all. Undoubtedly our beekeepers are becoming more skilled in their calling, and in an average season will probably surprise themselves with their success."

Foul Brood.

The inspector writes: "The one dark spot in the field of vision is the presence of foul brood. The outbreaks in Vancouver, Chilliwack and Essondale have been vigorously fought all summer. In Vancouver 19 colonies were found affected as against 34 last year; Essondale, none as against five; Chilliwack 18 as against five. The increase in Chilliwack was probably due to feeding back affected honey in the open air, spreading the infection to every colony in two apiaries. New outbreaks were discovered in Nanaimo; Salmon Arm, Rutland and Lardeau." "All affected colonies have, as in the past, been destroyed by fire."

"The rapid development of apiculture in the province is naturally resulting in a widespread movement of colonies from one district to another; also in the importation of queens from regions outside of the province, and it is by such movements that foul brood is largely spread. Up to the present, practically all cases of disease have been discovered by the inspectors, but the beekeepers themselves must become interested in the condition of the brood-nests and examine them at least in the months of April and May, reporting at once to the department any suspicious conditions."

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In the Canadian Beekeeper for December the inspector states: "No foul brood exists in British Columbia."

BROOD DISEASES OF BEES.

Beekeepers will be quite safe in assuming wherever they find a colony with any disease, peculiar to the brood of bees, that the disease is spread over a larger area than their own particular apiary, and the mere destruction of an infected colony by fire does not mean you have got rid of the trouble, unfortunately we are too apt to say, after the destruction of a colony, now we are safe. There are other and better ways of coping with diseases common to the brood of bees, methods, which if tried, assist the beekeeper to become more efficient and watchful, and will enable him or her to distinguish more readily an infectious disease from chilled brood, pickle, or sac brood, supposedly non-infectious. During the past few years beekeepers in the adjoining state of Washington have had to contend with both American and European foul brood. It is therefore very essential that beekeepers in B. C. should be on the lookout for any appearance of either disease in their apiary. And while on the lookout for infected bees—queens or workers from the other side, keep one eye on the districts where the inspector has "as in the past destroyed all affected colonies by fire." One of the best observers of bee diseases, Dr. S. F. Phillips, gives a brief but concise statement of the symptoms of American foul brood as follows: "The adult bees of an infected colony are usually rather inactive and do little toward cleaning out infected material. When the larvae are first affected they turn to a light chocolate color, and in the advanced stages of decay they become darker, resembling roasted coffee in color. Usually the larvae are attacked at about the time of capping, and most of the cells containing infected larvae are capped. As decay proceeds these cappings become sunken and perforated, and as the healthy brood emerges the comb shows the scattered cells containing larva which have died of the disease, still

capped. The most noticeable characteristic of this infection is the fact that when a small stick is inserted in a larva which has died of the disease, and slowly removed, the broken-down tissues adhere to it and will often stretch out for several inches before breaking. When the larva dries it forms a tightly adhering scale of very dark brown color, which can best be observed when the comb is held so that a bright light strikes the lower side wall. Decaying larvae which have died of this disease have a very characteristic odor which resembles a poor quality of glue. This disease seldom attacks drone or queen larvae. It appears to be much more virulent in the western part of the United States than in the east."

(To be continued.)

Fruit Marketing Plan Offered by Mr. A. Lindley.

Continued from page 817

ber is that it would enable the growers thoroughly interested in the above idea to select men to go to Victoria in the month of January to attend the B. C. Growers' convention who will be able to use influence with those at the head of the organization to assist the growers in the Kootenay and Boundary districts in working out this scheme."

Any organizations or individuals who are interested are requested to communicate with A. Lindley, Box 70, Creston.

"I intend to pray that you may forgive Casey for having thrown that brick at you," said the parson when he called to see a man who had been worsted in a melee. "Mebbe yer riverence 'ud be saying toime if ye' just wait till Oi get well, an' then pray for Casey," replied the patient.

The Shorthorn as a Dual-Purpose Breed.

What constitutes a dual-purpose animal?

The man who is interested mainly in milk production often classes any cow that does not produce profitably, especially if she shows a tendency towards beefiness, as a dual-purpose cow. Other dairymen go to the other extreme and call such cows as the Holstein, dual-purpose because they have some value for beef production. As well might we call all dairy cows dual-purpose, for are they not all used for beef when their milking days are over? On the other hand, a breeder of one of the beef breeds is very hable to minimize the dairy part of the term, "dual-purpose," and call any cow of these breeds with a fair-sized udder a dual-purpose animal.

True, dual-purpose type stands midway between the extreme dairy and the extreme beef type. A dual-purpose cow is one which will yield a fair quantity of milk; which will produce heifer calves that, when steered, will be of good beef conformation and quality, and which will herself finally furnish a good beef carcass when fattened.

A dual-purpose breed is one in which these characteristics prevail generally, and are transmitted with reasonable certainty. It must not, however, be expected that a cow of such a breed will compare in milk production with the best individuals of the special dairy sorts, or that her calves will always be able to compete in beef production with those of the special beef breeds. She should produce about 250 pounds of butter per year, and her calves make good beef animals.

Conditions in the corn belt of the U. S. A. are most favorable for dual-purpose stock, and here the type is most numerous. In this region the farmers find they cannot give the special dairy breeds the attention they require, and without which they are unsatisfactory. They also have a great deal of roughage to consume, and find that home-raised animals of the dual-purpose type will dispose of it most profitably, without much additional labor. Shorthorns best suit these conditions.

The "roast beef of Old England," has a world-wide reputation for juicy tenderness and flavor, and the Shorthorn breed has made it famous. The Shorthorn is the dairy breed of England as well, as 95 per cent of the milk used in that country is furnished by Shorthorn cows. Prof. Long says:

"The milk-producing farmer has studied how to increase the flow of milk while maintaining the characteristic feeding qualities of the breed, and has succeeded.

On the other hand, some of the great pedigree breeders have subordinated milk to flesh development. But here in its native land the Shorthorn is pre-eminently the best dairy cow in the best dairy country in the world."

Milking Qualities of the English Shorthorn.

