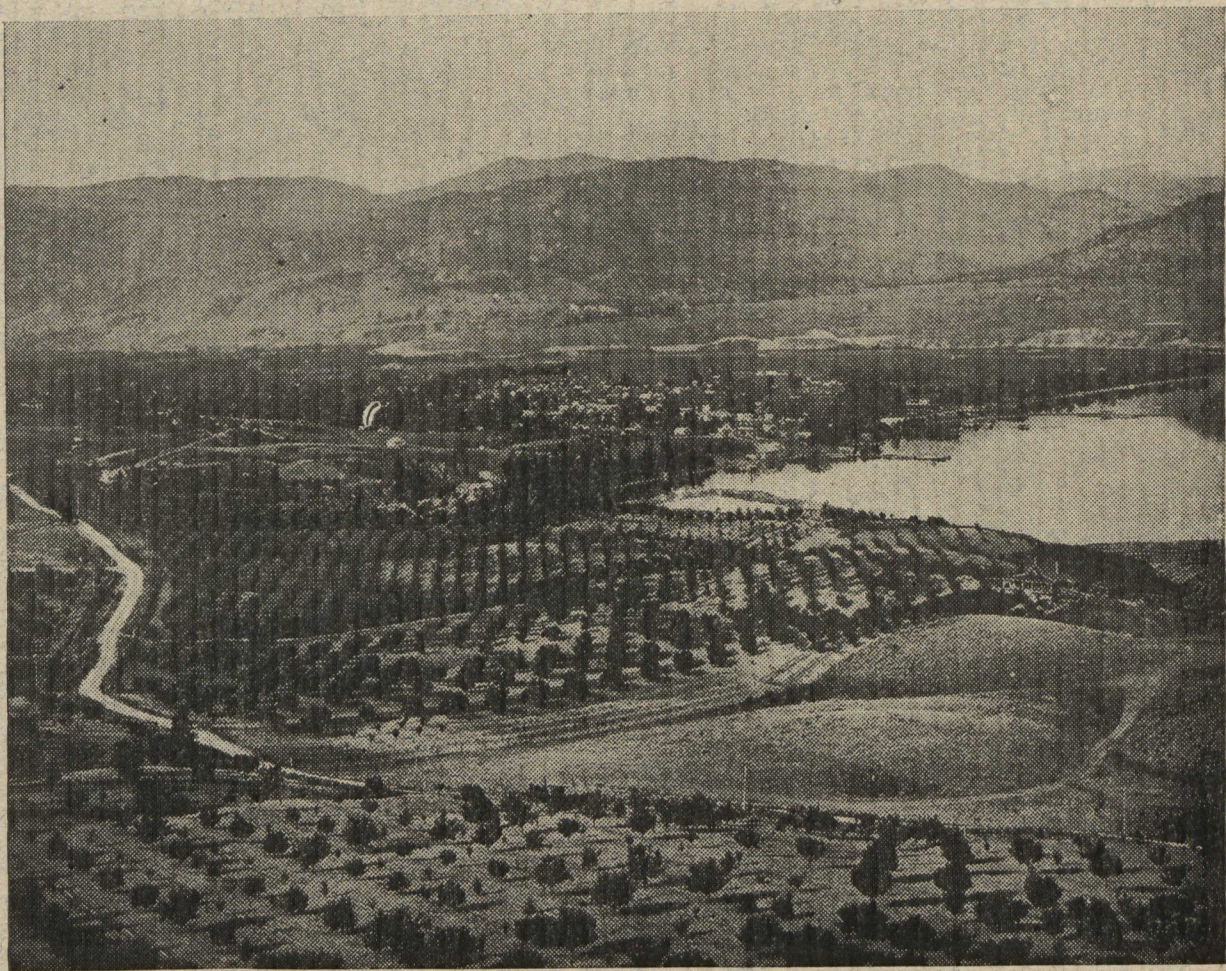


BRITISH COLUMBIA
FRUIT AND FARM
MAGAZINE

Vol. VIII., No. 4

APRIL, 1916



PENTICTON FROM THE BENCH LANDS

--a good honest wear-resisting boot.

Made from leather bought by experts in the best leather markets of the world. A boot that won't run down at the heels or wear through the soles, or give way to general "break down" four or five days after you've had it.

LECKIE BOOTS

are made to gain PERMANENT customers, and are not cheap "shoddy-made sale boots." They are made to stand up and give you good honest wear—your dollar for dollar value. There's comfortable fit, and good style to a LECKIE BOOT, too. Ask your dealer to show you LECKIE'S—name stamped on each pair.

IT ISN'T

what CAN I do with electricity on the farm?

But

what CAN'T I do with it?

Here are a few things that are actually being done with electric power today in the Fraser Valley.

Root cutting.
Hay cutting.
Grain crushing.
Silo filling.
Cream separating.

Sawing wood.
Pumping water.
Incubating.
Besides innumerable other things.

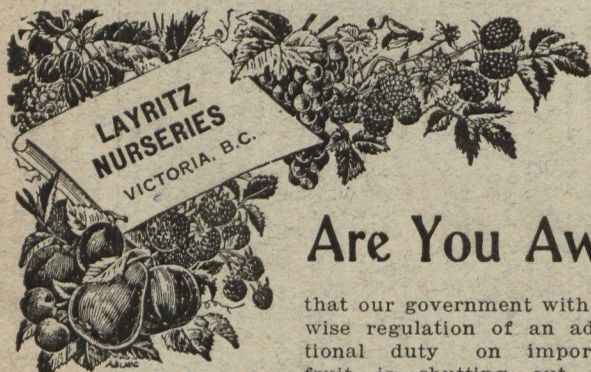
Consult our agents as to the many money and labor saving uses of electricity.

B.C. Electric

Vancouver.
Abbotsford.

New Westminster.
North Vancouver.

Victoria.
Chilliwack.



Are You Aware

that our government with its wise regulation of an additional duty on imported fruit is shutting out the American apples completely? Are you aware, too, that with the removal of this unfair competition fruit-growing now will become a real profitable business? Now is the time to plant and prepare without hesitation to meet the increased demand for good fruit at right prices.

We offer a complete assortment of

FRUIT & ORNAMENTAL TREES

SMALL FRUITS, ROSES, EVERGREENS, CLIMBERS.

In Fact, Everything Hardy, That Is Desirable for the Garden in Strictly First-Class Quality.

Layritz Nurseries

CAREY ROAD.

VICTORIA, B. C.

TABLE OF CONTENTS FOR APRIL

	Page
B. C. Fruit-Growers' Convention	881
Annual Meeting B. C. Stockholders	883
Fighting Injurious B. C. Orchard Pests ..	887
Editorial	888
Beekeeping	890
What the Consumers Want	892
Georgina Newhall.	
Communication	894
Gardening for the Home	896
H. M. Eddie.	
Poultry Section	899
Review of Farmers' Institutes, 1915	901
Women's Section	908

Fruit and Farm Magazine

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

Vol. VIII.—No. 4

Vancouver, British Columbia

\$1.00 per year
in Advance

British Columbia Fruit Growers' Convention

Mr. Thomas Abriel of Nakusp, Succeeds Mr. W. C. Ricardo as President of the Association—Mr. R. M. Palmer, of Cowichan Bay, Vice-President—Important Changes Considered.

The twenty-sixth annual meeting of the British Columbia Fruit Growers' Association was held in Victoria during March. The new executive was elected as follows: President, Thomas Abriel, of Nakusp; vice-president, Mr. R. M. Palmer, Cowichan Bay; secretary, Mr. R. M. Winslow, Victoria; and Messrs. George Heggie, C. E. Barnes, and J. E. Reekie.

The board of directors was chosen as follows:

Victoria, W. F. Somers, Gordon Head; Duncan-Nanaimo, R. M. Palmer, Cowichan Bay; Gulf Islands, F. Robson, Mayne Island; Lower Mainland, south of Fraser, G. I. Thornton, Sardis; Lower Mainland, north of Fraser, Mission and East, J. Lawrence; Lower Mainland, north of Fraser, west of Mission, J. C. Metcalf, Hammond; Lytton to Kamloops, including Lillooet, C. E. Barnes, Walhachin; Salmon Arm-Armstrong, W. A. Chappel; Vernon, A. T. Howe; Vernon, George Heggie; Okanagan Centre-North Kelowna, J. E. Reekie, Kelowna; Kelowna, South and East, L. E. Taylor; Summerland, R. V. Agur, Balcom; Penticton, E. W. Mutch, Penticton; Similkameen, J. J. Armstrong, Keremos; Kettle River, James Rooke, Grand Forks; Arrow and Sloean Lakes, Thomas Abriel, Nakusp; Nelson and Lower Kootenay, J. Johnstone, Nelson; Creston and Upper Kootenay, J. H. Hoyle; Peachland-Westbank, Geo. Powell.

It was decided to hold the next meeting in Victoria. There will be a midsummer convention in the Interior, however, at which all members will pay their own expenses. It was pointed out that the convention in Victoria cost \$1,200. A proposal to raise the membership fee from \$1 to \$2 was defeated.

Some dissatisfaction was expressed with the present qualifications for membership, representatives of district associations complaining that although they represent often more than 100 members of the smaller associations, their voting power in the provincial association is no greater than that of the private fruit grower who goes to the annual meetings in Victoria. The Okanagan United Growers, Limited, introduced a resolution complaining that "the provisions for voting at the annual general meeting of the B. C. Fruit Growers' Association are very unfair, in that individual members of the association have the same voice in the proceedings as a regularly appointed delegate of an affiliated association or director representing one of the fruit divisions into which the province is divided, with the result that districts, remote from the place in which the annual meeting is held are not properly represented."

The Goldstream Fruit Growers' Association also introduced a resolution to the same general effect.

Change in Representation.

The rights of the individual growers were vigorously upheld by those who claimed it would be undemocratic to rob them of their franchise in these annual meetings. The matter was left to a special committee who reported in favor of the abolition of the affiliated associations and recommended the formation of district branches, each of which shall nominate a director to represent it.

The resolution which was passed affecting the change reads:

"Your committee would recommend that the system of affiliated associations be abolished; that local branches be formed to correspond with the districts as they now exist, or as they may be altered by the directors as provided in the constitution;

"That each branch of the association representing a district shall have the right annually to nominate a director or directors for that district;

"That where a district is entitled to more than one director, the directors for that district shall be nominated from at large by the members of that particular branch of the association;

"That the two separate districts now existing in each case in Vernon and Kelowna be consolidated into two districts to be known as Vernon and Kelowna districts, each of which shall have the right to nominate two directors;"

Through the change involved in the foregoing it was explained that individual members of the association attending the conventions shall suffer no curtailment of their voting powers.

The question of greater self-reliance was discussed, it being pointed out that the membership is getting sufficiently large so that it will not be necessary to depend on government aid. The opinion was expressed that the fruit growers owed it to the country to help themselves now more than they have been doing. The president, in his annual address, pointed out that the organization was well established and must help themselves more. He said in part:

"Especially must this be true at this time when governments, like individuals, are called upon by stress of the times we are passing through to employ every means to economize and contract expenditure. I am also confident that we can more readily approach the government for our needs if we can show that we, as growers, are doing all we can to help ourselves and our indus-

try. I commend this to your consideration."

By resolution the convention went on record as approving of the government's policy of giving aid to agriculturists under the Agricultural Act of last year. The resolution read:

"Resolved that this convention communicate to the government of British Columbia its appreciation of the great benefit of fruit growers, farmers and the people of the province generally, that may be expected from the operation of the Agricultural Act of 1915, and urge the importance of making this valuable legislation effective as soon as possible."

Protection Against Fraud.

There was much discussion over the advisability of appointing government agents throughout the Northwest centres to protect the British Columbia fruit shippers from fraud on the part of buyers. It was said that in many cases buyers claim that fruit is received in imperfect condition and offer a much-reduced price for it. The fruit growers here say they have no means of knowing the exact condition of their fruit when it reaches the market and have to take the word of the buyer.

It was finally suggested that the express companies be approached to see whether any arrangement could be made with them as to inspecting fruit before delivering it to the consignee. The possibility of the fruit growers' district associations having their own representatives in the prairie cities was also advanced. One grower said that he had sent ninety boxes of apples in perfect condition to a city in the middle west, and had been able to realize only \$8.50 on the lot, as the buyer claimed the fruit was not received in good condition and the buyer's word had to be accepted.

In his annual address President Ricardo of Vernon, said in part:

"Two important matters stand out to my mind clearly. One is that we should endeavor, with all the means in our power, to give publicity to the consumer what the producer or grower sells his produce for; to enable the consumer to join hands with the producer to help regulate the spread between the producer and the consumer, so that the distributor of our product should reach a reasonable profit for his labor and no more.

"The other point is that we should ask the provincial government to initiate at once a technical survey of the cost of production for a box of apples in British Columbia, covering a period of not less than three years and over an average number of

orchards. This I consider most important. When I say that Professor Lewis's Bulletin No. 132, published by the Oregon Agricultural College in June, with the cost of production for a box of apples tabulated from 1,000 orchards and over a period of four years, which came to hand in October only, was a very strong factor in establishing our case with the Economic Commission of the Federal government, I am not going too far.

Protection Against "Dumping."

"We asked to be protected from unfair competition of American apples in Canada; we were able to show the immense over-production south of us; and we were able to take this up and show that they had been selling below cost of production for some years on the average, not only in this country, but in their own, and that the cost of production was fixed, published and given wide circulation by one of their own official bulletins.

"I believe that if British Columbia, Ontario and Nova Scotia knew and had to hand, by means of surveys kept up from time to time, what the cost of a box or barrel of apples was, the fruit industry of Canada would be adequately protected for all time, and the consumer would demand fruit at a price allowing the producer and the distributor a fair living profit.

"Our thanks are due to our provincial government for the active interest they have taken in pressing our demands at Ottawa. The department of agriculture sent our secretary, Mr. Winslow, the first time to deliver our case to the Economic Commission when they first met, and again the second time when your committee put up the case and arguments.

"To the Hon. Martin Burrell I have already expressed our appreciation of the constant and ever sympathetic interest he took in our case. We have also to thank Mr. R. F. Green and the Federal members for British Columbia for the energetic way he and they pressed our case with the minister. To Mr. D. Johnson, the Dominion Fruit Commissioner, our thanks are due for the untiring help he has always accorded us.

"We received the most courteous consideration at the hands of the Economic Commission and the Federal ministers your committee interviewed, and from the first to the last, over a period of years, the Hon. Martin Burrell has been keenly sympathetic for our case."

Important Resolutions Passed.

Three important resolutions were passed at the second day's proceedings. The first of these was one favoring the consideration by the education department of adding the art of fruit packing to the curriculum of the manual training department of public schools; the second was a resolution recommending the provincial government to apply the first principle of economy—production to counterbalance destruction—to the base of production, the farmer, by teaching him system and classification of energy through the issuance of a scientific tabulated time-book covering all the principal occupations on the farm suitable for each district in the province; the third being a resolution of endorsement by the Summerland Fruit Union of the Okanagan United Growers' motion urging the appointment of an adequate staff of government inspectors to examine all packs at point of shipment.

The meeting adopted the report of the executive and the secretary-treasurer. This

included a review of the past year's work, noted the fact that the provincial government grant of \$5,000 had greatly facilitated the efficient performance of the association's increasing work, and commented with satisfaction on the increase in the total membership of the association despite the numerous enlistments for overseas service. The present membership is now 904, including independent members and those who were automatically members through affiliated organizations. The total expenditures during the past year had been \$4,426.50. The matter of labor and production was dealt with very briefly and earnest consideration of the meeting to this subject was asked. The question of transportation was touched upon, also co-operation, advertising protection, and other matters which are being discussed at length by the convention now in session.

Premier Addresses Convention.

In his address to the convention Premier Bowser stated that the government proposed appointing a minister of agriculture, a man who could give his whole time to it. As at present conducted the minister of finance and agriculture had his duties too much divided to do much for the interests of agriculture. Mr. Bowser referred to the Agricultural Credits Act, which he said his government had not yet been able to bring into force because of the abnormally high interest rates on money. "There is no sense in any business man attempting to deceive the people of the country, by borrowing money at the high rate of seven per cent, adding one per cent for administration and loaning it to farmers at eight per cent," he said. "It would be absolutely impossible for the farmers to pay such a ruinous rate as eight per cent. To lend them money under such conditions would be like hanging a mill stone around their necks."

The Premier explained the efforts his government has been making to get cheap money. "Sir Frederick Williams Taylor told me in New York last winter that I would be doing well if I got a loan placed there for the province at seven per cent, especially as the Anglo-French loan was costing those two great nations five per cent," he continued. "In the face of this, however, British Columbia placed its loan for ten years at 6.39 per cent. There has lately been even a great improvement over this, and today we have offers at less than six per cent. At present we are endeavoring to get \$2,000,000 at still lower rates."

Referring to the duty on foreign apples, Mr. Bowser said if it had not been for the Hon. Martin Burrell the fruit growers would not have been successful last January.

The Premier said that the government was doing all in its power to solve the irrigation difficulties in the Okanagan district. Mr. Mackenzie has made investigations and is now making his report, upon which the assistance the government will give will be decided.

Mr. Bowser spoke highly of "the good work done in this Province" by the late Mr. Thomas Cunningham, fruit inspector.

Mr. W. C. Ricardo, president of the association, in commending the Premier for his interest in the work of the fruit grower, declared that the association could not thank the Premier and the government enough for what they have done in the last few years for the industry. He made special mention of the government's work in getting the apple duty raised.

The Vernon Fruit Company, Ltd.

1908 : : 1916

The old reliable Company that
has always made good.

ONE
COMMISSION
BETWEEN
SHIPPER
AND
RETAILER

Eight Years of Successful
Marketing

Head Distributing Office:
Calgary, - - Alberta

Several Addresses Given.

During the convention Mr. R. C. Abbott, coast markets' commissioner, and Mr. W. E. Taggart, prairie markets' commissioner, spoke on "Market Conditions and Advertising." Mr. F. D. Nicholson, president of the Okanagan United Growers, Ltd., spoke on "Co-operation"; Mr. J. B. Musselman, general secretary-treasurer of the Saskatchewan Grain Growers' Association of Moose Jaw, spoke on the need of the northwest farmer for British Columbia fruit.

Concluded on page 902

Annual Meeting of B. C. Stock Breeders

At the ninth annual convention of the British Columbia Stock Breeders' Association held in Victoria during March, Reeve A. D. Paterson, of Delta, was elected president and the other officers as follows:

Hon. president, Hon. T. W. Paterson; hon. vice-presidents, Dr. Tolmie and Mr. W. E. Scott; vice-president, Mr. Sam Smith, Directors: Lower Mainland—Alex Davie, Ladner; H. Webb, Chilliwack; Captain Erskine, Lulu Island. Upper Mainland — Frank B. Ward, Douglas Lake; John I. Jackson, M.P.P., Greenwood; J. B. Tiffin, Pavilion. Vancouver Island—George Sangster, Victoria; Frank Bishop, Koksilah; Griffiths Hughes, Cobble Hill.

About fifty delegates were in attendance at the two-day meeting.

coming season. It may be mentioned that through the dairying districts in general the silo is becoming very popular, and this is particularly true of the Chilliwack Valley. The poor yield of roots in many localities during 1915 will have a tendency to increase the popularity of the silo.

Increase in Cattle

"Along the line of the Grand Trunk Pacific a considerable amount of live stock is being introduced, and the foundation is being laid for more or less extensive mixed farming communities. In both the Bulkley and Nechaco Valleys, beef and dairy cattle have been imported from east of the Rocky Mountains.

"In many of the newer communities ad-

Thomson Watershed	14,043	3,735
Northern	11,000	2,235
Okanagan and Boundary	15,357	13,409
Kootenay	3,156	3,390
District	Beef Cattle	Sheep
Islands	6,586	5,815
Lower Mainland	16,190	10,400
Thomson		
Watershed	63,340	5,185
Northern	62,408	3,491
Okanagan and Boundary	34,192	7,470
Kootenay	5,060	1,078
Totals in British Columbia: Horses, 62,000; dairy cattle, 81,000; beef cattle, 165,000; sheep, 40,000; swine, 36,500.		

Beri Beri Also Affects Animals

Pigs as well as human beings are taken



SHEEP RANGE, BRITISH COLUMBIA.

Increased production is the patriotic duty that lies before the stockbreeders of the province, according to Mr. Paterson.

"During the war, it is the duty of those who remain at home to do everything in their power to increase the yield of the fields, flocks and herds," said Mr. Paterson addressing the convention. "By so doing, those of us who must remain at home can serve our country just as loyally as by serving in the trenches. Even suppose this might entail loss, we should be willing to sacrifice some of our profit when others are going to the front and sacrificing their lives for the Empire.

"The last year has been marked by an increasing interest in mixed farming. This is particularly true of some districts that previously had been looked upon as almost exclusive fruit lands. For example, we find that during the year 1915 creameries have been placed in operation at Grand Forks, Kelowna and Salmon Arm, and all are reporting satisfactory results. In the district of Kelowna alone, fourteen silos were built during 1915, and the construction of many more is being planned for the

vantage has been taken of the Dominion and Provincial schemes for supplying pure-bred sires, and this undoubtedly will be a great factor in improving the general quality of the live stock in these districts. It also stimulates an interest in more, as well as better, live stock.

"The sheep industry has been particularly favored during the year just passed. Mutton and wool have commanded excellent prices, while the outlook for the immediate future is promising. In many districts, owners of sheep have suffered considerable loss from the ravages of panthers, coyotes and especially dogs, and it might be well for this convention to consider the advisability of asking the government to pass a law requiring that all dogs be licensed. By this means a great many useless curs would be gotten rid of."

During his address Mr. Paterson gave these statistics of the number of animals kept by stock breeders in British Columbia:

District	Horses.	Cattle.
Islands	4,750	23,000
Lower Mainland	13,714	35,191

with beri-beri when put on a China rice diet, according to Mr. P. H. Moore, superintendent of the Experimental Farm at Agassiz, B. C., who addressed the convention. Many of his statements were corroborated by Dr. Hawden, of Duncan.

According to these two authorities, pigs are often reduced to helplessness on the rice diet. Their legs become bent because of the softening of the bones, their eyes staring and frightened, their coats rough, while their alimentary tracts are lined with ulcers. Experiments show that the lack of phosphate, through the removal of the husks, is the cause of the trouble.

The beri-beri conditions, however, can be quite readily overcome by a mixed diet, introducing all the elements necessary to animal life. In less than ten days of the mixed diet the pigs will be frisking around feeling better than before their experience.

Rickets, pellagra and other kindred diseases are also caused by chemically impoverished diets. Cotton-seed poisoning is of similar origin.

Decrease in Sheep

The sheep population in Canada has been

on the decrease since 1881. Mr. Alexander Davie, of Ladner, one of the best known stock men in Ladner, told the convention there are 2,500,000 sheep in the country, 500,000 less than in 1881, whereas we should have at least 25,000,000. Mr. Davie said that cattle, horses and hogs were on the increase, but despite the increase in the price of wool from 7 to 22½c a pound in the last four years, nothing has been done to stimulate sheep growing. British Columbia in 1914 imported 47,000 sheep; in 1913, 72,000; and in 1912, 97,000. And today there are only 40,000 sheep in the whole province. "It's mighty poor economy for the farmers of British Columbia not to supply her own market when there is this great demand," said Mr. Davie.

In England, where they are more than 30,000,000 sheep, they are considered a great asset to agriculture? Argentina, with 100,000,000, considers the industry of paramount importance.

Mr. Davie declared that sheep should be chosen for the width between horns, full wide backs well covered with flesh and wool, and medium short legs. A pure bred sire is perhaps the most important attachment to a flock, as it is through him that the breed can be kept up. The best time for farmers to buy is in the fall.

Stockbreeders' Greatest Benefactors

Dr. J. G. Rutherford, C.M.G., said that the human race would be better off if more college men went in for stock breeding.

"We could get along with much fewer lawyers, parsons and doctors," he said. "If these men were carrying on such work as cattle breeding, they would be doing more for the human race than they are by exercising their talents in the occupations in which they are at present engaged.

"We are getting many of our ideas of production revised these days. The only real and genuine producer is the farmer. The man who goes out catching fish doesn't produce the fish. The man who cuts down the trees of our forests and makes lumber doesn't produce the trees. The trees were there before him. The man who burrows in the mountains doesn't produce gold, silver or coal. But the man who takes the fields and by careful cultivation produces a crop that was not there before is the real producer. The stockmen who, by painstaking work, have bred up better animals for human needs, are the real producers. It is they who from the beginning of time until now have fed man and kept the race going. Today the livestock industry is the keystone of Canadian progress and prosperity."

Dr. Rutherford traced the evolution of the modern cattle from the undomesticated bovines that roamed the German forests in Caesar's time and which are described in the commentaries. He said that few improvements in breeding were made until the latter part of the eighteenth century. He pointed out that even the Mendelian principles, upon which all modern breeding in the animal and plant world is based, were not recognized until 1900, although the work of the Bavarian monk was published in 1865.

Big "Range" Days Are Gone

Mr. F. B. Ward, of the Douglas Lake Cattle Company, told the convention that the day of the big cattle ranch with all-year-out-door pasturage is gone. Each year it is more difficult for the cattle rancher to get grazing lands because of the encroachment of settlements, he explained.

"We used to turn everything loose until it was ready for beef," said Mr. Ward.

An Excellent Stock Food Dried Brewers' Grains

Manufactured under government inspection. The minimum percentage of fat in bran is 3 per cent., shorts 4 per cent. The average percentage of fat in Dried Brewers' Grains is 6 per cent.

Ask for—

**ROYAL BRAND DRIED BREWERS'
GRAINS**

For quotations in carload or ton lots,
apply to—

Royal Stock Food Co.

Corner Yew and Eleventh Avenue W.

Vancouver, B. C.

"Now, because of the insufficiency of range, we have to bring in all cattle for the winter. It is necessary to feed everything for at least six weeks in the winter, and some of the females and young stock for longer than that. The stockman of today is becoming a large farmer, growing quantities of feed and grain with which to feed his stock."

There are more than 10,000 head of cattle on the ranch of the Douglas Lake Cattle Company, which is the largest cattle ranch left in British Columbia.

Dean Klinck, of the University of British Columbia, addressed the convention, explaining in detail some of the great improvements made in the breeding of grains, roots and fodder crops. He gave the details of the methods used by the scientists in creating a new variety of grain. All the steps were illustrated by slides. He also went into the various varieties of corn, wheat, clovers, grasses, soya beans and alfalfa, giving their advantages to the producers in various growing districts.

Dean Klinck announced that he has just received word of the creation of a new variety of wheat at the Macdonald College of St. Anne's, Quebec. This new variety gives a yield of five bushels to the acre greater than the yield of any wheat known ten years ago. To produce this variety took nine years of breeding, by selection and cross-fertilization. It cannot be put on the

market until it is produced in commercial quantities for seed.

Must Organize for Protection

Dr. S. F. Tolmie told the livestock men that the time has come when they will have to take steps to protect themselves against the big meat packing trusts that are springing up on the northern half of this continent. Already he declared the meat trusts have the American growers in their grip and the next assault will be the attempt of the Canadian trusts to tie up Canadian producers.

"During the last two years the livestock farmers in the corn belt of the United States have been losing money," said Dr. Tolmie. "But at the same time the slaughtering interests have been making great profits. I attended the meeting of the American National Association of Livestock Men in El Paso last year and there is no doubt in the minds of stockmen that the violent fluctuations in the market are not due to the old laws of supply and demand. A notable fact has been a most remarkable diminution of late years in the competition amongst buyers despite the increase in population and demand.

"At present the demand for beef is good but the returns for the first nine months of 1915 show that 226,000,000 pounds of beef less were exported from the United States than during the first nine months of the previous year. At the same time imports

decreased by over 30 per cent. The same returns show, however, that although there is a real cattle shortage in the United States, cattle prices paid the producers are now 8 per cent. under those of a year ago. In eight years the number of cattle in the United States has been reduced by about 22 per cent. Along with this, however, there has been a decided shrinkage in the consumption of beef, this amounting to between 10 and 11 per cent. in spite of the increase in population.

"Many of these conditions are due to the large packing house interests. They are well organized and able to carry out any policy they decide on. The government of the United States has tried fining some of the powerful combines in order to restrain their activities. But it is found that they are so powerful they merely laugh in the face of the government. When they are fined \$50,000 they turn around and drop the price paid to the producer by one-half a cent until the amount of the fine is made up.

"But there is no reason why the livestock interests with their several billions of capital should not be equally well organized to fight back, and conduct a campaign to secure better markets and distribution facilities. As Western Canada will develop into one of the greatest live stock countries, it behooves the stockmen here to unite and strengthen the union in every way possible

to prevent and overcome many of the market evils prevalent south of the line. The Western Canada Live Stock Union was formed in 1913 and embraces all the territory west of the Great Lakes. It was felt necessary to form such a union to enable the stockmen to deal with the large questions of transport and marketing."

Dr. Tolmie declared that Argentina is the greatest competitor of this continent in the production of live stock. The progress there in the last few years has been tremendous. In 1912 there were 29,000,000 head of cattle in the South American Republic. Last year there were 35,000,000. This is about 25 head to the square mile. The average of the United States is 19. Along with the increase in numbers has been a striking improvement in quality. Argentina breeders have been paying the highest prices in Great Britain for pedigree stock, in one case \$34,000 being the amount paid for one animal. Alfalfa is being introduced as a forage crop. In 1913 there were 16,500,000 acres of this crop, which, with cheap labor, enables the Argentina stockman to produce at a lower price than the American.

Follow Example Set by Boys at Front

The convention was brought to a close with an appeal from Mr. W. E. Scott, Deputy-Minister of Agriculture, for a greater optimism, patriotism and production on the

part of the farmers and livestock producers of this province.

"This is a time when we should all be optimistic," said Mr. Scott. "The spirit of optimism is a gift we all should have, at all times and particularly at this time.

"We can't do better than take an example from our boys at the front. Those stalwart, fine, clear-eyed, active young men we have sent to the front, they are doing their best for the country. It is up to us who stay at home to see what we can do to help out our country.

"But you ask what can the farmer do? I reply that those also serve who stop at home and work. Let us endeavor to keep more and better stock and crops, and to call science to our aid in our production.

"In the past we have been living in a Fool's Paradise. The people of this province have been living largely on borrowed capital, with no thought of the morrow. We went ahead selling real estate to one another, thinking that by this means we would all become rich.

"The time has long since come for the change. To make the change permanent we must put the right man on the right piece of land and to keep the young men there, we must make farming more attractive and the conditions in the country a little more pleasant.

"I am strongly of the opinion that agriculture should be taught in every school

LOUDEN DAIRY BARN EQUIPMENT

LOUDEN Roller Bearing Litter Carriers
—make quick, easy work of stable cleaning. No bother with brakes or ratchets. Loads easily elevated; a light pull on hand chain does it. Box loaded or empty will stand at any height. Roller bearing track wheels give ease and steadiness of motion on the track. Heavy galvanized steel box carries a big load.

LOUDEN Steel Stalls and Stanchions
—are neat, strong and sanitary. Heavy high carbon steel tube, and malleable fittings used in constructing Loudon Equipment. No sharp corners on Loudon stalls, stanchions or mangers to injure or make the cows uncomfortable.