The milking qualities of the English Shorthorn are shown in a remarkable way by the results of the tests made at the London Dairy Show. In the eleven years, from 1894-1904 inclusive, first place in both milk and fat production was won by a Shorthorn in every case, competing against all dairy breeds, commonly bred there. As regards beef qualities, the breed's record at Smithfield and at the Chicago International is sufficient. The ability of the

Concluded on page 828

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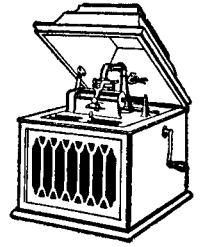
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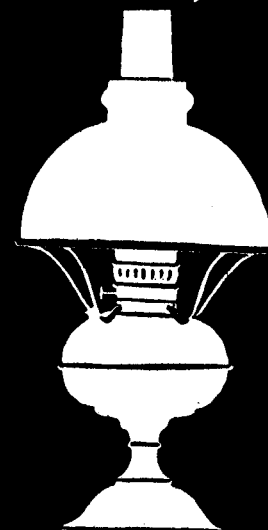
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Prune Growing in B. C.

British Columbia is already famous as a producer of apples, plums and peaches, but that is not all. According to a resident of Kootenay prune-growing promises to be very successful. For the man with only average means, prune-growing in southern British Columbia, according to an informant of The Kamloops Standard, proves very profitable. A ten-acre farm cleared and ready for planting, may be purchased for about \$200 per acre.

The prunes grown in British Columbia are sold extensively in the prairie provinces and it is the experience of the wholesale and jobbers of the middle west that they command a better price and a quicker sale than any of the prunes handled by them from either Europe or the United States. This being the case it is of interest to make inquiries as to the extent to which the prune growing industry, which is now only in its infancy, can be further developed in the district in which it has already taken such a firm hold.

Production Is Heavy.

On Sunnyside Fruit Farm, three miles west of Grand Forks, there is a prime orchard of nine acres, which contains exactly eleven hundred trees. From these eleven hundred trees there were picked this year 152 1-2 tons, equal to 14,738 boxes, were distributed throughout the middle west from Medicine Hat to Winnipeg. These figures were obtained directly from those who have control of the prune orchard, and full reliance can be placed upon them.

The figures have been given for nine acres, and there are about twenty thousand acres suitable for prune-growing within the district immediately surrounding Grand Forks. It can easily be seen, therefore, that a very great extension of the prune-growing industry can take place in that part of British Columbia.

The success of the prune-growing industry in that district is due partly to the fertility of the soil, partly to the convenience with which an abundance of water can be placed on the land and partly to the climate, which a rugged westerner a few years ago described as "the finest God ever made." At Sunnyside Farm they have an abundance of water, obtained from Fourth of July Creek, at a point about 350 feet above the prune orchard. Prunes will grow at Grand Forks without irrigation, but the returns per acre are much smaller when artificial watering is not employed. It is possible, however, to place an abundance of water on the entire twenty thousand acres available for prune-growing. It is, in fact, quite feasible to distribute the water of a whole river throughout the valley. The North Fork of the Kettle River is about a hundred miles long, and it is fed during the summer by the melted snow from the mountains, the period of the highest water being in June. If a dam were constructed in this river a few miles above the town of Grand Forks, the water from it could be distributed by means of gravity over the whole valley.

Plenty of Water in Sight.

The building of such a dam would have to be done by a company, and it would be the duty of the government, in granting a charter to such a company, to insert a clause giving the government the right to supervise levying of water rates on those using water, as it would not do to allow any company to throttle the prune-growing

industry by charging excessive rates for the use of water. The insertion of such a clause should not retard investors, as it would be quite possible for a company, formed to provide water for irrigation, to obtain a profit of seven per cent on their total outlay, and at the same time furnish an abundance of water at a comparatively low rate.

The third factor in the requirements for success in prune-growing is the climate and it should be remembered that the climate of the interior of British Columbia is totally different from that of the coast, which is known by the people of the interior as "the rainy country." It scarcely ever rains in the interior of British Columbia during the winter, the entire precipitation consisting of snow.

A Suitable Climate.

In Southern British Columbia the snow-fall is quite light. October and November are months of bright sunshine, and the buttercups are almost always in bloom throughout the valley before the end of February. The air is dry, and is especially favorable for persons afflicted with asthma. The climate is, therefore, quite suitable for the growth of prunes, and a great increase in that industry will undoubtedly take place within a few years, as the market for prunes is almost unlimited. It will be necessary, however, for prospective prune-growers to inquire closely into the matter of securing plenty of water for irrigation, as such large returns as those secured this year at the farms mentioned cannot possibly be obtained without an abundance of water. It is not necessary, however, to use irrigation while the trees are young, and during the first three years the methods of dry farming can be employed with quite satisfactory results.

Another point to be considered is the existence of adequate transportation facilities, and in this matter southern British Columbia is specially favored by fortune, three railways linking this part of the country with the Pacific Coast and the prairie provinces.

With the aid of the transportation companies Provincial Fruit Inspector Cunningham of Vancouver hopes to not only check all shipments and trace evidences of disease to their point of origin, but hopes to be in a position to prevent the exportation of potatoes from British Columbia that may be affected. Only after a shipment of potatoes has been subjected to inspection by the fruit inspector's department, and a certificate has been issued, will the transportation companies accept the shipment. In effecting this arrangement with the transportation companies, Mr. Cunningham has been influenced by the removal recently of the embargo against British Columbia, placed by the United States some time ago, and which prevented the shipment of hundreds of carloads of tubers across the line.

At a public meeting in Vancouver during the month held by the B. C. Veterinary Association, Dr. S. Ransom said: "Butchers doing a provincial business only have no meat inspection, except a perfunctory civic one. The inspection of an animal with the viscera out is valueless. In those houses doing an export business which have meat inspection there is sometimes a loss of \$10,000 a month through condemnation. What happens in the places where there is no inspection?"



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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.)

Since last addressing my readers, another year has been completed, and filed away in the capacious cabinet of eternity, there beyond our reach "to cancel half a line" or even to "wash out a word of it."

The past year has been fraught with the most momentous happenings which have never in our generation been so common to all. Joys and sorrows there have been in which we have all had our share, doubts and fears in which we have all participated, and hopes which have buoyed us up through some of the darkest hours of our empire's history.

The advent of the new year shows no radical change from the closing days of the old, but we feel with confidence that the day is fast approaching when our joy will reach its climax, all doubt will be dispelled, our sorrows assuaged and our highest hopes be realized.

Since reading "Our Greetings" in December's Magazine I feel that my preamble, already penned, is superfluous and wish to be included under the same heading, taking advantage of an abler pen than mine to express sentiments difficult at this time to put into words; with deference and sincerity I wish all my readers a Happy and Prosperous New Year. During the past year many lessons have been severely taught us, not the least being the need for economy and we will here consider this lesson in so far as it relates to horticulture.

I do not propose to ask you to cut down expenses on the garden if well and wisely spent, but rather to ask you to reduce your household expenses by growing for yourselves more of the everyday garden commodities for which you have been paying cash.

The cold evenings during the month of January is a good time to commence planning the work of the garden for the coming year, when, in comfortable easy-chair, notebook in hand, toes on fender and good wife at elbow to discuss the principal fruit and vegetable dishes for table, you can figure out at your ease just how much you spend on fruit and vegetables you could perfectly well grow for yourselves.

Towards the end of the month, if the weather permits, is a good time to perform the laborious but important operation of digging. (I have at various times recommended that heavy clay soils ought to be dug in early fall.) The heaviest rains of winter are over now and that which we are now liable to get will not seriously leach the manure dug in now. When digging remember that by digging deep you are providing a large feeding area for the roots of your crops. A garden that has usually been dug one spade deep can be made to yield double the produce if dug two spades deep, if the lower spading is not hard pan or sour clay. If the soil is naturally poor it is false economy to save money on manure and

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spend time and labor on digging and subsequent cultivation. The latin axiom ex nihilo nihil fit (nothing comes of nothing) should be borne in mind and liberal quantities of manure applied. There is nothing to beat the old-fashioned barnyard article for enriching the soil at this time.

It is good at this time to draw up a plan for the garden so that a certain amount of space can be allocated to the various crops and the danger of crowding the later planted crops obviated.

In drawing up the plan try to practise rotation of crops as much as possible, that carrots where cabbage was last year, for while the foods required by all crops are practically the same the proportions differ and rotation helps greatly in maintaining a balance.

It will also be necessary to give consideration to the distance between the rows required by the various crops. To help out here are the recognized distances for some of the chief garden crops: Beans, broad, 3 feet; beans, dwarf, 1½ feet; beans, pole, 3½ feet; beets, 1½ feet; Brussels sprouts, 2½ feet; cabbages, early, 1½ feet; cabbages, late, 2½ to 3 feet; carrots, 1 to 1½ feet; cauliflower, 1½ to 2½ feet; leeks, 1½ feet; lettuce, 1 foot; onions, 1¼ to 1½ feet; parsley, 1 foot; parsnips, 1½ to 2 feet; peas, 2 to 6 feet (the distance apart to sow peas is governed by the height of the variety, one that grows 2 feet tall will require 2 feet between the rows and so on); potatoes, 1½ to 2½ feet; in small gardens I would only advise the growing of a few early potatoes, early in the season they are expensive to buy but later on they are usually cheap enough; radishes, 3-4 feet; shallots, 1 foot; spinach, 1½ feet; salsafy, 1½ feet; tomatoes, 2½ to 3 feet; turnips, 1½ to 2 feet; vegetable marrow, pumpkin, squash, citron, cucumber, 6 feet each way between the hills. The proper distance between the rows when one kind succeeds another is the means of the two distances, say when beets comes after broad beans the distance between the two ought to be 2¼ feet. The rows of vege-

tables in a garden should always run north and south so that the shadows cast by the tall growing kinds may be as evenly distributed as possible and none be entirely deprived of the sun.

Small gardens are very often deprived of a great part of their usefulness because of the fruit trees they contain. They are usually planted so close that they soon cast too much shade for the successful cultivation of vegetables and the latter get ousted altogether. "Well," you may ask, "what are we to do, give up growing fruit?" No, but relegate the fruit trees to where they belong in small gardens, that is, on to the fences and walls. I don't mean to suggest that those of you who have fruit trees in your gardens should pull them up and plant them against the walls. What's done can't very well be undone, but I do suggest that those of you who have gardens still in the making, plant and train your trees against your walls and fences and devote the rest of the kitchen garden to vegetables.

Your walls will have various aspects from north to south but there are fruit trees that will suit them all. Currants, red, white and black, will do splendidly on a north wall without even getting a blink of sun, so also will gooseberries and Morello cherries. Apples and pears do well on an east wall; and apples, pears, plums, peaches and sweet cherries will all do well on west and south walls.

Fruit trees on walls require special pruning and training. There are various methods but for all practical purposes these can be reduced to four, viz., cordon, horizontal, fan and gridiron.

The cordon method is used with pears when results are wanted quickly. The horizontal method is suited for apples, pears and sweet cherries. The fan for plums, peaches and Morello cherries, because of the necessity for keeping those trees well supplied with young wood. This is more important with peaches and Morello cherries than plums, although the latter frequently require rejuvenation by laying in



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young wood and cutting out the old. The gridiron method will suit several of the other kinds but is particularly adapted to red and white currants and gooseberries. Walls for fruit trees ought to be strung with horizontal wires one foot apart and securely held in position about two inches from the wall.

Space at this time will not allow of fuller details but if any of my readers are interested in this form of fruit culture, I will be delighted to mail them full instructions for the various kinds of trees on application.

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

**The Shorthorn as a
Dual-Purpose Breed.**
Continued from page 820

Shorthorn to produce high-class meat is too well known to require discussion.

It is rather to the dairy characteristics of the breed that attention must be directed. The charge brought by Prof. Long "that some pedigree breeders have subordinated milk to flesh development," must be admitted in part, especially on this continent, so much so that many farmers who wish to keep the milking qualities of their Shorthorn herds unimpaired experience difficulty in obtaining bulls of the necessary type and ancestry.

Far-seeing breeders, however, have recognized the danger, and there is a movement now on foot to foster and give prominence to the dairy qualities, not at the expense of beef, but in conjunction with it. This movement began in England, and now has spread to this continent. In many herds at present the cows are milked and individual production kept. Such a movement is of immense importance, not only to the pedigree breeders, but to the thousands of farmers, especially in the butter-producing states of the Mississippi valley who keep Shorthorn grades.

As Pure-Bred as Pedigree Animals.