LOUDEN STANCHIONS
—are fitted top and bottom with single chain, which gives the cow freedom to lie down and rise as she would in the pasture. High-built-up curb can be used only with Loudon stanchions.

LOUDEN BARN PLAN BOOK
112 pages of valuable information

Write for Free Catalogues.

Write for Louden Plan Book. It's Free.

LOUDEN MACHINERY CO. - Dept. 45 Crimea St. Guelph, Ont.

WINNIPEG, MAN.

ST. JOHN, N.B.

VANCOUVER, B.C.

(4)

in the province. If our boys can have the opportunity to go to an institute like the new University of British Columbia, where they can learn the underlying principles of agriculture, they will be properly equipped and be in a position to go on the farm.

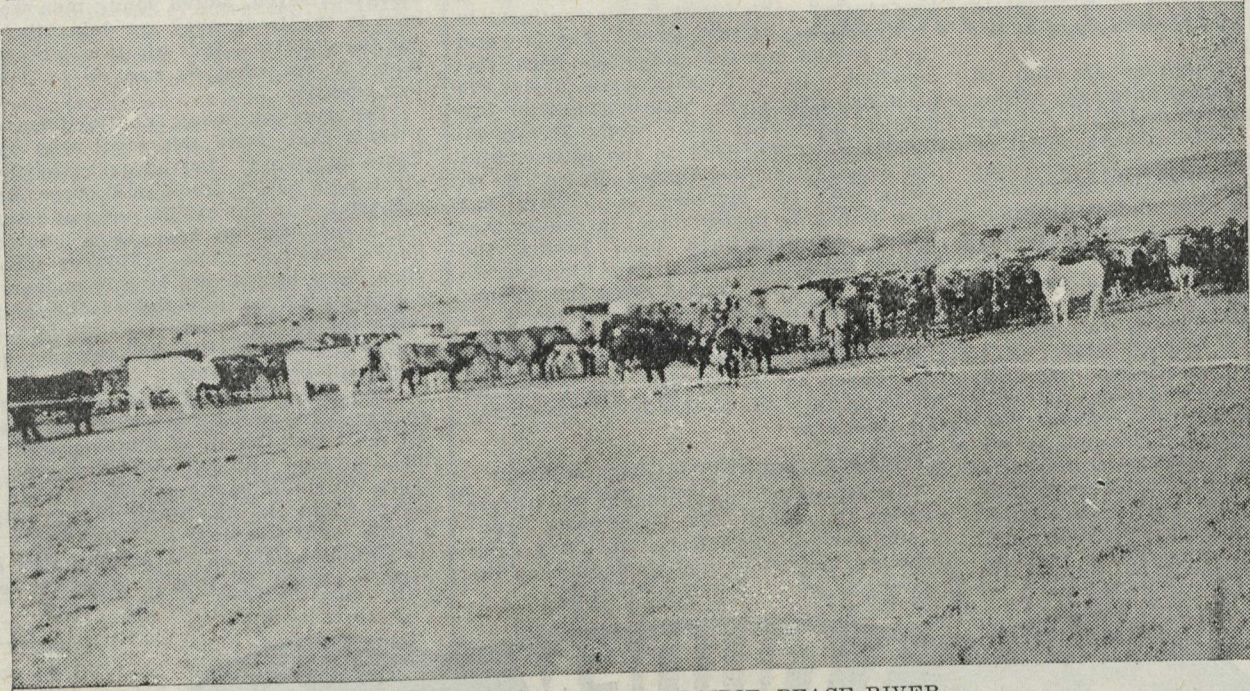
Better Agricultural Conditions

"What are the causes for the failure of

forget that land in British Columbia will always be worth more than land in the prairie provinces because of the better soil and climate here.

"There are two chief needs of the farmers of British Columbia. First is the need of long term loans at a low rate of interest; and second is the need of the introduction of better agricultural methods. The Agri-

British Columbia has been an uphill fight, but it is being won. Today we have many co-operative societies, and they are proving successful and doing good work. I would say to all farmers, "Try to sink all differences and come together for the good of the industry. Until you do that you will not get the results from your labors to which you are entitled."



HERD OF CATTLE, GRAND PRAIRIE, PEACE RIVER.

land settlement in this province? One of the chief is that many persons come on to the land having absolutely no knowledge of farming. They have the idea that any fool can farm. I contend that farming takes as much knowledge as that required in any of the learned professions. Another difficulty is the fact that land in British Columbia is too expensive. When you get down to fundamentals, land is worth what it will produce and no more. But we must never

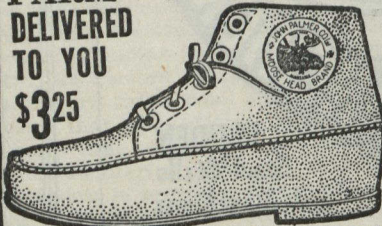
cultural Credits Bill that will shortly be brought into effect here, is designed to remedy the first. A similar measure, introduced into New Zealand in the early '90's, saved agriculture in that country, and made it the greatest agricultural producing country in the world.

"Better marketing conditions are to be secured only by the effective co-operation of the farmers themselves. The struggle for co-operation among the farmers of

"The prospects in this province for stock raising at present are exceptionally bright. The meat supply of the world is being rapidly depleted. All the stock is being killed off from the war-swept zones of Europe. In this Canada has a unique opportunity. And it is 'up to' all of us to take advantage of it. I feel sure that the price of stock will keep at a very profitable level for the producer for many years to come."

SPECIALLY MADE FARM FOOTWEAR

DELIVERED TO YOU \$3.25



Here is a light weight, durable and comfortable working shoe specially suitable for farmers, woodsmen, millmen, trackmen, laborers—all who require extra strong, easy footwear for working in. We make them of the splendid oil-tanned Skowhegan waterproofed leather that has made

Palmer's "Moose Head Brand"

famous for almost forty years. No need to suffer with tired, sore, aching, burning feet. Get a pair of these and find ease and comfort. If your dealer doesn't carry them, send us his name, enclosing \$3.25, and we will ship you a pair, all charges paid, to any address in Canada or U. S. Remit (stating size) by postal or express order. Same style as shown, 8 eyelets high, \$3.75. Write for catalogue V.
JOHN PALMER CO., Limited,
 Fredericton, N. B., Canada. 27

SIBERIAN HARE

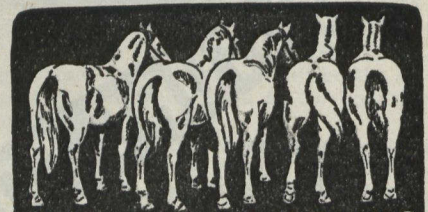
Send 25c for booklet giving prices and information of the most profitable furbearing animal on earth. The Black Fox is not in it with the Black Siberian Hare.

SIBERIAN HARE CO.
 Hamilton, Canada.

WANTED—Persons to Grow Mushroom-rooms for us at their own homes. From \$15 per week upwards can be made by using small waste space in cellars, sheds, yards or gardens. We furnish full instructions. Illustrated booklet sent free on request. Address **MONTREAL SUPPLY CO., Montreal, Quebec.**

FOR SALE

Two or three Jersey Bulls. These animals are from imported stock and their grandsire was Noble of Oakland, the highest priced Jersey Bull in Canada. These animals are registered. Apply—
J. J. LOGAN, GLENWOOD. AGASSIZ,
 B. C.



KEEP THEM WORKING

A horse in the field is worth two in the barn. You can't prevent Spavin, Ringbone, Splint, or Curb from putting your horse in the barn but you can prevent these troubles from keeping horses in the barn very long. You can get

KENDALL'S SPAVIN CURE

at any druggists at \$1 a bottle, 6 for \$5, and Kendall's will cure. Thousands of farmers and horsemen will say so. Our book "Treatise on the horse" free. 104
Dr. E. J. KENDALL CO., Enosburg Falls, Vt.

Fighting Injurious British Columbia Orchard Pests.

British Columbia Entomological Society Deals With Codling Moth at Annual Meeting in Victoria—Must Always Be on Guard.

The annual meeting of the B. C. Entomological Society was held in Victoria on March 11. Through the courtesy of Mr. Francis Kermode the society was enabled to meet in the quarters of the provincial museum.

The endeavors of this society are somewhat different to the other societies and associations that have been meeting in Victoria recently. The basic knowledge required to fully comprehend the various papers presented is somewhat scientific and out of the ordinary, appealing to a comparative few. But on the basis of this knowledge the society is indebted for much assistance to the fruit grower and farmer, which is essentially practical. Many entertaining papers were presented, among them being articles by Messrs. E. H. Blackmore, Germain Beaulieu, Tom Wilson, T. W. Cockle, Dr. Seymour Hadwen, G. A. Hamilton, J. R. Anderson and R. C. Treherne. The more practical issues brought out at the meeting, of special interest to the fruit-growers, etc., was information laid by Messrs. R. C. Treherne, E. H. Strickland, Arthur Gibson and Tom Wilson.

The Codling Moth.

Mr. Treherne dealt with the presence and distribution of the codling moth in British Columbia. The first moth bred from B. C. grown apples was reared at Kaslo in 1905. In 1906 it was again reared at Kaslo and recorded for Kamloops where it was introduced several years previous. In 1904 the moth made its appearance at Victoria. These three outbreaks were all handled in an efficient manner so that, in these centres, at any rate, few codling moths remained. So the situation was until 1911. In 1912, however, an outbreak occurred at Rutland and another at Armstrong. Both of these outbreaks have been checked so that no infestation occurs today at either locality.

In 1913 an outbreak occurred at Kelowna and this still persists. In 1915 outbreaks occurred at Westbank, Okanagan Landing and Vancouver; in size and extent, the two former, represent the most serious yet.

The gradual increase in the numbers of the moths in such separated localities casts no reflection on the quarantine and inspection service. The numbers of outbreaks occur naturally in proportion to the bearing acreage of apples in the province, as the moth is a fruit-infesting insect—statistics show that an immense and sudden increase in the production of apples occurred in 1911. Fruit growers should realize, as Mr. Treherne pointed out, that strenuous efforts will have to be made to retain the moth in the present bounds, and that individual growers should take steps to acquaint himself with the life habits of the moth and its control. Mr. Treherne dealt with the control measures and the same will probably be issued for distribution later.

Other Orchard Insects.

Mr. Treherne further dealt with the presence and distribution of the dreaded San Jose Scale—at present it occurs at Spence's Bridge and only unsubstantiated reports record it elsewhere in the province. The woolly aphid, also, is increasing its numbers

Fire Blight Destroys Thousands of Trees

FIRE BLIGHT OF THE APPLE IS SPREAD BY APHIS

APHIS CHECKS GROWTH OF TREES
APHIS CAUSES LEAVES TO CURL
APHIS DEFORMS FRUIT
DESTROY APHIS WITH
"BLACK LEAF 40"

Guaranteed 40% Nicotine

Your dealer will furnish you this effective insecticide in concentrated form—200 gallons of spray from the 2-lb. can costs \$2.50—1,000 gallons from the 10-lb. can costs \$10.75. If he will not supply you we will send it to you, express prepaid, upon receipt of price. Write for Free Bulletins to the address below.




"BLACK LEAF 40"

40% Nicotine

The KENTUCKY TOBACCO PRODUCT CO.
INCORPORATED
LOUISVILLE, KENTUCKY.

in the coast and Okanagan areas and should be regarded more seriously by fruit growers. The same also applies to the bud moth. The pear farid, an extremely injurious insect reported during the past spring (1915) for the Saanich Peninsula, was also the subject of attention, as also the black currant bud mite, a recent importation from England.

Mr. Tom Wilson drew attention of the meeting to the increase of the cottony maple scale in the wild bush and gardens in the province and advised growers to pay more attention to its control.

Mill Infesting Insects.

A most important consideration was brought to the attention of the society in a report by Mr. Arthur Gibson in the control of mill infesting insects. Carbon bisulphide has been used extensively in the control of such insects but experiments have shown that heat is more efficacious. By heating mills to 125 degrees Fahrenheit for five consecutive hours all forms of life, including the eggs of the weevils, will be killed. This was considered a very important point and of special advantage to the many rice and grain mills of the coast.

General Business.

An appreciation for the life and work of the late Mr. Thomas Cunningham was placed on record in the proceedings of the society and an expression of regret voiced on his recent decease. Capt. R. V. Harvey, formerly secretary of the society, having been wounded at Langemark, taken prison-

er by the Germans, died in a German hospital as a result of his wounds and the society felt his loss severely.

No less than 15 members of the society are on active service and many more are in training now in the province. Despite the reduced membership the society is in good standing and active.

B. C. Farmers Exchange

(John McMillan Manager)

WHOLESALE FRUIT AND PRODUCE MERCHANTS.

Goods handled strictly on commission.
Prompt returns our specialty.

138 WATER ST. VANCOUVER, B.C.

A Breeder's Card this size will cost only \$1.25 per month. Advertise the stock you may wish to sell.

BRITISH COLUMBIA FRUIT and FARM MAGAZINE

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

Subscription: In advance, \$1.00; in arrears,
\$1.50; single copies, 15c.

Copy for advertisements must be in hand by
the 15th of the month preceding publi-
cation.

All letters and communications should be
addressed to, and remittances made in
favor of

FRUIT AND FARM CO., LTD.
615 Yorkshire Bldg. Vancouver, B. C.
Seymour 2018

Vol. VIII. APRIL No. 4

EDITORIAL

UNNECESSARY AND UNFAIR

The action of the department of agriculture in undertaking a monthly publication is open to grave objection. The farming public is already served in this province, not only by this journal, but by prairie farm papers as well, and the entrance of the department into competition with private enterprise opens up possibilities and establishes a precedent which will be resented, we think, by publishers. Will the government also publish a mining journal, and a lumberman's magazine? If the taxpayers' money is to be employed to finance undertakings in opposition to his own, he is not likely to submit tamely. The publications branch of the department of agriculture must become either an expensive luxury maintained out of the revenues, or an unfair competitor against private enterprise. This slip is uncalled for, because the field it enters is already served; it is unfair because it marshals the resources of the government against those of the individual.

The spectacle of a high official soliciting twenty-five cent subscriptions to his journalistic child at recent conventions does not add to the dignity of the position.

CITY AND COUNTRY

Boards of Trade in the larger centres of the province are doing a good work in legislative matters and other questions directly affecting the various commercial interests composing these boards. What are these boards doing towards bettering the condition of the farmers of the province?

The city depends upon the country, and just so far as the prosperity of the farmer is increased, so will the prosperity of the commercial interests of the city be increased.

We would suggest to the Boards of Trade of the province that they devote more study to the problem of the farmer. Tentative efforts at this are undoubtedly made by many boards throughout the province, but they do not go far enough. A question pertaining to agriculture is brought up in a board and referred to a committee. Prior to the next meeting the committee has a hurried meeting and makes a report of glittering generalities on the matter, and that is about all that is ever heard of it. We would suggest that the city man devote some real study to the problem of the settler, the question of better marketing conditions, the question of competition from the United States, the patronage of British Columbia grown food stuffs, the great

problem of land clearing, and the score and one other questions that confront the farmers of this province.

These are questions, however, that are not settled in a day, nor will submitting a nicely worded report prepared in the secretary's office dispose of the matter, either. There is work here for exhaustive study and research, much travel, considerable expense and the devotion of much time.

Commercial bodies in the Southern States have taken up the development of their particular sections with great success in the last few years, with the result that many prosperous country and town districts have sprung up throughout parts of the South. The result was obtained by co-operation between town and country. We believe there is room for improvement in this respect in British Columbia.

THE NEW MINISTER

It is promised that the portfolio of minister of agriculture will be separated from that of finance minister. This is all right as far as it goes and is a decided improvement on what has existed, but having gone this far we would suggest that the man appointed be thoroughly qualified for the position. This is to say, give the portfolio to a thorough agricultural expert. The objection that has been raised to combining the departments of finance and agriculture hitherto has been mainly that it was difficult to find a good financial man who had also the time and ability to make a study of agricultural matters. Now that the two have been separated the country will be satisfied with nothing but a thorough agricultural man in the place. A practical farming man could fill the bill, but, if the government can find a good theoretical man, as well as a successful agricultural practitioner, all the better. Agriculture has jumped to the first place of importance in the activities of the province, and the electors will now be satisfied only with the very best man possible to get for its minister of agriculture.

It is to be regretted that the position has had to remain vacant so long, but at best the general elections will not long be delayed now. Whatever government is in power, following the appeal to the country, will go a long way towards establishing itself in the good graces of the farmers of the province by placing a man thoroughly equipped to undertake the all-important duties of the minister of agriculture.

LET US HEAR FROM YOU

Do you like Fruit and Farm? Have you any ideas for its improvement?

If you have, we would like to hear from you. This magazine is for you, and we want to publish the things that will interest or be of benefit to you. The more we hear from you, the better able we will be to serve you.

Let us hear from you frequently, and if you know something you think would be of interest to our readers, write it out and send it along.

In as far as we are able, we will try to make the magazine conform to your wishes

LAST MONTH'S CONVENTIONS

We have devoted considerable space in this month's issue to reports of the various annual meetings of agriculturists held in Victoria last month. While considerable other important matter has been crowded out, we believe that the space has been well devoted to this purpose. At best the

reports printed are but a brief synopsis of what transpired at the gatherings. The value of such meetings as these lie, not in what one is able to print of them afterwards, but in the real benefit they are to those who attend them. Here are brought together the purely practical man and the purely theoretical man. The practical man has much to learn from the theoretical man, just as the latter has from the practical farmer. It is when the two meet and learn respect for each other's ideas that the best results are obtained. The practical man can often get an idea from the other man that will result in increased production for him and more money for him, just as the theoretical man is taught by the other where his theories are not applicable to practical or economical farming, or where he may improve on them to the point of practicability.

It is safe to say that as a result of the Victoria conventions during March many valuable ideas that will mean dollars and cents to the possessors will be carried back to the various sections of the province for dissemination and to be put into actual working.

PLANT PESTS

Indications are that spraying compounds will be higher in price later in the season than they are now.

Look over your spraying machinery, polish up the rusty parts; replace broken or missing parts.

Prune out old or cankered wood from the apple trees before spraying operations are begun.

Look over the fruit trees and see whether scale insects are present. If so, plan to give the dormant lime-sulphur treatment before April 1.

Raspberry canes injured by red-necked cane-borers and tree crickets, if they were not cut out last fall, should be cut now and burned.

Formaldehyde for the treatment of seed grain should be bought at once. Plan to treat for smut. Stinking smut of wheat was common last year.

Pull out all the old used stalks in the garden and burn them, as the eggs of the common stalk borer are found in such stalks oftentimes. The destruction of the stalks will prevent injury from this pest during the summer.

Begin to select seed potatoes. Select only those true to type, of moderate size and free from any cracks or rotten patches on the surface. Plan to plant them on soil which has grown no potatoes for about five years.

BIG CONCLAVE OF MILKMEN

One of the largest and most important conventions of its kind ever held in the province will take place in Vancouver on May 12 and 13, when the Pacific Northwest Milk and Dairy Testers' Association will meet. Delegates will be present from Washington, Oregon, Idaho, Montana, Utah, Alberta and various points from British Columbia. Departmental speakers from eastern Canada and Washington, D. C., will be in attendance. In all, 60 delegates from the United States and 125 from Canada are expected. Live Stock Commissioner W. T. McDonald, of the provincial department, is president of this important organization. All phases of milk will be discussed at the convention and an effort made to bring before the public the value of milk as a food, and efforts made to increase its sale.

BEE-KEEPING IN THE PROVINCE.

On the first day of October, 1915, there were listed on the records of the department of agriculture the names of 1,100 bee-keepers in the province. From all of them there was requested a honey-crop report for the season, and 326 responded. Briefly, the following result was obtained: Colonies in April, 2,417; crop, 57,245 pounds. Average per hive, 23 pounds. Assuming that those reporting are fairly representative bee-keepers, a little calculation will show that the total honey crop of the province in 1915 was probably above 100 tons. Okanagan Lake district had the largest number of bee keepers, with 113, while Kootenay Lake had 104 names. The highest average per hive was reported from Pemberton Meadows, with 41 pounds.

The oldest bee keepers in the province are unanimous in stating that the season yielded the poorest honey crop in their experience. This condition was not confined to British Columbia alone, however, being prevalent all over the American continent. 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, which is in marked contrast with other years, and undoubtedly shows that B. C. bee keepers are becoming more skilled in their calling.

Inspector F. Dundas Todd points out that while there are few expert bee keepers in British Columbia, the average bee keeper here will compare favorably with an equal number in any other part of the world, and that from now on honey production in the province will progress at a very rapid rate. Thousands of tons of nectar that at present go to waste every year on our mountain sides and in our great valleys will soon be gathered for human food, and British Columbia will advance to the very front rank as a honey-producing region. The delicious flavor of our honey, claim departmental officials, will always ensure for it a ready market once its quality is known.

GOOD DEMAND FOR GEESSE

Elsewhere in this number we publish a very interesting article on geese. This, however, does not deal with the commercial side of the goose. Every winter thousands of dollars leave British Columbia for geese, which are required to supply the demand. There is no reason why this province should not produce a supply of geese that will take care of the demand and keep this money at home.

Now is the time to consider the plan of raising geese for the next Christmas trade. Given favorable surroundings, geese are the easiest of all domestic fowls to handle. Where sufficient green pasture and water are available, this class of fowls can be kept very cheaply in this province. As yet, however, very few geese are being kept. According to Mr. J. R. Terry, chief poultry instructor for the province, the most profitable are the Toulouse, Embden, African, Chinese, and Canada (or wild) geese. It is recommended that the best way to start is to purchase mature stock at least two years old; a year or two older, the better. Young geese will lay the first season, but if bred, the progeny are liable to be weak and unthrifty. When starting one should purchase in the fall, as oftentime geese will not breed if moved at breeding time.

Geese need little shelter except in very cold climates, and most of them can be restrained by a three-foot fence. Very little grain is needed if plenty of pasture is available during the spring, summer and fall

months. Once the goslings are two or three days old very little care is needed.

Those contemplating raising geese for the 1916 holiday trade are advised to write the department of agriculture at Victoria for detailed information relative to the peculiar phases of the subject in their own locality.

ESTIMATING AGRICULTURAL PRODUCTION

Although agriculture is not generally regarded as the greatest industry of the province, nevertheless the fact is that in 1914 the value of the agricultural products of the province was greater than the value of production of any other one industry. What makes these figures of more value is that they are not arrived at purely by estimation, as is the way in other provinces.

The ordinary method in vogue is to send out forms to farmers to be filled in. Statistical estimation is that one-fifth of these are returned with the necessary information. To arrive at the total production, the aggregate value of the forms returned is multiplied by five.

In British Columbia it is doubtful if any such estimate would be anywhere near correct, while at the best the resulting figures are merely approximate. In this province the Deputy Minister hit on a scheme which gives a figure of production as close to the actual thing as it is possible to get. Practical men were sent out through all the districts, with the exception of the most remote, and they visited all the farms. They talked with the farmer himself, and saw what he had and appraised the value. The chief statistician of the department made as many as 2,000 calls himself. Thus it may be seen that the agricultural figures of British Columbia are based on facts.

It is proposed to follow this plan every five years, and then, with the information which will have been gathered from year to year, approximate the increase of production of the intervening periods. To carry out this system cost \$13,000; so it would hardly be advisable to spend this amount of money every year.

IS DOMINION INSPECTOR

The appointment is announced of Mr. W. H. Lyle, for the past eleven years connected with the provincial fruit inspector's office in Vancouver, to be Dominion inspector of destructive pests. This appointment will be undertaken by Mr. Lyle in connection with his duties under the provincial government.



Hotel LOTUS

Corner Abbott and Pender
Absolutely Fireproof Streets
European Plan VANCOUVER, B. C.

THE LOTUS "Serves You Right"

Room with detached bath \$1.00 day up
Room with private bath \$1.50 day up

GRILL Moderate Prices
Unsurpassed

OUR FREE AUTO BUS MEETS ALL
BOATS AND TRAINS

Provincial Hotels Co., Ltd., Proprietors

HOWARD J. SHEEHAN, President
W. V. MORAN, Resident Manager

Men's Hats

The new spring blocks are now ready for your inspection--this is an appropriate and favorable time for hat buying --it is particularly favorable because the stock is most complete with what is new and fashionable.

We carry the variety of shapes and proportions necessary for the exercise of individual taste in the selection of a becoming hat.

We have hats for all occasions in Scott, Christy, Stetson and many other makes.

T. B. Cuthbertson & Co. Ltd.

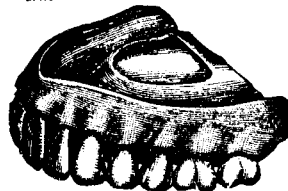
Men's Furnishers and Hatters

3 STORES VANCOUVER, B. C.

DO IT NOW!

While Our Prices Are About Half

You have been wanting your teeth fixed for a long time but have dreaded the pain and expense. Here is your opportunity. We kill dental pain and our prices are about half of what you have been accustomed to pay.



Dental War

Dr. Gilbert has always been considered the lowest priced reliable dentist. To maintain this he has so greatly reduced his fees that the best of dentistry is now within the means of the most humble. All work guaranteed ten years.

EXAMINATIONS FREE
ESTIMATES FREE

DR. GILBERT'S PAINLESS DENTAL PARLORS

2nd Floor Dominion Bldg.
Hastings and Cambie Streets
Vancouver, B. C.

1304 Govt. St., Victoria, B. C.

Beekeeping in British Columbia

THE BEEKEEPERS ASSOCIATION OF BRITISH COLUMBIA.

Head Office: Vancouver, B. C.

A general meeting of above will be held in the Board of Trade Rooms, Vancouver, Wednesday, April 5th, at 2.30 and 7.30 p.m.

The directors will meet in the Board Room at above address at 1.30, to receive reports of honorary secretary-treasurer re: Incorporation; supplies for members at reduced rates; government grant in aid of exhibit of products of agriculture; price of bees with hives.

Members residing along the line of Fraser Valley Branch, B. C. E. Ry., attending meeting will be granted a reduced rate by applying to the agent at the station for a certificate, hold same for endorsement of secretary at meeting. The meeting will not only be for business, but educational, and members are asked to attend and bring any friends interested, at 2.30 and 7.30 p.m.

Messrs. Brooks, F. E. White, W. M. Smith, B.A., W. H. Lewis, F. Dundas Todd, F.B.I., and other well-known bee men have been asked to attend and address the meetings. The evening session will be partly devoted to assist the beginner. Members requiring supplies at the reduced rates should apply to the honorary secretary-treasurer at the meeting.

WILLIAMS HUGH,

March 21st, 1916.

Hon. Sec.-Treas.

SOME EXPERIMENTS IN WINTERING BEES

By John Brooks

On November 10, eight colonies were packed for winter, with a view to testing various methods, as advocated by some of our leading beekeepers. Two were packed in a specially constructed winter case, with six inches of packing material all round and ten inches above, the material being excelsior. Two more were packed as above, substituting paper rolled in balls and packed fairly tight. Number five was completely enclosed in a corrugated board box with three inches of space all round and a half depth super in top filled with planer shavings. This box was then sealed by pasting sheets of brown paper all over and then given a coat of varnish to keep out the water.

The sixth was treated in a similar manner, but not sealed tight, and cushions were packed in the three-inch space all round; seventh was placed above a full depth super full of empty combs, resting on the bottom board and arranged in such a manner as to have the combs in the hive proper run across the lower combs and not parallel with them, as is customary, making use of an old hive to accomplish this. There was no packing whatever used on this colony.

The eighth hive had all frames removed that the bees were not occupying, and also one they were, leaving five frames loaded with bees and stores. Two division boards were placed on each side of the frames, leaving four to five inches of space, which was filled with cushions of planer shavings, then the quilt on top, and six inches of

planer shavings above in a half depth super. Now for the results.

On March 14 all colonies were examined, it being a nice, quiet, mild day. The two colonies in the winter case packed with excelsior were in fine condition, with brood in three frames and bees looking clean and fresh.

Those packed in the other winter case, with paper for the insulating material, had not fared so well, although they had brood in two and three frames, respectively. They had consumed more stores and did not have that fresh appearance noticed with the other colonies—which leads me to think that paper is not much good for packing material. One of these colonies on the weather side of this case was very low in stores and had to be fed immediately.

The hive in the sealed corrugated box with the cushions all round was in good condition, but had very little brood started, and the bottom board was quite wet, as were the sides of the hive. This was probably caused by condensation, as there was no upward ventilation, and as the hive was covered by a large board, no water could have leaked in.

Colony number five in the other corrugated box, but with no packing at the sides, was in very poor condition and looked as if it had put in a very hard winter, as their stores were low and signs of dysentery present. It is only fair to say that this colony went into winter quarters with old bees, as the queen did not lay after early September, being an old queen, while all the rest were young bees mostly, as they were all re-queened last year but this one.

Number seven wintered over the empty combs was a surprise, as they had no protection and the winter was about as severe as bees in British Columbia will ever have to weather. On taking off the cover the writer expected to find everything at its worst, but he found four frames of brood and bees in every frame in the hive except the two outside ones, and in splendid condition. This colony contained a Caucasian queen; as an experiment she was introduced early last Fall. Whether the method of wintering or the strain of bees was responsible for the good condition will be ascertained by further experiments.

The colony with the contracted brood nest came through in fair condition, but queenless. There had been some brood rais-

ing, as bees had queen cells built and a virgin in the hive, so she was promptly killed, as by the time drones begin to fly she would be too old to mate successfully. In these experiments all colonies were made of equal strength and their stores were equalized, so that conditions were as much alike as possible.

SEASONABLE HINTS

F. W. L. SLADEN, Dominion Apiarist.

Supering—Give a super as soon as the bees fill the hive and honey is coming in. It is easier, and often pays better, to produce extracted honey than comb honey, because the bees are less liable to swarm, and when there is a supply of empty combs about double the weight of honey is obtained.

Swarm Control—To get a full crop of honey the bees should be prevented from preparing to swarm. This is best done by enlarging the entrance, preventing crowding in the brood nest and giving the queen plenty of room to lay. The first super, consisting preferably of empty extracting combs, may be given without a queen excluder, so as to permit the brood nest to expand up into it. As soon as the first super is beginning to fill rapidly with honey, a second super should be placed underneath it. The queen should now be confined to the brood chamber by means of the queen excluder. If the honey flow is expected to last a long time, as, for instance, the flow from fireweed, one or two combs containing mostly honey or capped brood may be removed from the brood chamber every week and placed in the super, their place being taken by empty combs, and at the same time any queen cells that may have been built should be cut out. Clipping the queen's wings (the queen is more easily found before the colony gets populous) is a good precaution to take against loss of first swarms, but the swarm should be attended to when it issues or the queen may get lost. When the swarm emerges, cage the queen, move the old colony to a new stand and place on the old stand, to receive the returning swarm, a hive containing frames fitted with foundation, with the queen inside. By this means the old colony becomes so much depleted that it is not likely to swarm again.

System in apiary work is important, especially during the active season. A certain day of the week, say, every Monday, should be chosen for doing the apiary work, examining the colonies, and giving any further super room that may be needed.

WABRE

G. J. SPENCER

WABRE

BEEWARE MANUFACTURER

All parts of our Hives are made in Vancouver, British Columbia, and of B. C. lumber, and strictly adhere to the Standard Dimensions in use in the province.

For excellence of finish and accurate adjustment they are not excelled anywhere. The bodies, covers and tops are made of thoroughly seasoned cedar of fine quality, the frames are of Vancouver Island pine.