It perhaps may be stated here that the Shorthorn grade cows of England are, in the majority of cases, just as pure-bred as the pedigree animals. There the ordinary farmer has almost invariably used pedigreed bulls so long that very little difference in quality is to be observed between well-bred grade cows and pedigreed animals, and in milk production the grades often capture the premier prizes at the London Dairy Show. It may also be stated that the champion steer at the Birmingham and Smithfield Stocks Shows in England in 1913 was from a five-gallon cow—a Shorthorn.

In tracing back Shorthorn history we find differing types favored from time to time. Colling, Booth, Bates, Cruickshank all had different ideals. The show-yard type has changed from time to time. At present on this continent the Cruickshank or Scotch type finds favor in the show-ring, on account of the adaptability of this type for beef production. Yet the surprising fact that even in this extreme type milking qualities of a high order exist was shown to the writer on a recent visit to the most noted breeder of Scotch Shorthorns, Wm. Duthie, of Collynie, Scotland. It was sur-

prising to see that many of his cows with growing calves at foot showed every sign of being deep milkers. Indeed, Mr. Duthie stated that these cows (calved two months and longer) had to be brought up and milked out every day, because the calves could not take all the milk. No nurse cows were used in the herd.

Among the early improvers of the breed, the man who made the Shorthorn the pre-eminent dual-purpose breed was Bates who bred for both beef and milk and achieved historic success. Many of our so-called dairy Shorthorns today are of Bates blood.

A Milk and Beef Producer Combined.

The late Richard Stratton was of the same opinion as Bates, and a great many breeders of Shorthorns in the sixties, seventies and eighties, that a perfect Shorthorn should be a good beef and milk producer combined. From 1852 onwards for many years cattle from the Stratton herd captured more prizes at Birmingham and Smithfield than any other. At that time Mr. Stratton was milking by hand over 100 pedigreed Shorthorns, and these prizes were won in the strongest kind of competition with all the well-known beef breeds. His son, the present Richard Stratton, has followed in his father's footsteps. To offset the influence of the show-ring prejudice in favor of the beef type, he urged the encouragement of milk production. During his term of office in the Shorthorn Society's council, and even when president of that society he failed to persuade the society to give prizes for special dairy qualities. He then appealed personally to Shorthorn breeders, a committee was formed, and about two hundred pounds a year was collected and offered in ten-pound prizes at various shows, with the stipulation that the recording society should give a second prize of five pounds.

This move proved very popular, and the Shorthorn council, realizing their mistake, soon took over the matter officially and have ever since given a considerable amount annually for the encouragement of milk production. In 1905 the Shorthorn Dairy Association was formed further to promote the dual interests of the breed, with the Earl of Northbrook as first president, and the Earl of Crewe and Lord Rothschild vice-president. Rules were drawn up relating to the publication of milk records and the giving of prizes at shows. Inspectors are employed by the society to check the records kept by members, and may inspect them at any time.

(Concluded Next Month.)

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Grade 1 for general use; Grade 2 for spider and woolly aphs on very tender greenhouse plants; Grade 3 for spider, woolly aphs, mildew, rust, etc. Postpaid prices, 55c, 85c, \$1.55 and \$2.80. CASH WITH ORDER. Representatives and salesmen wanted everywhere. Apply **PHYTOPHILINE DISTRIBUTORS**, 1493 Seventh Avenue West, Vancouver, B. C.

Phytophiline, No.3, also for all kinds of vermin on poultry and birds, cats, dogs, cattle, etc., and their houses, cages and stables, and for moths in furs. Absolutely non-poisonous.

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Conservative investors seeking safety and a good return will find the B. C. Municipal Bonds we handle to be a safe and profitable investment.

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MIXED FERTILIZERS.

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- SUPERPHOSPHATE OF LIME.
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BRANDS, 723 Robson Street, Vancouver, B.C.

POULTRY SECTION

GOVERNMENT ISSUES, SHIPPING REGULATIONS FOR LIVE FOWL

A circular issued by the Department of Agriculture at Victoria calls attention to the new regulations regarding the crating of fowl for shipping purposes. It says:

Note particularly that coops of standard construction now in use with sides and ends slatted but not conforming to the foregoing measurements will be accepted only until Jan. 1, 1916.

Coops containing live poultry for market or consumption must have sides, ends and tops slatted. Tops with slats more than 1 1/2 inches apart must be protected by wire netting.

Coops containing chickens or ducks must not be less than 12 inches nor greater than 16 inches in height for each tier of birds. Coops containing turkeys and (or) geese must not be less than 16 inches nor more than 22 inches in height for each tier.

Coops must not exceed 30 inches in width and 48 inches in length. Shipments of live poultry in broken or weak-jointed coops, and coops not conforming to the above measurements must be refused.

Crates must be cleaned out and dead birds removed therefrom before they will be received for transportation.

Coops of standard construction now in use with sides, ends and tops slatted, but not conforming to the foregoing measurements, will be accepted until Jan. 1, 1916.

Fernie's First Show.

Some optimistic and enterprising members of the Fernie Poultry Association suggested that the society hold a poultry show in December. With some trepidation this was decided upon and the result has been that it resulted in one of the best shows held in the province. Much credit is due to President H. D. Wilson and Secretary W. H. Gates for the success of the undertaking. Mr. Jos. Shackleton, government expert for the Alberta government, did the judging and remarked that the White Wyandottes and White Orphingtons were of an unusually high class. All birds were judged by the standard of the American Poultry Association.

Trail Holds Best Show Yet.

The Trail poultry show on Dec. 7, 8 and 9 was the best in every way that Trail has ever witnessed. The exhibiting space was taxed to its capacity, there being over 500 birds. Some splendid birds were shown and there were numerous outside exhibits from Nelson, Grand Forks, Phoenix, Colville, Wash.; Nakusp, Syringa Creek, Rosland and other points. H. H. Collier of Tacoma, Wash., officiated as judge, in the place of C. G. Hinds of Oakland, Cal., who was unable to come. The success of the show is in a large measure attributed to the efforts of Secretary Wadsworth.

Grand Forks Has Good Show.

The most successful show ever held by

the Grand Forks Poultry Association was held in December. There were in the neighborhood of 400 entries, all the Boundary towns and Rosland, Trail and other Kootenay points being represented. The standard of the birds was a marked improvement over those seen at former exhibitions.

Cowichan Poultry Association.

Cowichan Poultry Association held its first show during the month, which being so great a success should prove a stimulus to the already flourishing poultry industry of the district. Owing to the absence of the secretary, W. E. P. Estridge, who has recently gone to England, G. O. Pooley took his place, and it was largely owing to his energy and that of the president, Dr. A. G. Price, that the arrangements were so good. The judges found the hall exceptionally well lighted for show purposes, and the exhibits which filled the room were well staged in wire coops kindly loaned by the Victoria Poultry Association. The judges were W. Miller Higgs and H. E. Upton, of the Department of Agriculture. The judges considered the Rhode Island Reds especially good and the single comb Leghorn cockerel shown by J. J. Dougan equal to any bird they had judged this year.

Cranbrook Show Successful.

Cranbrook reports a successful show with 36 poultrymen exhibiting and 100 prizes awarded. Great credit is given to F. S.

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 fall 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.

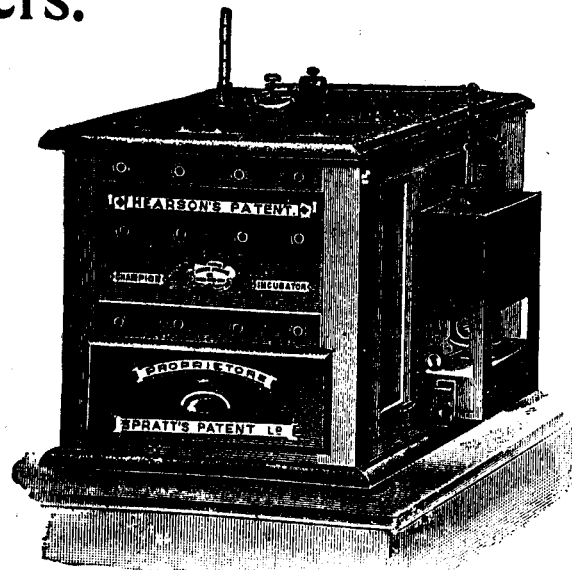
REMEMBER, your outlay is substantial, therefore follow our advice and investigate before pledging yourself. You cannot afford to experiment, **Hearson's Incubators and Foster Mothers** have been established for over fifty years. They are used by the most successful breeders and poultry raisers in all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

Poultry Show Notes.

Mr. E. A. Orr, one of the successful poultry exhibitors at the San Francisco Exposition, states that no district in Canada won so large a proportion of prizes as Chilliwack and that the list of entries was so large that a bird had to be flawless to get into the prize list.

The Central Park Poultry Association has elected the following officers: President, J. W. Thurston; vice-president, Rev. J. Clarke; secretary-treasurer, W. Kirkham; auditors, T. A. Prentice and W. W. Burke; directors, Messrs. Walker, Holland, Sinclair, Willson, Gray, Emery, Nimmo, Mrs. Kirkham, Mrs. Reynolds, Porter J. Clarke, sr., Wilkinson, F. E. Harmer, J. Clarke, jr., and Wright. The annual report showed receipts of \$696 and an expenditure of \$622. From the balance \$15 each will go to the Burnaby and South Vancouver Patriotic Funds.

Chilliwack fanciers made a wonderful showing at the Panama Exposition. In the Utility Class A. Unsworth won first and fourth for males in single comb White Leghorns, and first for cockerel and fourth and sixth for hens in White Wyandottes. C. W. Robbins won third and fourth places for utility hens in the Buff Orpington class. In the Exhibition Class Cnas. Parker won fourth prize for Black Orpington pullet, and A. H. Turvey sixth for White Orpington cockerel. In the Exhibition Class Orr and Slater won first cock, first cockerel and fourth pullet for Partridge Wyandottes.

Revelstoke will hold a poultry show about the middle of the month.

NORTH FRASER VALLEY

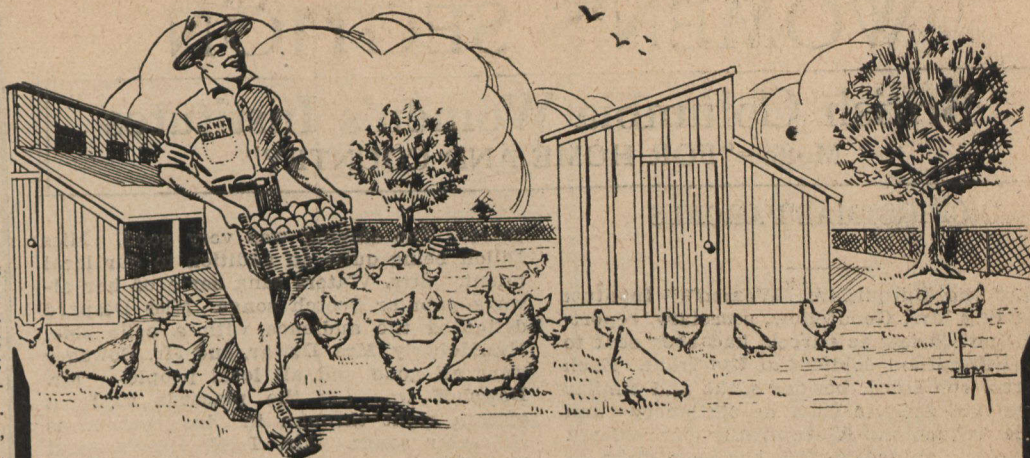
The Fourth Annual Show of the North Fraser Valley Poultry Association, at Mission City, eclipsed all previous records in the number of entries received. Secretary Dave Gibbard stated that this year's show was the best yet held by the association, the quality of the birds exhibited being of a high standard. The judging was carried out by Mr. T. C. Oldershaw.

COBBLE HILL NOTES

Despite inclement weather a good attendance viewed the Fourth Annual International Poultry Show held in Cobble Hill. All the popular breeds were represented, with the Leghorn, Wyandotte, Buff Orpington and Rhode Island Red leading. Prizes were fairly evenly distributed, though the birds of J. J. Dougan, Mrs. McMillan and J. Moon scored for their owners a preponderance of awards. The exhibition comprised some 350 entries and indicated what co-operation and willing help will do towards bringing to a successful conclusion an undertaking that is of benefit to poultrymen and the district at large.