So satisfied are we with the quality of our hives and fittings that we sell them on the distinct understanding that if not satisfactory they may be returned within ten days at our expense, and all monies paid will be refunded.

All necessary nails are supplied with hives or parts sold in the flat. The right nail is there for each particular part.

G. J. SPENCER, 1635 THIRD AVENUE W. VANCOUVER, B. C.

BEE NOTES

Wilfred M. Smith reports "no loss at his Dewdney yard," which is fairly good considering the winter.

A Shawnigan, V. I., apiary lost 17 colonies out of 59.

Several beekeepers around Victoria lost colonies through lack of stores.

The inspector reports beekeepers in the vicinity of Nanaimo came out with less than they went into winter quarters with.

The experiences of others on the Mainland will be helpful in the future, if we can hear the cause of the colonies dying out.

Is it the lack of stores that is responsible for so much loss, and not the unusual winter?

W. H. Lewis, of Edmonds, will address the Beekeepers' Association meeting in the Board of Trade rooms, Vancouver, April 5, on "Spring Management and Swarm Control on the Lower Mainland." Mr. Lewis is an old-timer beeman, with down-to-date ideas, and those beginning should attend the evening meeting with their note books.

Fred E. White will speak on "Honey Exhibits at Paris"; John Brooks, "The Work of the Queen"; William Hugh, "The Hive"; Wilfred M. Smith, B.A., "Some Suggestions to Beginners."

Questions on all points relating to bee lore will be welcomed by F. Dundas Todd, F.B.I.

Other members will address the meeting on questions of interest to beekeepers.

Mr. F. Dundas Todd, F.B.I., addressing the members of the Entomological Society of B. C., at the annual meeting held in the Museum, Victoria, brought to the notice of his hearers that a Mr. Shannon, formerly of Vancouver, in the year 1860 had brought into the province the first shipment of live bees. Five colonies were brought near the present town of Elgin, but owing to neglect there was no development in the industry, and the swarms took to the woods. A well-known beekeeper of Ladner commenced beekeeping by procuring bees from trees and had built up a profitable hobby.

In regard to the work of the foul brood inspectors, they had made education a part of their work. They found beekeeping a losing proposition. Many had come to the conclusion there was nothing in beekeeping, but since they had started work the production of honey had risen from 20 tons to 150 tons per annum. He warned his hearers not to open out before they had the knowledge of the craft. "We are," said the inspector, "getting foul brood under. We make no pretence to cure it; we wipe it out. B. C. at no distant date, will be one of the greatest honey-producing provinces on the coast."

FRUIT BLOSSOM AND FLOWER BLOOM IN THE LOWER FRASER DISTRICT

"When daffodils begin to peer
With heigh! the doxy over the dale,
Why, then comes in the sweet of the year."
—Winter's Tale.

Mr. Henry Kacer, of Eburne, has carefully kept a record of the dates when pollen and nectar-bearing flowers bloom, during the past six years on Lulu Island. The dates will assist the progressive beekeeper. At present little is known of the nature of the forces at work in relation to the secretion of nectar in regard to the weather, and if reliable data could be obtained from various districts, extending over a number of

BEEKEEPERS'

SEND FOR
Our Illustrated Catalogue and Price List
of Bee-Keepers' Supplies

Wm. RENNIE CO., LIMITED

1138 HOMER STREET, VANCOUVER
Also at Winnipeg, Toronto and Montreal

SUPPLIES

years, the laws regulating the production of nectar might be found. At present we have nothing but the vaguest hints and conjectures upon this great question.

- March 3—Pussy willow in bloom;
- March 21—End of pussy willow bloom;
- April 1—First dandelion;
- April 3—Salmon berries and early plums;
- April 7—Gooseberries and red and white currants;
- April 10—Bees work on dandelion;
- April 14—Cherries;
- April 19—Pears, black currants;
- April 26—Apples;
- April 27—Bees obtain nectar above immediate needs;
- April 28—Chestnuts, wild blackberries, late apples;
- April 30—Raspberries, crab apples;
- May 2—First drone;
- May 5—First white clover in South Vancouver;
- May 8—Blueberries, Indian tea;
- May 11—First swarm in South Vancouver;
- May 11—Rhamnus (buckthorn), berberis (barberry).

Will some of our readers in other parts of the province compare above, noting weather conditions.

SHAKESPEARE ON BEES

April 23, 1616

This being the tercentenary of Shakespeare it will not be out of place to give an extract from his works upon the subject of bees—

"So work the honey bees;
Creatures, that by a rule in Nature, teach
The art of order to a peopled kingdom.
They have a king, and officers of sorts;
Where some, like magistrates, correct at home;
Others, like merchants, venture trade
abroad;

Others, like soldiers, armed in their stings,
Make boot upon the summer's velvet buds,
Which pillage they, with merry march,
bring home

To the tent royal of their emperor;
Who, busied in his majesty, survey
The singing masons building roofs of gold;
The civil citizens, kneading up the honey;
The poor mechanic porters crowding in
Their heavy burdens at his narrow gate;
The sad-eyed justice, with his surly hum
Delivering o'er to executors pale
The lazy, yawning drone."

QUESTIONS

"When is the best time to clip the queen's wings?" B.—About the time of fruit bloom.

E. T.—That depends upon the value of the

"Does it pay to re-queen every year?" queen you have; if she is prolific and her progeny are good strong producers, there is no reason why you should not keep her a second year—if not always re-queen.

"Which is the best race of bees, and why?" G. F.—Italians are generally recognized as good resisters of disease, and are certainly good nectar gatherers. For the beginner the Italian is a good all-round bee.

"How can I tell when my bees are going to swarm?" McA., Vancouver.—If you will examine your colony about every ten or twelve days after the end of April, you may find drone brood in cells. Queen cells are constructed around sides or lower edge of comb. When you find the queen cells capped over, you may look out for swarms. Of course, all the foregoing are only part of conditions. They are, however, the usual indications.

"In re-queening, must I remove the old queen?" B., Duncan.—Yes, always remove the old queen before introducing the new one. I find it best to allow the colony to be without a queen for two days before introducing.

What the Consumers Want

Written from a Woman's Standpoint.

By MRS. E. P. NEWHALL.

There is a certain class of people who regard it a social triumph to eat strawberries so early in the season, and so expensive in price that "the scent of the pocketbook hangs round them still," to parody the words of a well-known poet. These people British Columbia can scarcely expect to cater to, even though the British Columbia strawberry season has of late become one of the most extended, if not the longest, in the world.

But there is also the energetic housewife who likes to boast that she always gets her fruit done up early. Something that is necessary in order to retain her goodwill is accurate information as to how she may safely depend on B. C. for her supplies. I have known housewives who, out of sentiment, have determined to wait for B. C. berries to be told, after all other supplies had vanished, that the anticipated crop from certain localities did not turn out well, or, it rained so hard the berries could not be shipped, or other reasons entirely satisfying and sufficient to the grower but which left the consumer sore, and quite resolved not to be cheated out of her supply of strawberries the next season by any considerations of patriotism. While I fully realize that we are all subject to a certain extent to the vagaries of the elements I should advise that careful statistics of crops and the times at which they will mature and the dates at which they may be expected to be on the Calgary market should be advertised for a week or so ahead of time, and that quite candid advice should be given the housekeeper as to her course in this matter. Are B. C. supplies sufficient that where one locality fails another can step into the breach?

Small black currants are a mortification to the flesh. If men were put at the work of preparing them for the kettle there would be few of them on the market. It is a sufficient task to prepare the larger varieties and there are too many calls on the time of the housekeeper for her to waste it on infinitesimal berries which cook as hard as rifle shot when they are consigned to the kettle.

With regard to gooseberries these are almost always marketed too green and too small. Some have not even got as far in their maturing as to acquire an acid condition. A lady who bought some last year decided to commit them to the garbage can. It would have taken a fortune to sweeten them and there would have been no gooseberry flavor. Quite two or three weeks later she bought some which had been properly ripened. These when put up had all the fully matured flavor which is absolutely necessary to make gooseberry jam a success. When bought they were large and faintly pink.

Raspberries on the Calgary market last year were excellent,—large, fresh and finely flavored.

I have heard some complaint of the small receptacles of either gooseberries or raspberries being exposed to destruction through the slatted crate and that gooseberries especially, but sometimes raspberries as well, are lost out of the frail receptacle in this way. Will not some woman put her inventive genius to work to correct this.

Personally I never put up what are gen-

erally called "pre-serving cherries" of the red variety. The sweeter black cherries take less sugar and when popped into the cans immediately upon reaching the boiling point retain a flavor and freshness which makes them an ever welcome selection for the table.

What shall you do with discarded fruit—small black currants for instance? Let me point out that prohibition has carried in Alberta; will carry in other provinces. Soft drinks will be in demand. Some months ago the Saturday Evening Post spoke of a new process by which cider was being prepared for shipment. Cider has always shipped badly; it ferments from the motion of the cars. By heating it to a certain degree of heat, not sufficient however, to destroy its flavor, and by passing it through even the ordinary cream separator to remove all those particles which go to excite fermentation, it can now be canned and shipped by rail. This process as well as an article on the increasing demand for fruit juices appeared some time last summer in the above mentioned publication and I spoke of it to some of the growers present at the convention in Calgary. Probably more accurate details would be obtained from the department of agriculture at Washington. Black currant juice has certain remedial qualities of its own as the writer knows from personal experience of sore throats from which she suffered as a child, and which were sometimes conjured into existence for the sake of soothing drinks of black currant juice and water. For all other fruit juices I believe there will be an increasing demand as prohibition extends.

GEORGINA NEWHALL,

Chairman Advisory Board Public Market, Calgary.

COMMUNICATIONS.

To The Editor,

"B. C. Fruit and Farm Magazine."

Rear Sir,

On page 863 of your March number, under the heading "Manure and Fertilizers," you quote from Circular No. 8 by Dr. Frank F. Shutt, Dominion chemist, department of agriculture, Ottawa. In the main, every practical farmer will agree with the ideas expressed in that circular. It is wasteful and foolish indeed not to use all the available manures produced on the farm, and Dr. Shutt's advice as to time and method of application is sound. What he says as to rotation of crops and the growing of leguminous crops is also in harmony with good farming methods.

But there are two very serious errors in this article. You quote Dr. Shutt as saying that "commercial fertilizers cannot be depended upon profitably to maintain the soil." To refute this, we might quote from the reports of the Rothamstead Experimental Station, where experiments have been conducted for at least sixty years, but in British Columbia we do not need to go so far afield. We know of many farmers here who have not only "profitably maintained the soil," but have actually built up impoverished and so-called "worn-out soils," by the sole use of chemical fertilizers in conjunction with a reasonable rotation.

Dr. Shutt further says that "By home mixing fertilizers a saving of 25 to 35 per cent can be effected." This may be true where mixed fertilizers are sold which contain a great deal of "filler" or "make-weight," but it is utterly untrue of British

Please mention B. C. Fruit and Farm Magazine when writing to Advertisers.

What Standardization Means to Motor Car Buyers

IT means VALUE. Just to the extent that a car is standardized does the buyer's dollar approach the maximum of purchasing power.

Standardization means definite, proved quality, known manufacturing costs and reduced selling costs.

Of the million autos that will be sold in 1916, 75% will be standardized cars selling for less than \$1000.00 each. This remarkable American achievement is the direct result of standardization.

Finally the upholstery has been standardized by the almost universal adoption of



MOTOR QUALITY

40% of all 1915 cars sold were upholstered in this proved, guaranteed material and in 1916 the total will be at least 60%.

Fabrikoid is the only standardized automobile upholstery. It wears better than coated splits (commonly sold as "genuine leather") and has the artistic appearance and luxurious comfort of the best leather.

Raynite Fabrikoid for tops, single or double texture, is guaranteed one year against leaking, but made to last the life of the car.

To get the most for your money, buy a standardized car

Du Pont Fabrikoid Co.
Toronto, Ont. Wilmington, Del.



Craftsman Fabrikoid, the artistic upholstery material for furniture and home decoration is sold by leading department stores.

Made in Canada

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

213 Hastings St. East, Vancouver, B. C.
J. E. HUGHES, Manager.

Columbia. Here little, if any saving can be so effected, since no "filler" is used, and in fact home-mixing is more than likely to involve serious loss in that the mixture will probably be imperfectly made, and therefore the plant foods will be unevenly distributed. It has always been the custom in British Columbia to charge barely enough to cover the actual mixing costs.

Yours faithfully, M. H. DOBIE,
Victoria, March 8.

Clearing the Land

Much has been printed and said in British Columbia calling attention to the necessity of the provincial government and land owners generally taking concerted and immediate action in the matter of clearing, stumping and making ready for early cultivation the thousands of acres of logged-off land now open to settlement throughout the province. Many theories have been expounded on the subject and fewer practical solutions put forth.

D. E. Brown, Hope & Macaulay, official land selling agents for large tracts of C. P. R. lands, and who control or own outright large areas have put forth one idea that may be of assistance to those confronted by the same problem that met them. In an interview this firm says:

"Some time ago, Mr. Mason, a client of ours, and ex-city engineer of Prince Rupert, called at our office while passing through Vancouver. In the course of discussion regarding the many knotty problems encountered in the laying-out of Prince Rupert, Mr. Mason asserted that clearing land in the city limits had been a different problem. It was pointed out that in this part of the province not only was the country rough, but the timber growth was heavy and dense, all of which made clearing lots slow, tedious and expensive. Mr. Mason told how he had been asked in the spring of 1915 to witness a demonstration of stump pulling to be given in the neighborhood of Prince Rupert with a hand power machine. To quote the city engineer: 'The demonstration was an eye opener, not only to me but to all who witnessed the wonderful performance of the machine.' According to our informant, large deep-rooted stumps were pulled within a period of a few minutes by the new machine. As a result of this demonstration, Mr. Mason recommended to the Prince Rupert civic authorities that a hand-power stump puller be purchased. His wishes were promptly met and the work of clearing up certain areas of the city limits was rapidly pushed to completion.

"We were impressed by the recommendation of Mr. Mason, and as soon as possible went to South Vancouver and saw one of these stump pullers in operation. It required only the witnessing of a single large stump being up-rooted clean and clear from a position which but a few minutes before the operation seemed to offer defiance to ejection, to satisfy us that the machine was a most valuable asset to anyone having land to clear. Upon returning to our office, we got in touch with the manufacturers and had a stump puller shipped to Miller, B. C., where we have a tract of semi-improved land. Nearly all this land has been sold in blocks varying from 14 to 40 acres at intervals during the past three years. Settlers in nearly every instance took up occupancy upon completion of purchase and commenced clearing their respective holdings as their means permitted. We believed it would be good business to place within the easy reach of these settlers a device by means of which better work could be accomplished by one man in a single month than the entire colony could hope to do by the old method in several months. This settled, a hand-power stump puller was placed in charge of one of our settlers, with the understanding that the entire colony could have the use of the machine. The stump puller, including a complete equipment necessary to

PULLING STUMPS OF ALL SIZES FROM THE ATLANTIC TO THE PACIFIC

Land Clearing

A Pigmy in size, but a Giant in strength. The Columbia Hand Power Stump Puller is doing wonderful work in clearing up the stump lands of the Dominion. Power for the very heaviest, and Speed for the very lightest work. Works in any position on any kind of ground. Operated by one man. No horses; no help required. Sold direct from the factory to the farmer. No agents. Before you invest in powder or stump puller get full particulars of the Columbia. A postcard will fetch it by return mail.

COLUMBIA BLOCK & TOOL CO.
VANCOUVER, B. C.

start any ordinary work at a moment's notice without the added cost of 'extras' of any description, was purchased in August, 1915. We have, as a result, a colony of happy, satisfied settlers, all of whom are setting a pace in real home-making which others may advantageously follow. What we have done for this colony we hope to do for others, some of which are in process of formation. We might further add that what we have done here at an expense hardly worth mentioning, others similarly engaged in the business of catering to the wants and wishes of a land-seeking element can, and should also do.