VANCOUVER SHOW

The Twenty-first Annual Exhibition of the Vancouver Poultry and Pet Stock Association brought out 1600 entries, 300 more than last year. In some classes there were as high as 64 entries. A feature of the show was the entry of prize-winning birds at the Panama Exposition. There was a splendid display in the pigeon classes. An extra feature of the exhibition was an egg exhibit and candling demonstrations



EGGS ! EGGS ! EGGS !

More eggs daily. MAKE your hens produce. You can do it—it is being done every day. Cash in on your poultry while winter eggs are so dear. It's all in the food. FEED THEM PROPERLY—KEEP THE EGG ORGANS ACTIVE—FEED THEM—

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Contains more digestible protein and less fat, moisture and waste than any food on the market. IT'S JUST WHAT THE HENS NEED.

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with lantern slides, given every afternoon and evening under the supervision of Mr. W. H. Ault, of the Dominion Live Stock Branch, from the poultry division of the Dominion Department of Agriculture. In addition to the above, H. E. Upton, provincial poultry inspector, of Victoria, gave an illustrated lecture.

WHY ONE MAN MILKED FASTER WITH THE LEFT THAN RIGHT HAND

An Interesting Little Article From An Alberta Farm Owner.

I have often noticed that I milked faster with my left than with my right hand, writes W. I. Thomas, of Drumheller, Alberta, in the Nor'-West Farmer. Until I began to eliminate all false moves I thought of this greater speed of my left hand only as a curious incident, as I am right handed and should milk faster with the right hand if there is to be a difference at all. It struck me, some weeks back, that I ought to bring my right hand up to my left and so get through with the milking earlier. Accordingly, I took to studying the difference between my left and right hand milking.

When I first started to milk I had an impression that the best results would be gained by pressing the ends of my fingers directly in towards the centre of the teat. As I follow the usual custom of milking on the right side of the cow, my left hand does not readily come into position to follow my early notion and the right hand does. Consequently I clasp my left fingers farther around the teat with less curve in the fingers. At once, when I noticed this, I could milk as fast with my right as with my left hand.

I am now altogether certain that clasping the fingers well around the teat so as not to press the ends of the fingers into the teat, is an unfailing rule for fast milking. It might be influenced by the size length and shape of the fingers, but I am very certain that if a person is a slow milker, it is due to some inapt method of manipulating his fingers which he could discover and correct if he went at it.

A White Leghorn hen in the egg-laying contest held at the Delaware Agricultural College, Newark, laid 307 eggs in 355 days. This beats the world's record.

Poultrymen are finding out that hens will lay as freely without the company of males as with them. This fact permits the lessening of expenses by doing away with the roosters. It is also a fact that eggs that are infertile will keep much longer. These are two points of importance to egg-farm specialists.

There is every indication that 1916 will be a banner year in poultry culture, says "The Farm Journal." Indirectly, the European war is the cause of it. The people must be fed. Poultry and eggs are staple articles and, naturally, the demand for them will be greater this year than it was during 1915.

Poultry feed is still high, but in comparison the prices for eggs and chicken meat is equally high. Feed is pretty sure to be lower in price this year; and with firm prices for the product, poultry and eggs will bring in a good profit. It is largely up to the poultryman.

WOMEN'S SECTION

British Columbia Women's Institutes

Motto—"FOR HOME AND COUNTRY"

CHRISTMAS PARCELS

At the Burquitlam Women's Institute meeting Mrs. Goodfellow, secretary, reported that Christmas parcels had been sent to 18 Burquitlam soldiers at the front. Each parcel contained, besides socks and similar comforts, articles such as stationery and toilet requisites. A beautifully embroidered tea cloth, valued at \$20, has been given to the Institute by Miss M. Anderson, teacher in the Blue Mountain school. It will be raffled. It is proposed to hold a social meeting with tea on the date of the raffle. A letter from Mr. F. Cockrell, secretary of Coquitlam school board, was read, in reply to the Institute's proposal to establish hot lunches for the children attending Blue Mountain school. The conditions, namely, the consent of 75 per cent. of the parents, and the teachers of the school, etc., were acquiesced in and the institute will proceed to comply with them. The annual meeting of the Institute will be held on January 11, when the election of office bearers will take place.

COWICHAN WOMEN'S INSTITUTE.

The regular meeting of the Cowichan Women's Institute was held on Dec. 14th, with Mrs. Hayward in the chair. In the absence of Mrs. Maguire, Mrs. Whidden acted as secretary.

Some discussion took place regarding keeping an attendant in the rooms and hours of leaving them open.

It was decided to offer the Institute room and library for the use of the soldiers during the evenings, if this did not conflict with any arrangement being made with the Board of Trade committee, and one of the ladies was asked to confer with the president of the Board of Trade in this regard.

Mrs. Hayward made an appeal for contents for six or seven Christmas hampers to be sent out, and also for relief for a destitute family with a large number of children.

KELOWNA INSTITUTE.

At the last meeting of the Kelowna Women's Institute a collection was taken up for the Institute's adopted prisoner of war who is Pte. H. Chaine, 7th Battalion, Campagne 4, Barrague D, Gressen in Hessen, Germany. Mrs. Mathison demonstrated on Christmas cooking, dealing particularly with mould of salmon, scalloped corn, carrot pudding with divine sauce and orange biscuits. A vote of thanks was then extended to Mrs. Mathison. It is very satisfactory to know that the meetings are well attended, fifty-two being present on Saturday last. With the singing of "God Save the King" the meeting was adjourned.

SUCCESSFUL CONCERT.

The Kalamalka Women's Institute concert-entertainment was a great success and satisfaction was expressed by all who were

there. The singing was very good, Miss Dillon being quite an addition to our local talent. Mrs. Waters sang some of her always popular Scotch songs. Miss Despard delighted the audience with a cello solo. Mrs. Moberly, Mrs. Dewar, and Mr. Bowsher were all good and all local people. Mr. Bowsher was (as the placards say) a scream right through in his humorous character songs. Mr. T. T. Brown and Mr. Nelson gave recitations and Mr. H. Irvine a reading. Mrs. Bourne accompanied at the piano and has been most helpful, practicing and working with the singers for the event. The tableaux by the Oyama Dramatic Society were all that could be desired.

KASLO INSTITUTE.

At the meeting of the Women's Institute held Dec. 2nd, the report of the Patriotic Show was presented and the sum of \$100 voted to the local branch of the Patriotic fund. The jam committee reported that the ton of jam donated to the head office of the Red Cross had been shipped to Montreal and the piano raffle committee reported having paid the \$50 to the head office of the Red Cross, Toronto, and of receiving a letter of thanks for the same, which is to be devoted to the purchase of a cot in the Cliveden Hospital, named the "Kalso, B. C., Woman's Institute Cot." A letter from Mrs. Davis of the advisory board asking the Institute to co-operate in work for soldiers and the Red Cross was read, and a sum of \$25 was voted to be spent for material for same.

AT NARAMATA.

The Women's Institute held their regular meeting on last Tuesday, Dec. 14. Roll call was answered by each member giving some Christmas suggestion. Mrs. Fred Manchester read Mrs. Lipsett's paper on "Parliamentary Laws" and Mrs. Leash read a short story. As the next meeting will be election of officers every member is expected to be present.

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Reliable persons will be furnished with profitable, all-year-round employment on Auto-Knitting Machines, \$10 per week readily earned. We teach you at home, distance is no hindrance. Write for particulars, rates of pay, send 25c stamp.



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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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YOUR TEETH

Nature's gift for your appearance and comfort: **DO NOT NEGLECT THEM.**

If you have a tooth that should come out, attend to it at once.

If you need a filling, prompt attention can probably save your tooth and others which might be affected by it.

If you need Crown or Bridge-work **DO NOT PROCRASTINATE.**

What does delay bring, anyway? Only pain, suffering, expense. You will have to see a dentist **SOMETIME.** THEN DO IT NOW AND SEE THE RELIABLE ONES.

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Examination and Estimates Free.

STUDY COURSE FOR WINTER MONTHS

Superintendent of Women's Institutes W. E. Scott, has sent the following letter to all the secretaries of Women's Institutes in the province:

"Madam—I have the honor to advise you that the matter of a study course to be taken up by the Institutes in this Province during winter, and which was discussed at the conference held in this city on the 7th and 8th of September, has received the further attention of the department.

"It will be within your recollection that a suggestion was made at the time that the school law of British Columbia and its relation in particular, to rural districts, should be taken up as the subject.

"Upon discussing the matter with the Education Department, however, I have taken up by the Institutes in this province during the winter, and which was discussed at a conference held in this city on the 7th and 8th of September, has received the to advise you that I do not consider it expedient that the study course to be adopted by Women's Institutes should take this form, and it is therefore regretted that no outline or instructions as to same will appear in the January number of the W. I. Quarterly, as originally intended by the Department."

MISSION RED CROSS WORK.

At a meeting of the Mission City Women's Institute on Thursday, Nov. 25th, the secretary of the Red Cross committee reported having shipped the first consignment of articles to the Red Cross central depot in Vancouver. The bundle consists of 280 pieces, viz:

Thirteen surgical shirts, 14 pyjamas, 9 pairs ward slippers, 30 eye bandages, 29 T. bandages, 13 many tail bandages, 10 knee bandages, 2 pair operating socks, 4 shoulder pads, 10 scarfs and helmets, 2 elbow rests, 9 pairs mitts, 2 triangular bandages, 1 sling, 90 handkerchiefs, 1 pillow case, 2 pairs overshoes, 20 cup covers, 19 bedside bags.

Twenty Christmas parcels were also sent to the boys who have gone overseas from that vicinity. Each parcel contained 1 helmet, 1 pair socks, 1 handkerchief and gum or bar of chocolate.

SURREY INSTITUTE AIDS SOLDIERS.

At the Surrey Women's Institute meeting at Cloverdale on December 7th, Mrs. Croft in the chair, it was reported that a box of furs had been contributed for the Italian soldiers and a large case of clothing and jam had been sent to the Central Park W. I. for the South Vancouver relief committee. It was decided to donate \$5 to the Belgian relief fund. The institute is preparing for an entertainment in January for the aid of the Surrey relief fund.

TYNEHEAD NEWS.

The concert under the auspices of the Women's Institute, held in the public hall on Wednesday, 8th Dec., was a most enjoyable affair. The program was excellent, every number being good, and the chairman, Mr. F. J. McKenzie, M.P.P., contributed in no small degree to the success of the evening. The amount raised, \$17.00, was handed to Mr. McKenzie for the patriotic fund.

BUY OWN CHINA.

The regular meeting of the Salmon River Valley Women's Institute was held on Thursday, Dec. 9th., at the home of the president, Mrs. W. J. Andrews. It was proposed by Mrs. Scott, seconded by Mrs. Rowe, that cups, saucers and spoons should be purchased for the use of the Institute at afternoon teas and socials.—Carried. The question of the Institute library was gone into, and it was decided to ask Mrs. A. Heywood to take charge of it. A magazine club was suggested by Mrs. W. F. Smith, and this was left open for further discussion. A novel and pretty table centre was exhibited by Mrs. E. Rowe and afterwards tea was served by the hostesses, Mrs. and the Misses May and Maud Andrews.

AT SUMMERLAND.

The usual monthly meeting of the Sumerland Women's Institute was held in the Methodist club rooms on Friday, Dec. 10th, there being a fairly good attendance. The meeting took the form of an informal social gathering at which afternoon tea was served. Two solos were pleasingly rendered by Miss Anna Hayes, while Miss Edna McLeod gave a pianoforte selection. Mrs. S. F. Sharpe brought samples of coconut macarons and gave the recipe for the same. Mrs. J. W. Augwin showed forth her art in the making of crystalized apricots, while Mrs. Fred Gartell sent a sample of nough candy which was pronounced by all to be of excellent worth.

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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 FLOWER-ING 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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VANCOUVER, B. C.

The Beef Industry of British Columbia

Dr. Tolmie has reported on beef raising in British Columbia to the Dominion Live Stock Commission as follows:

The first record that we have of the introduction of beef cattle into British Columbia was in the early forties, when consignments were brought to the southern end of Vancouver Island by the Hudson's Bay Company from their farm in what is now Washington State.

These animals were bred by the company for a number of years near Victoria, and they supplied animals to many individuals who commenced farming in the neighborhood.