"For the common good of the country and the people, and particularly for the purpose of minimizing the burden which often falls to the lot of the farmer and his family in a new country, we should be glad to see hand-power stump pullers as numerous throughout the logged-off areas of British Columbia as binders in the harvest fields of the great grain producing prairie provinces.

"It is an opportune time for provincial, civic, and municipal authorities, as well as large and small holders of uncleared and partially cleared land, to take the initiative. In this way not only may preparations be made for the reception of intending settlers but something really worth while may be accomplished."

BOUQUETS.

"The magazine is a good one, and should have a great many readers."—Geo. Brown, Collingwood East, B. C.

"I have found 'FRUIT AND FARM' both instructive and interesting."—Alex Martin, Joyce, B. C., Feb. 12, 1916.



Victoria, Nelson, Vancouver.

Manufacturers of

**LOW FREEZING
STUMPING POWDER**

**LOW FREEZING
AMMONIA POWDER**

**VERY LOW FREEZING
GELATINE POWDER**

Correspondence invited.

CHARCOAL MANURE AND PRE-EMPTIONS

I am afraid I cannot agree with the writer of an article which appeared in "Fruit and Farm" a short time back when he says: "Charcoal is an altogether noxious substance." We all know that charcoal has a great capacity for absorbing noxious matter, and that is its one great advantage and use; we feed it to our fowls, and by absorbing the substances that cause digestive troubles, it leaves the stomach contents sweet and wholesome. This is the same with plants. If your land is sour—it should not be—the charcoal absorbs the acid, leaves the rest of the soil sweet, and the plant rootlets avoid the charcoal; in this case, to use an analogy, it is like interning the Germans; they, in common with other noxious substances, are better and safer when collected together and fastened up than when wandering at large.

But there is another way of looking at it. Charcoal does not only absorb acids; it has a great capacity for holding other substances, among these being the ammonia which invariably accompanies rain. Now supposing the charcoal charged with acid—say, sulphuric acid—when a shower brings ammonia near it, by absorption and combination a new substance, sulphate of ammonia, is formed, a salt for which we gladly pay several dollars a cut, and whose fertilizing ability is beyond question. The neutralizing of the opposite characters of the two above-named substances leaves the charcoal free to continue its good work.

Last of all, Mr. Eddie—I have no doubt—would be the first to recommend a dressing of soot on an onion bed; yet this is the very substance he complains of which has absorbed all the noxious and otherwise gases which are given off during the process of combustion of a wood fire. I would ask Mr. Eddie whether in the whole of his personal experience he can trace an instance of crop diminution to a dressing of charcoal; also, does he not approve the practice of many excellent gardeners who place a layer of charcoal in the bottom of flower pots, and further, has he never dug up charcoal, as I have done repeatedly, and found it filled with tiny plant rootlets—and trust a root to know what is good for it.

The above is written, not for those who know, but on account of the unnumbered multitude who have given up city life to take up ranching; it may be, as in my own case, a pre-emption. They read of how bad charcoal is, and it being too much trouble to pick it out from the ash, throw the whole lot on a pestilential rubbish heap.

I asked a pre-emptor one time how his garden was doing, and his reply was: "Oh, punk, except where I used to throw my slops and rubbish." I know dozens of fellows who can't grow a vegetable on a bet, yet pack in half a day's journey on their backs lime, etc., which they have read is good for this, that, or the other, and throw on a heap or bury human manure and house refuse enough to grow everything they want.

Their portion is somewhat like my own was at one time. I would pick up a book on poultry and find a few pages devoted to the looking after the normal hen and all the rest of the book was about treating the various diseases to which fowls are heir to. I almost came to the conclusion that no one could be a farmer unless he was a fully-fledged doctor and veterinary

Gives You A Giant's Power

When you see a KIRSTIN get a grip on a great big stump and bring it out, roots and all, at a rapid rate, you will realize how this little machine gives a man the power of a giant. The Kirstin's wonderful system of double leverage enables one man to do more work, quicker work, easier work, better work at stump pulling and at less cost. The powerful

One-Man Easily Handles And Operates A Kirstin



Kirstin One-Man Stump Puller

will clear an acre from one anchor. The only stump puller that changes speed while in operation—the only puller that gives you five machines in one. We back the Kirstin with an iron-clad guarantee and invite full comparison with any other stump puller or land clearing method. Our Big Free catalog tells all about the easy, economical KIRSTIN way of clearing land. Write today for your copy. Agents wanted.

A. J. Kirstin Canadian Co.,
5802 Dennis St., Sault Ste. Marie, Ont. 52

surgeon. In practice, my only one or two deaths have been on account of a hawk occasionally cutting a pullet off in its prime.

What I wish to convey is that there is so much matter written which implies all kinds of difficulties, and men who have no experience soon get discouraged and cease trying. I like some of the Bulletins that are issued by our practical government—concise little leaflets, the whole thing in a nutshell, and if you act up to them you do not need to pay your schoolmaster too much for experience bought.

Talking of discouragement if you tried to discourage a man who thought of enlisting for the great war we have on hand, you would stand a good chance of finishing up as a guest of His Majesty—behind bars—and I think that some of the "knockers" who try to choke off an intending pre-emptor and persistently discourage newcomers to a district, would be somewhat discouraged themselves in their advice-giving by having a similar treatment handed them.

I have in my mind as I write, an article which appeared in Fruit and Farm a year or so back on this matter, the "Ashcroft knockers" and "Fort George;" my own experience is on the same lines.

There is a lot too much written about the sourness of land; the acidity of the soil is not the great trouble. We have up here in Shushartie land that, when you dig it smells just like, and is as acid as spirits of salts; by which name hydrochloric acid is commonly known, and just ditching it does no good, but dig it up. Let the air get to it and it will change color, go darker and lose its offensive smell. "While you are watching it," in two or three days, if broken in fairly small pieces, it will have sweetened right through; but you can't grow a thing on it—yet, but put on some manure—I refer to the made-on-the-farm variety, without depreciating the value of artificials—and at once you can grow anything.

Anyone, I think, who cares to go to the Government Offices when in Victoria, can see the photograph taken by the pre-emption inspector of a small patch of Brussels sprouts, 20 inches high, planted on swamp land, which has never been touched until the spring of the year the photo was taken, and on my brother's place, sunflowers, seven to eight feet high. These latter were planted on what was a lake, known locally as Goose Lake.

The first attempt at drainage was when the ice was thick enough to stand on. I cut out a width of ice and my brother fol-

CANADIAN EXPLOSIVES LIMITED

Head Western Office:
Victoria, B. C.

District Offices:
Vancouver, B. C. Pr. Rupert, F. C.
Nelson, B. C. Edmonton, Alta.

EVERYTHING IN THE
EXPLOSIVE LINE

Have YOU Tried Our Low Freezing Stumping Powder

CORRESPONDENCE SOLICITED

Write for Pamphlet

Get a Farm of Your Own TAKE 20 YEARS TO PAY

The land will support you and pay for itself. An immense area of the most fertile land in Western Canada for sale at low prices and easy terms, ranging from \$11 to \$30 for farm lands with ample rainfall—irrigated lands from \$35. Terms—One-twentieth down, balance within twenty years. In irrigation districts, loan for farm buildings, etc., up to \$2,000, also repayable in twenty years—interest only 6 per cent. Privilege of paying in full at any time. Here is your opportunity to increase your farm holdings by getting adjoining land, or secure your friends as neighbors. For literature and particulars apply to

ALLAN CAMERON, Gen. Sup. of Lands
Desk 31, Department of Natural
Resources C. P. R.,
CALGARY ALBERTA

lowed and made a trench in the mud. We had previously let off all the water we could by cutting away the bank. The photo of the sunflowers mentioned was taken seven months later on in the same year. Of course, other stuff was grown; I only mention these because they are shown in two official photographs and so are beyond question.

There are many who look on all these things as "juggling." We were asked last December, "What do you do to your fowls?" because we were getting eggs. Another man told me quite seriously that he had planted various vegetable seeds, and—this is the rich bit—"they had come up." I asked what he expected the mto do. I asked what he expected them to do. I only become wearisome. What I would like to see is someone who would show the men who do not know it all, how to utilize the material at their disposal—to name a few: Dead fish, bones, mussels, clams and shells, kelp, wood and kelp ashes, and in the interior, peat, ashes, etc., etc.

That some such education is necessary is shown by Mr. Stone in an old number of Fruit and Farms, who says: "Only the favored few can manage without going out to get work." I only had a few hundred dollars, but have not looked for a job yet, and do not intend doing so, though I am not as flush as I might be. It was suggested that I should support myself and wife—I think I ought to have said my wife and self—without getting work on the road or otherwise.

The suggestion—it was almost a challenge—came as a result of my saying that I believed an energetic man could make a living—of a kind—while getting his place under, and I contended that as soon as a pre-emptor leaves his ranch he is getting into a practice that will prevent him from ever doing anything with his pre-emption, because if he earns "good money," he finds it easier, and if the other kind—hard work and small pay—he never attempts to get stock and implements, and so he never makes a start. CHAS. A. BARNES.

Shushartie Bay.

If you are repairing any fencing this spring, remember that to get the maximum service out of a fence it should be well built from good end and corner posts. The corner posts should be placed solidly in the ground, so that they can not be heaved by frost or drawn over by the pull of the fence.

The wire should be strung tightly to the end posts, but it should not be tightly stapled to them. It should be fastened so that the wires can move in a horizontal direction to take care of expansion and contraction, due to changes in temperature, and to distribute evenly any pressure caused by a blow to the fence.

A barbed wire should be placed a short distance above the top of the woven wire to prevent stock from crowding it down when reaching over the fence.

What is an Internal Bath?

By R. W. BEAL

Much has been said and volumes have been written describing at length the many kinds of baths civilized man has indulged in from time to time. Every possible resource of the human mind has been brought into play to fashion new methods of bathing, but strange as it may seem, the most important, as well as the most beneficial of all baths, the "Internal Bath," has been given little thought. The reason for this is probably due to the fact that few people seem to realize the tremendous part that internal bathing plays in the acquiring and maintaining of health.

If you were to ask a dozen people to define an internal bath, you would have as many different definitions, and the probability is that not one of them would be correct. To avoid any misconception as to what constitutes an internal bath, let it be said that a hot water enema is no more an internal bath than a bill of fare is a dinner.

If it were possible and agreeable to take the great mass of thinking people to witness an average post mortem, the sights they would see and the things they would learn would prove of such lasting benefit and impress them so profoundly that further argument in favor of internal bathing would be unnecessary to convince them. Unfortunately, however, it is not possible to do this, doubtless prove to be. There is, then, only one other way to get this information into their hands, and that is by acquainting them with such knowledge as will enable them to appreciate the value of this long-sought-for health-producing necessity.

Few people realize what a very little thing is necessary to improve their physical condition. Also, they have almost no conception of how little carelessness, indifference or neglect can be the fundamental cause of the most virulent disease. For instance, that universal disorder from which almost all humanity is suffering, known as "constipation," "auto-intoxication," "auto-infection," and a multitude of other terms, is not only curable, but preventable through the consistent practice of internal bathing.

How many people realize that normal functioning of the bowels and a clean intestinal tract make it impossible to become sick? "Man of today is only fifty per cent. efficient." Reduced to simple English this means that most men are trying to do a man's portion of work on half a man's power. This applies equally to women.

That it is impossible to continue to do this indefinitely must be apparent to all. Nature never intended the delicate human organism to be operated on a hundred per cent. overload. A machine could not stand this and not break down, and the body certainly cannot do more than a machine. There is entirely too much unnecessary and avoidable sickness in the world.

How many people can you name, including yourself, who are physically vigorous, healthy and strong? The number is appallingly small.

It is not a complex matter to keep in condition, but it takes a little time, and in these strenuous days people have time to do everything else necessary for the attainment of happiness, but the most essen-

tial thing of all, that of giving their bodies their proper care.

Would you believe that five to ten minutes of time devoted to systematic internal bathing can make you healthy and maintain your physical efficiency indefinitely? Granting that such a simple procedure as this will do what is claimed for it, is it not worth while to learn more about that which will accomplish this end? Internal bathing will do this, and it will do it for people of all ages and in all conditions of health and disease.

People don't seem to realize, strange to say, how important it is to keep the body free from accumulated body-waste (poisons). Their doing so would prevent the absorption into the blood of the poisonous excretions of the body, and health would be the inevitable result.

If you would keep your blood pure, your plexion clean, your head keen, your blood pressure normal, your nerves relaxed, and be able to enjoy the vigor of youth in your declining years, practise internal bathing and begin today.

Now that your attention has been called to the importance of internal bathing, it may be that a number of questions will suggest themselves to your mind. You will probably want to know WHAT an internal bath is, WHY people should take them, and the WAY to take them. These and countless other questions are all answered in a booklet entitled "THE WHAT, THE WHY, and THE WAY OF INTERNAL BATHING," written by Doctor Chas. A. Tyrrell, the inventor of the "J. B. L. Cascade," whose lifelong study and research along this line make him the pre-eminent authority on this subject. Not only has internal bathing saved and prolonged Dr. Tyrrell's own life, but the lives of multitudes of individuals have been equally spared and prolonged. No other book has ever been written containing such a vast amount of practical information to the business man, the worker and the housewife. All that is necessary to secure this book is to write to Dr. Tyrrell at Room 895, 257 College Street, Toronto, and mention having read this article in Fruit and Farm, and same will be immediately mailed to you free of all cost or obligation.

Perhaps you realize now more than ever the truth of these statements, and if the reading of this article will result in a proper appreciation on your part of the value of internal bathing, it will have served its purposes. What you will want to do now is to avail yourself of the opportunity for learning more about the subject, and your writing for this book will give you that information. Do not put off doing this, but send for the book now, while the matter is fresh in your mind.

"Procrastination is the thief of time." A thief is one who steals something. Don't allow procrastination to cheat you out of your opportunity to get this valuable information, which is free for the asking. If you would be natural, be healthy. It is unnatural to be sick. Why be unnatural, when it is such a simple thing to be well?

\$120.00 SURE

Congenial work at home among church people. Man or woman. 60 days or less.

Spare time may be used. No experience required. INTERNATIONAL BIBLE PRESS, Spadina Av. Toronto

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.)

Like the seeding of the vegetable garden, the planting of summer flowers in the flower garden ought not to be all done the same day (some time about the end of May or later), but a start ought to be made now to get the best results from pansies, violas, pentstemons, antirrhinums and some others of the hardier summer flowers.

Pansies and violas are growing and starting to flower now and must be planted at once; too often they are left till too late and they are half grown, when transplanting gives them such a check that they never recover and are unsightly the whole year.

Pentstemons are slow growers and, unless planted early, they will just be coming to their best when early fall frosts may bring their flowering season to an untimely end. Pansies and violas like a cool, moist soil, rich in humus, and do best in a slightly shaded position; the seed pods ought to be picked from the plants as soon as the flowers fade, to prevent the maturation of seed and the consequent curtailment of the flowering season. Pentstemons require a deep, rich soil, and full exposure to the sun. Antirrhinums do wonderfully well in poor, dry soil, but amply repay the little trouble taken to give them a more congenial environment.

It is quite safe now to sow the various hardy annuals; there is such a host of those that it is useless for me to enumerate them here—recourse had better be made to a good seedsman's catalogue.

Splendid results can be obtained from hardy annuals sown in rows or clumps in beds and borders, and some very good color schemes can be worked out if a little care and thought is given to their arrangement.

They are also very useful when employed in the herbaceous border to prevent blanks being made by the passing of such spring flowers as tulips, daffodils, crocus, etc. The seeds of some of the above class of plants are very small and require careful sowing and light covering; when sown in beds and borders the soil ought to be well dug, and fertilized with well-rotted stable manure, and, if used in the herbaceous border, the soil ought to be loosened up well with a fork and the surface well pulverised with the rake before sowing.

Supposing you have a clump of daffodils in your herbaceous border which will leave a blank when over; dig round it with a fork and sow a few seeds of nemophila or some other desirable hardy annual; the young seedlings will be grateful for the little shade afforded by the daffodil leaves and will grow and flower when the bulbs are resting.

Vegetable Garden

It is time now to sow carrots, beet, turnips, lettuce, kidney and pole beans, and don't omit the fortnightly sowing of green peas. Carrots should be sown in shallow

“Always on the job”



RITCHIE'S reliable seeds, and the service of a home concern of seedsmen who know local conditions and requirements.

SEED POTATOES

This year our stock of seed potatoes is better than ever. And we have several new well-tested varieties to offer. We have a large stock and many varieties. Here are three:

Early Rose—For first early. Per peck **60c**

British Queen—Second Early. Per peck **75c**

Gold Coin—For main crop. Per peck **60c**

\$3.00 and \$3.50 per 100 lbs. Special prices for ton lots. All this stock is grown on high land.

SEND ADDRESS AT ONCE IF YOU HAVE NOT HAD OUR 1916 SPRING CATALOGUE. WE MAIL IT FREE.

RITCHIE'S 840 GRANVILLE ST. OPP. GLOBE THEATRE

GLADIOLUS BULBS

Nothing returns more profuse masses of splendid large flowers. Plant now in the open, cover with 3 inches of soil. They will bloom all summer. Here are three varieties, merely suggested from our long list of splendid bulbs:

America—Color, soft lavender pink, spikes 2 to 3 feet long, dozen **40c**

Brenchleyensis—Color brilliant scarlet; very large flowers, per dozen **50c**

Ritchie's Mixed Hybrids—Best exhibition varieties saved and selected; many shades and rich colorings, per dozen **50c**

drills and lightly covered with fine soil; the soil over all seeds ought to be firmly pressed down with the flat of the foot—this ensures a plentiful supply of moisture for germination. This detail is of the greatest importance should a protracted spell of drought succeed the sowing.

The early short horn carrots ought to have twelve inches between the rows; taller growing varieties fifteen to eighteen inches.

Beet requires a little deeper soil than carrots because of the larger seed, and the same distance apart as the larger growing carrots.

Turnips are an excellent vegetable, but hard to grow here on account of the maggot. As a precaution, it is a good plan to take out a drill six inches deep and the same in width, scatter 1 lb. of vaporite to every ten feet of row, return the soil again and sow the seeds on top. This method is usually successful; but the vaporite will give out before the activities of the fly are at an end, hence it is wisest to only put in small sowings at intervals of two or three weeks. The main crop for winter use is best sown about the middle of June, when the one application of vaporite will usually carry the crop over the period of infection.

Lettuce can be sown in an odd corner, to be transplanted when in the rough leaf to

good soil, the plants to be twelve inches apart each way.

Kidney beans require drills two inches deep and two feet apart. Sow thickly, as they have to be thinned out later to six inches. Pole beans are sown in hills three feet apart each way, and sometimes in rows after the manner of green peas.

TRANSPLANTING VS. THINNING VEGETABLES

Better results are very often obtained by transplanting vegetables than by planting them in place and thinning out later. There are several advantages in favor of transplanting. The plants develop a better, more compact root system. They can be set at exactly the desired distance apart in the row; the soil in which the plants are to be set can be cultivated so that the plants when put out will have a start ahead of the weeds; earlier crops can be secured by starting the plants inside early in the season, and transplanting outside after danger of cold weather is past.

Sometimes the work of transplanting a crop is no more than that of thinning—take onions, for example—they can be transplanted with about the same trouble that it required for thinning, when planted in



Sutton's Seeds

A. J. WOODWARD, Sole Agent

615 Fort St., Victoria, B. C. 667 Granville St., Vancouver, B. C.

DIRECT FROM
READING, ENG.
Catalogs on Application



rows where they are to mature. Better onions can be secured by the transplanting method.

Plants like lettuce, cabbage and parsley do much better if transplanted at least once. Melon or cucumber plants, if grown in paper pots or boxes, can be started inside much earlier than in the open, and then transplanted, after danger of frost is past. If grown by this method, so that the roots are not disturbed, they can be transplanted quite readily.

Hotbeds and cold-frames are very desirable for growing plants for transplanting; the hotbed to start the plants in and the cold-frame for hardening them off. However, much can be done without the use of these structures.

THE FARMER'S WIFE'S FLOWER GARDEN

By Rusticus

Poets without number have sung their songs of the spring. Indeed, we have what we call spring poets—flocks of them, who surely migrate like the birds, for we never hear their songs till drear winter is succeeded by the days of gentle showers and balmy breezes. However, the spring poet is only a near-poet, after all, and not to be taken seriously.

But we all know what that great, all-the-year-around poet, the late Laureate, Alfred Tennyson, wrote about the spring in "Locksley Hall":

In the spring a deeper crimson comes upon
the robin's breast;
In the spring the wanton lapwing gets himself
another crest;
In the spring the purple iris circles on the
burnished dove;
In the spring a young man's fancy lightly
turns to thoughts of love.

All of which is true; even that about the young man's fancy. But what has all this to do with a farmer's wife and a flower garden? you ask. It is only a prologue. We shall proceed to the theme.

First, let us borrow a thought from the quotation, and say: In the spring the fancy of a farmer's wife turns to thoughts of a flower garden. That is not poetic, but it is fact. Well! after Mrs. Blank's fancy has turned, she turns to her husband.

"George," she says, "I'm going to have a nice little flower garden this summer."

"All right, dear," says Mr. Blank without raising his eyes from his newspaper.

"And," continues the wife, "I want you to help me plan it."

This is where the flower garden idea gets its first frost-bite, for Mr. Blank disclaims the slightest knowledge of flowers. Moreover, he says he has no time to bother with a garden.

Probably Mrs. Blank quietly pushes the fancy back into the spring braincell from whence it sprang. Later, when her husband, throwing down his paper, announces that he is going to town in the morning and that if she will make a list of the seeds she wants he will get them for her, and that he will have one of the men spade up a bit of ground for her, she says she not think she will bother with flowers this

RENNIE'S SEEDS

Always Grow

The Finest in the Land

SEND FOR OUR 1916 SEED ANNUAL

DO IT TODAY

Wm. RENNIE CO., LIMITED,

1138 HOMER STREET

VANCOUVER, B. C.

ALSO AT WINNIPEG. TORONTO AND MONTREAL

SPRAY WITH PHYTOPHILINE

The Great Non-Poisonous Insecticide and Plant Tonic.

The best all-the-year-round spray for all insect pests and fungous diseases, including caterpillars, slugs, aphids, white fly, scale, ants, leaf curl, worms, thrip, mildew, rust, etc., etc., on Fruit trees and bushes, Roses, Indoor and Outdoor Plants, Vegetables, etc., and also for vermin on animals, and for moths, wasps, etc. Absolutely safe to use and a splendid tonic for plant life. Special booklet with testimonials, etc., on application. Grade 1 for general use for insects on plants. Grade 3 for spider, woolly aphid, mildew and rust on plants, and also for vermin on poultry and animals, and their houses, and for moths in furs, etc. Postpaid prices, 55c, and double sizes 85c, \$1.25 and \$2.80. CASH WITH ORDER. All leading florists or from. **PHYTOPHILINE DISTRIBUTORS, 1493 SEVENTH AVENUE WEST, VANCOUVER, B. C.** Agents wanted everywhere. **SPRAYERS** for Phytophiline. Special mist sprayer 90c postpaid. Also the famous "Florists' Friend" Sprayer, solid brass, all latest improvements, \$3.85 postpaid.

The "Quality" Tree House

THE BRITISH COLUMBIA NURSERIES CO., LIMITED, have about completed their Spring packing of trees, shrubs, roses, etc., for shipment to all parts of the province, and wish to take this opportunity of thanking their numerous customers for their liberal patronage during the past year.

While sales are not as heavy as in other years, yet our business is very encouraging considering the prevailing conditions. We have sufficient faith in our industry and in the development of British Columbia to enlarge and extend our business, believing that on the return of prosperity nursery stock will be wanted in increasing quantity.

With our added facilities and extensive planting at Chilliwack this Spring, we will be even better equipped to serve our patrons than ever before.

It will always be our aim to grow and deliver the best stock, TRUE TO NAME; in fact, we guarantee satisfaction in every deal, large or small.

A few reliable men wanted to act as salesmen for us, beginning at once, to solicit orders for Fall, 1916, delivery. Liberal terms and honest treatment given to salesmen and customers.

British Columbia Nurseries Co., Ltd.

1493 SEVENTH AVE. W.

VANCOUVER, B. C.

BRAND'S
SEEDS
GROW

BRAND'S SEEDS

723 ROBSON ST.

VANCOUVER, B.C.

CATALOGUE
AND GUIDE
FREE OF
CHARGE

year. And the little flower garden dies before its birth.

Or, perhaps, Mrs. Blank will nurse her fancy alone and determine to plan and plant a flower garden all by herself. In such case in due time seeds are sown, germinate and burst through the warm earth. Now the farmer's wife has a fine, healthy, infant flower garden. She spends as much time among the young plants as she can spare, and looks forward to a bower of beauty. But no one else is interested, and when extra household duties and hot weather come she loses interest, weeds choke the tender plants and the little flower garden is not, and never will be, a thing of beauty. What a difference a little help, a little interest, a little sympathy by Mr. Blank and other members of the family would have made! The garden would have thrived and there would have been infinite pleasure for the woman whose life has little enough in it that makes for gladness.

Of course, if Mrs. Blank, besides being a lover of flowers, is an enthusiastic floriculturist with the essential sympathetic "touch"—flowers, like people, develop best under sympathetic treatment—then she will have a nice little flower garden whether Mr. Blank is interested or not.

This little bit is not written for that Mrs. Blank. It is written to the Mr. Blank whose wife would love to have a nice little flower garden, but needs his help and sympathy for its success.

Celery for the Home

Prepare your trench in the following manner: Mark off your ground six feet wide by the length required to take care of the quantity you intend planting. Dig this out to the depth of eight inches, throwing the earth equally on each side. Fill this eight inches up with good rotten manure and dig it in thoroughly and deeply. To insure its being thoroughly incorporated with the soil, tramp all over it and then dig it up again. Then level and rake it over, after which mark off, with a string, the three rows, which should be eighteen inches between the rows. The rows should run north and south. Next get your plants which should now be about eight inches long, that is, four inches of tops and four inches of roots; take the shears and clip off about one-half inch of foliage and one-half inch of roots, and then plant eight inches apart in the rows. Be sure, when planting, that you do not have the roots turning upwards. Dibble your holes big enough to allow the roots to go down in their natural position, and, above all, press the earth very firmly around the roots. Give a good supply of water and shade for a day or two with boards or paper.

You can get the plants from seedsmen, but do not leave it too late in ordering. You had better order early than wait until the twenty-fourth of May.

Grow Some Radishes

Along each side of your trench you have a hill running the whole length, probably a foot high. Level this off on top to about eight inches wide and sow radishes, which will mature long before you need the soil for earthing-up purposes; in fact, I get two crops of radishes off these hills.

Cultivation.

From this out (your rows being wide enough), run your hoe through one day, and water the next day. Take off the nozzle and hold the hose down close and give a liberal supply of water. Once a week give the rows a watering with liquid manure. By

the end of July you will have some celery fit to pull. About the second week of July start the earthing-up operations by drawing from the hills on either side and putting about four inches of earth around the stalks. Do this by holding each individual plant firmly with your left hand and using your right to draw the earth, being very careful not to let any earth run in between the stalks.

Bleaching

To thoroughly bleach the celery fit for table use, allow yourself ten days or two weeks, covering up within four inches of the tops of the foliage. Scatter a little sulphur or slaked lime over your bed twice during the season. Look occasionally for a green and yellow caterpillar. Don't squirt water on the foliage. Carry out the foregoing instructions and you will have celery fit to place before a king.

I recommend the earth instead of paper or boards for bleaching, because I have tried all these ways, and find the earth far preferable. It gives the celery a sweet, nutty taste, and the bleaching is more complete.

High-grade Fertilizers Are Best Values

The average cost of Nitrogen in 600 samples of "complete" fertilizers was 66% higher than the cost of Nitrogen in

Nitrate of Soda

Are you one of many paying high prices for low-grade goods?

Send Post Card for Attractive,
Money-saving Books

WILLIAM S. MYERS, Director
25 Madison Avenue, New York City

STEELE BRIGGS'

PROVED THE BEST BY EVERY TEST

"CANADA'S GREATEST SEED HOUSE"

FOR SALE EVERYWHERE IN CANADA

SEEDS



3 Grand Varieties--Good as Gold

- Beans**—Refuge Wax—Pods round, clear and transparent and of handsome appearance. Is tender, very productive, free from rust, and stands dry weather well. $\frac{1}{4}$ lb. 15c., 1 lb. 45c., 5 lbs. \$2.00. Postpaid.
- Corn**—Golden Bantam—An early, hardy, productive variety, of finest quality and delicious flavor. It is a rich, cream yellow, deepening to orange-yellow when ripe. $\frac{1}{4}$ lb. 10c., 1 lb. 80c., 5 lbs. \$1.40. Postpaid.
- Peas**—Bruce's Early Settler—A grand extra early wrinkled marrow variety. The pods are large, deep green, and filled with large peas, possessing the rich flavor and quality of the best late varieties. It attains a height of about 1 $\frac{1}{2}$ feet and is very productive. $\frac{1}{4}$ lb. 15c., 1 lb. 40c., 5 lbs. \$1.75. Postpaid.

If sent by Express at purchaser's expense, deduct 10c. per pound. BRUCE'S Seeds are the cheapest, because they are the best.

FREE Our handsomely illustrated 128-page catalogue of Vegetable, Farm and Flower Seeds, Plants, Bulbs, Poultry Supplies, Garden Implements, etc., for 1918. Send for it.

John A. Bruce & Co., Ltd., Hamilton, Ontario
Established Sixty-six Years.

POULTRY SECTION

THE INTELLIGENCE OF THE GOOSE.

By MICHAEL K. BOYER.

The peculiarities and intelligence of geese has been the subject of many an interesting tale. Some of these anecdotes are scarcely creditable, yet those who have kept and studied the nature of geese are ready to accept almost any tale that may be told of him.

Morris relates a number of instances where ganders have become the inseparable companions of their masters, following about the fields on hunting expeditions, and into the streets of a town, like the most devoted dog.

The same writer also relates how faithfully a gander discharged the self-imposed duty of guardian and guide to an old blind woman. Whenever she went to church he directed her footsteps into safe paths by taking hold of her gown with his bill, and during the services he nipped the grass in the cemetery close by until his services as guide to return home, were needed.

Another incident is told that is said to have occurred in a town in Pennsylvania. A man was playing an accordion when it was noticed that the pet goose on the place became fairly intoxicated with the music. He kept excellent time with his feet all the time the music continued. Noticing the bird's liking for it, the man repeated the tunes again and again, the bird each time showing its appreciation.