During the time of the gold excitement on the Fraser river and in the Cariboo, in the sixties, a number of cattle were driven into British Columbia from Oregon, Washington and California for supplying beef to miners. About this time several small herds were established in what are now known as the cattle range districts in the interior of the province. Under favorable climate conditions, and with an abundance of feed, these herds increased rapidly and their surplus animals soon made a name for British Columbia bunch grass beef, which, for richness of flavor and fine quality, cannot be excelled anywhere.

For many years the ranchmen suffered on account of poor marketing facilities, often driving their stock for many days to some point on the Fraser river where it was possible to ship to the coast markets. Placer mining strikes at different points in the interior, from time to time, during these pioneer days provided the ranchman with a good market while the excitement lasted, and some of them, who are now very comfortably situated, can trace the beginning of their prosperity to the market created by these early day mining camps.

With the building of the Canadian Pacific Railway, matters were entirely changed; since then the ranchman has been able to dispose of all he can produce, though sometimes at prices not as remunerative as he would wish.

Of late years the beef industry has not been making much progress, and on the coast has practically been abandoned in favor of dairying, which, under existing conditions and prices, is much more profitable, giving the farmer a regular income, and, with the demand for dairy products at present, he is placed in a much more independent position when marketing his produce.

In many districts of the interior, too, large tracts of what was once ranch land are being cut up for orchard and other purposes so that at the present time the British Columbia ranchman does not nearly supply local demand.

The first record we have of pure bred cattle coming to the province was in 1867, a pure bred bull coming from California in that year; more were brought from Oregon in 1873, and a consignment came from Ontario in 1874. As might be expected all of these were Shorthorns. There are at present several herds of pure bred Shorthorns and Herefords and one herd of Highland cattle. As far as I am aware there are no

pure bred herds of Galloways or Polled Angus in the province. A few years ago there were several herds of Shorthorns of good quality at the coast, but of late years, these have been nearly all dispersed owing to the fact that the principal market for bulls is in the range districts, where they prefer animals grown under range conditions. For this reason also the Ontario grown bull is not popular on the range. Pure bred range bulls sell for \$70 to \$125, according to quality.

For close ranging, and on the smaller ranges, where feed is more plentiful, the Shorthorn is preferred, while on the larger ranches where the animal's rustling abilities have to be depended on almost altogether, the Hereford has the preference. Yearlings, and upwards, are the age used and they are kept for about four years. One bull is turned out for every twenty-five or thirty cows and the calf percentage runs about 50 to 60 per cent. The calves are castrated in June and are weaned in November; they are usually fed hay all winter.

Thin cow stock are also fed some hay, while steers in this climate require some feeding about two winters in every five. Where feeding is carried on it is estimated that from 800 to 1000 pounds of hay per head, consisting of clover, timothy and brome grass, will winter a mixed herd of cattle in fine condition under ordinary circumstances. Alfalfa is successfully grown in some districts where it provides an excellent winter feed; in other districts it winter kills badly. Under the above system three-year-old steers are turned off in the summer weighing from 1200 pounds to 1300 pounds, while cows run about 1500 pounds.

Some years ago a few consignments of "dogies" were brought from Ontario, but they did not give satisfaction, and the shipments were discontinued.

Practically all the beef produced in British Columbia is marketed between June 15 and January 15, the price obtained being 4 1-2 cents for cows and 6 cents for steers at the railway shipping point. During the rest of the year the supply is obtained from Australia, New Zealand and Alberta. Much better prices would be obtained if the animals could be held over and marketed in the late winter and spring, but there is little prospect of this being done with hay running from \$12 to \$25 per ton.

A large modern abattoir has been established at Vancouver within recent years and many cattle are shipped there. The cattle buying and slaughtering business is falling into the hands of large concerns and the smaller retailer is rapidly disappearing.

It is expected that with the opening up of areas suitable for ranching in the northern part of the province which are now being tapped by railways, that the range cattle output will hold its own, but little change can be looked for in the immediate future in the district already settled as other lines of animals husbandry offer much larger profits than the production of beef under existing conditions.

Predatory animals do not cause much loss on the ranges. Occasional losses are

caused by bears and panthers, but these do no amount to much. Owing to the country being more or less heavily stocked with game little loss of live stock is caused by wolves, which are able to get their food in the forest. Coyotes are not credited by ranchmen with doing much damage. Some cattle men would like them protected on account of their destruction of gophers and other animals of a similar nature.

Range cattle here are practically free from disease. Tuberculosis is almost unknown on the range, while cattle mange does not exist in British Columbia. A small outbreak of black leg was reported a few years ago in the range country, but this should be easily controlled by the use of the preventive vaccine now supplied by the Health of Animals Branch at the nominal price of five cents per dose.

Great improvement could be made in the cattle industry by the irrigation of larger areas of land for the production of alfalfa and other suitable forage to be followed by a more liberal system of winter feeding. This should be coupled with a careful selection of breeding animals and the use of only pure bred sires of good quality.

The beef cattlemen of the province should form an association and heartily cooperate with one another, bearing in mind that in unity there is strength. One of the first objects of this association should be to improve market conditions and to insure graded prices according to the quality of their stock. Another matter that will need attention in the near future is the systematic re-seeding of the ranges with valuable bunch grass which, apparently will be exterminated in some places if some method is not soon adopted for its preservation.

Beekeepers are invited to send in questions on Beekeeping to Fruit and Farm Magazine, which will be answered by an expert.

ELECT NEW OFFICERS

Members of Farmers' Institute Meet in Chilliwack.

At the annual meeting of the Chilliwack Farmers' Institute held in the city hall recently, there was a representative attendance of members. The auditor's report and financial statement showed the Institute to have had a very flourishing year, and that it was never in a healthier condition. The turnover for the year for powder and supplies exceeded \$3700. Mr. James Bailey, president, presided, and the secretary's report was read by Mr. J. W. Galloway, after which the election of officers was proceeded with and resulted as follows: President, James Bailey; vice-president, J. R. Walker; secretary, Horatio Webb; directors, J. R. Walker, J. A. Evans, E. D. Barrow, H. Webb, J. A. Coatman, Jas. Bailey, E. A. Wells and N. E. Gillanders. Mr. James Bailey was elected to the office of convention to be held in Victoria.