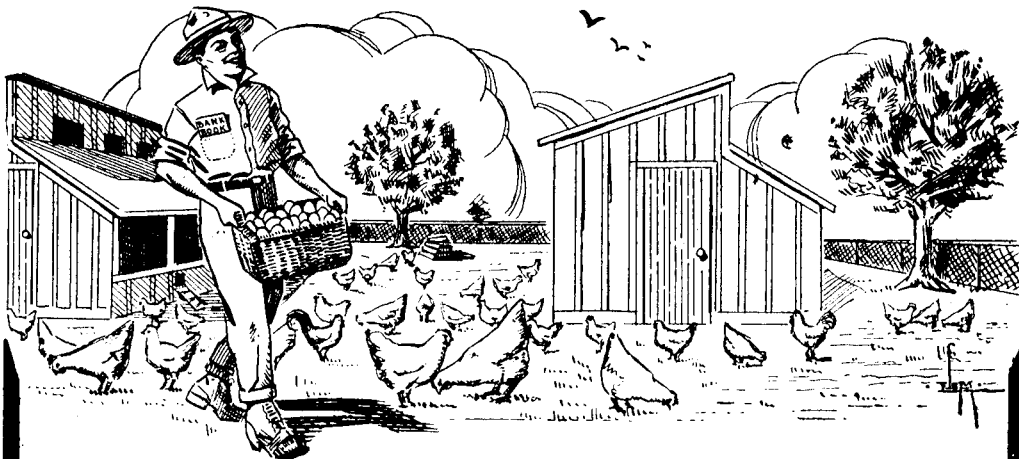
The writer one day was driving with an old-time resident along a country road in Massachusetts, when an old lady was noticed coming along closely followed by an old gander. When the old lady stopped to talk to a passerby, the gander would also stop and look up into the face of the stranger all the while he or she was talking, just as though it understood every word that was spoken. The bird's whole life seemed to be wrapped up in the affections of that old lady, and they were inseparable companions.

Our companion informed us that this gander would lie in front of the house perfectly contented as long as the old lady was indoors doing her work, but the moment she appeared ready for a walk the bird would greet her with a peculiar cry and walk closely by her side.

Geese are ever on the alert, becoming veritable watch dogs during the day and night. The approach of a stranger is the signal for shrilling yells which cannot be mistaken. It was this trait of watchfulness that gave the geese credit as early as 388 B. C., for saving Rome from surprise and capture.

Geese are long-lived, some instances being recorded where they attained a great age. In 1859 a goose was exhibited at the New Jersey State Fair, and her history, on a placard tacked on the coop, read as follows:

"Madam Goose is now owned by Robert Schomp, of Reading, Hunderton County, New Jersey. She has been in his possession 25 years, and was given to him by his grandfather, Major H. G. Schomp. Robert's father is now in his 85th year, and this goose was a gift to his mother as a part of her marriage outfit. The mate of Madam Goose was killed in the Revolutionary War,



NO SUCH THING AS "CHEAP" CHICK FOOD.

To sacrifice quality for price simply means "taking it out on your chickens," which in the long run is by far the most expensive way.

ROYAL STANDARD MILLS CHICK FOOD

is not a "high-priced" food, but it IS a food that will nourish and bring to a sturdy, energetic maturity. Made from the very cleanest, choicest grains. Contains high percentage of protein—the food element that builds bone, flesh and strength. Positively will not "scour" young chicks and cause mortality. Feed this to your chicks for the best results. Order from nearest dealer.

VANCOUVER MILLING & GRAIN CO., LTD.

Vancouver, Victoria, New Westminster, Nanaimo.


being rode over by a troop of cavalry. In the spring of 1857 she laid eggs, three of which were hatched and the goslings raised. In 1858 she made seven nests and laid but two eggs, evidence perhaps of failing faculties. Her eyes are becoming dim, one having almost entirely failed. The year of her birth cannot be ascertained, but she remains a representative of the olden time."

Nearly 30 years ago William Rankin, a noted breeder of geese, purchased in Rhode Island a wild gander which has been owned by one family some 50 years. A member of the family had wounded the gander by firing into a flock of wild geese, breaking his wing. The gander recovered from his injury and was kept for that number of years, without, however, mating with other geese. Several years ago it was reported that he was still alive, doing service as a decoy bird during the gunning season, and highly valued by his owner, although at least 75 years old.

Mr. Rankin cites the instance of a goose owned in Boxford, Massachusetts, where it was the property of one family for 101 years, and was then killed by the kick of a horse. She had laid 15 eggs and was sitting on them when a horse approached too near the nest; she rushed off, in defence of her eggs, seized the animal by the tail, and was killed by a kick from him.

In former times it was not uncommon for the farmer's daughter, on her wedding

**PORTABLE LIGHTS
FOR ALL PURPOSES**
write for catalogue:

MOR-O-LITE  **NO WICKS NO CHIMNEY**
three hundred candle power for sixty hours on one gallon

MOR-O-LANTERN
storm proof. furns night into day no glass to break

 **P. M. Moore & Co. LIMITED**
WORLD'S BEST VANCOUVER B.C.

day, to receive, among her other gifts, a goose from the old homestead, to become her property and accompany her to her new home. In some instances such geese were kept for many years, perhaps far beyond the life of the young lady to whom it was presented.

Geese have a number of peculiarities which are interesting. When sexes are equal, geese pair and become very much attached to their mates, seldom proving unfaithful. They have a strong attachment to their home. They are grazers, their bills being provided with sharp, interlocking, serrated edges, designed to readily cut and divide vegetable tissues, and the tongue at the tip is covered with hard, hair-like projections pointing towards the throat, which serves to quickly and surely convey the bits of grass and leaves into the throat.

Goose grease from time immemorial has been considered a sovereign remedy for rheumatism, lumbago, stiff joints, sprains, etc., and the Hebrews prefer it to lard for cooking purposes. In Europe the liver of the goose is sold to pie makers, who make of it the well known pies. As high as \$4.00 a dozen is paid for these livers in Europe. Geese are the cleanest fowls alive, being very particular about the condition of their food. They seem to appreciate the care and attention they receive, and soon learn to know their attendants. In China goose manure brings a high price, but its value has not become recognized in this country to any great extent.

Ganders occasionally take very peculiar freaks, such as conceiving a violent attachment for some inanimate object as a door, a stone, a cart wheel, a plough, or something of a similar nature, when they will spend the greater part of their time sitting beside it or in its company.

Should the gander be separated from his mate and placed with another, he will seldom accept the new one as long as the old mate is anywhere within hearing distance, and even when entirely removed from the premises, it frequently takes some time before he will become reconciled to his new mate.

The broody goose plucks off more or less down from her breast with which to line the nest and cover the eggs whenever she leaves them. During breeding season ganders, and even geese when sitting, or in defence of their young, manifest considerable courage and often punish intruders severely. When interfered with they seize the intruders with the bill, strike with the wings, and sometimes scratch with the claws. They have sufficient power in the jaws to bite quite hard, and a large, full grown gander has been known to strike hard enough with the wings to break a person's arm.

When a goose is hatching she must be watched, but not disturbed. The actions of the gander at this time is interesting. He keeps standing on one leg for weeks—probably his way of doing penance—and has one eye half shut, keeping watch and guard that nothing can approach the nest. Just as soon as the first gosling breaks the shell, the gander closes in and draws his defence closer, and stands or walks on both feet now. Should one approach the nest, the old goose will stretch out her neck and resist the intrusion to her utmost, while the gander will execute a flanking movement that is very disconcerting.

Young goslings quite frequently roll over on their backs while in the pasture, and unless righted will lie in that position until they die. They are unable to recover

15 ten inch, double sided, 90c Victor Records that should be in every home--

Flag That Never Comes Down	Edward Hamilton	17696 10 in.
British Troops Passing Through Boulogne	(Descriptive)	
Take Me Back to Canada (O. F. Beck)	Edward Hamilton	17742 10 in.
They Sang "God Save the King"	(Judge-Williams)	
It's Tulip Time in Holland	Harry Macdonough	17874 10 in.
When I Leave the World Behind	Henry Burr	
Shepherd's Hey (Morris Dance Tune)	Victor Concert Orchestra	17897 10 in.
Irish Tune from County Derry	Victor Concert Orchestra	
Mother Machree (Vocal)	Charles Harrison	17780
A Little Bit of Heaven (Vocal)	Charles Harrison	
'Till the Boys Come Home (Keep the Home-Fires Burning)	Wheeler	17881
The Drummer-Boy	Frederick Wheeler	
Cunha Medley	Hawaiian Guitars	17774
Hula Medley	Hawaiian Guitars	
Rule Britannia (Dr. Ame)	Coldstream Guards Band	120400 10 in.
La Marseillaise (de l'Isle)	Coldstream Guards Band	
Aloha Oe! (Farewell to Thee)	Hawaiian Guitars	
Lua-Kaill		17803 10 in.
The Rosary (Nevin)	Hawaiian Guitar Pale K. Lua	
Scotch Bagpipe Medley—No. 1	Lovat Bagpipe Band	17920 10 in.
"74th Highlanders Farewell to Edinboro'"—"Money Musk Strathspey"—"Deil Among the Tailors Reel"		
Scotch Bagpipe Medley No 2	Lovat Bagpipe Band	
"Midlothian Pipe Band"—"Lord, Blantyre Strathspey"—"Alexander Duff Reel"		
Cohen at the Pay Station	Gus Stone	216003
Cohen Exceeds the Speed Limit	Gus Stone	
Canadian Regimental Marches No. 1	Sousa's Band	17304 10 in.
Maple Leaf Forever (Solo and Chorus)	Alan Turner	
Piney Ridge	Irving Kaufman	17896 10 in.
All I Can Do is Just Love You	Irving Kaufman	
There's a Little Spark of Love Still Burning		
(McCarthy/Fischer)	Henry Burr	17897 10 in.
Everything Reminds Me of That Old Sweet-heart of Mine	Campbell-Burr-Oakland	
Success Medley Accordion	Pietro Delro	17896 10 in.
Melody Rag Accordion	Pietro Delro	

Records carefully packed and mailed to any postal address in B. C. — Mail your order today.

WALTER F. EVANS, Limited

526 Hastings St. W., Vancouver, B.C.

themselves. If the mother of the unfortunate gosling is a goose, she at once understands the young one's predicament and quickly rights it, showing a wonderful example of intelligence; but should the mother be a hen, she does not know what to do, and the consequence is that the little one is allowed to lie where it is and struggle until it is dead.

Years ago, and we presume it is the same today, geese were herded in large flocks in Strassburg, on the European continent, in charge of a shepherd. The birds were reared by the peasantry, every one of whom was possessed of some stock of these fowls. The shepherd every morning would wake the echoes of the village by the sound of a trumpet, which he assembled his feathered flocks with, and in the company of a herd of pigs, repaired to pasture on the common devoted to that purpose. In the evening the shepherd led back his flocks; but, before they arrived at the village, almost all the geese would take flight, rise above the roofs, and settle down in their respective homes. They flapped their wings, crossed, and flew against each other in the air, uttered a cry not unlike a note of a hoarse trumpet, and presented an animated scene to the delight of the villagers.

At that time it was said that 150,000 geese annually passed through the market of Strassburg—the place where Matthieu, the cook of Cardinal de Rohan first suggested the use of liver of the goose for pies. In order to secure large firm livers, a highly stimulating diet is resorted to. The attendant has to rise two or three times in the night, and inspect her stock—geese during the latter part of their feeding are subject to apoplexy. This dreadful watch marches about with a sharp knife, to cut the throat

of the first which shows symptoms of suffocation. The bird is then plucked and disjointed, and hung in an airy place. After 24 hours it is taken down and the much-esteemed liver extracted.

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

B. C.'s

MAIL ORDER SHOE HOUSE

MAILS SHOES FREE

"Write for Catalogues"

WOODEN SOLE SHOES. LOGGERS & MINERS SHOES. SHOE - PACKS.

ENGLISH

The World's Standard



SHOES

For Half a Century.

WOOD *The Shoe Specialist.*

VANCOUVER., B. C.

Review of Farmers' Institutes for 1915

Membership and Number of Institutes Has Increased Despite the Adverse Conditions Brought About by the War—Much Activity in All Branches of Work.

Despite adverse conditions caused by the war the Farmers' Institute shows an increase of 25 incorporated institutes during the year with 136 institutes and a total membership of 8,469 as against 8,353 in 1914. Since 1910 the number of institutes has increased 87 and the membership 3,243.

During the year short courses and meetings were held at 63 points in southern districts of the province. In addition an itinerary of meetings was arranged for a large number of institutes now incorporated in Central British Columbia. With only one exception no outside lecturers were employed, the lecturers being staff officials and the subjects taken up being dairying, poultry raising, horticulture, vegetable growing, marketing, seed growing and judging, soils and crops, etc. A short course in agriculture and horticulture was given at Kelowna.

Sixty-three institutes entered into the field crop competitions with 101 entries, the number of contestants being 812. Reports of judges indicate that these competitions are undoubtedly improving farming methods. The total amount paid out by the department of agriculture in prize money was \$2,065.

Boys' and Girls' Competitions.

In the boys' and girls' competitions there were 138 entries, which is a slight falling off from the previous year. It is the intention to stimulate renewed interest in these competitions this year and broaden their scope by including in addition to potato growing, competition in other crops, and also in hog and poultry raising. It is also proposed to organize boys' and girls' clubs, under the auspices of institutes or other public bodies, so that they may have an organization managed by themselves, under the supervision of a club organizer who will be a prominent member of the institute or some other public man interested in this work.

Two pure-bred heifer calves, the breed to be selected by the winners, were offered as provincial prizes being won by Miss Florence Anderson and Mr. C. W. Mizon, both of Malakwa.

The total amount of stumping powder, fuse and caps supplied to institutes was as follows:

Canadian Explosives, Limited—Powder to individual members, 9,074 cases; consignment orders, 4,250 cases; total, 13,324 cases; cases of fuse, all kinds, 52; cases of detonators, all kinds, 36. Giant Powder Company—Powder, consignment and individual members, 1,730 cases; cases of fuse, 10, cases of detonators; total cases of powder, 15,054.

The plan inaugurated by the department of agriculture of supplying pure-bred sires to Farmers' Institutes was not taken advantage of to the extent expected by government officials.

The Federal government has also arranged for the distribution of pure bred sires throughout the different provinces of the Dominion. The conditions are that any group of farmers who wish to take advantage of this offer of the Federal government must form a stock breeders' association in accordance with the conditions laid down by the Federal department of Agriculture. They can then make applica-

tion for any pure bred sire, and they will be supplied by the health and animal branch of the Federal government with the class of stock that they want, without any charge on their conforming with certain conditions.

If any institutes wish to secure information as to their methods of distributing pure bred sires, they are advised to write to the representative of the Federal government in Victoria, Dr. S. F. Tolmie.

Responds to Patriotic Call.

Institute members responded in loyal and generous manner to the appeal sent out for contributions to the Patriotic Funds. The sum of \$4,350.65 was subscribed of which Women's Institutes contributed \$1,256.75. The following distribution was made: Belgian Relief Fund, £500; Prince of Wales National Relief Fund, £391.15. In addition to the amount, further contributions have been received from institutes, and donated as requested: National committee for relief in Belgium, £103 9s. 5d. and \$597.90; originally received as machine gun fund, but handed over with consent of Institutes to the Prisoners of War Fund, \$433.87.

It is noted with satisfaction by the department of agriculture that their work in connection with the institutes in silo construction and filling has progressed satisfactorily. Thirteen silos were put up by the department, under the supervision of R. J. Ferris, of the soils and crops branch, and later filled by outfits operated by the department. The increasing popularity of the silo for live stock sections of the province is undoubtedly due to the silo demonstration work and corn growing work carried out by the soils and crops division of the live stock branch of this department. Silo white-prints and silo specification sheets were prepared and sent to 121 farmers who applied for them.

Seed Distribution.

With a view of stimulating and encouraging the development of better seed in the province, the department of agriculture undertook to handle a system of seed distribution on a fairly extensive scale. The seed was distributed through the medium of Farmers' Institutes. Registered seeds for co-operative tests and also for general seeding were distributed.

The following is a statement of seed sent out: 560 parcels of alfalfa seed; 528 parcels of corn seed.

Kind and amount of seed distributed: 119,300 lbs. registered American Banner oats, (third generation), and Gold Rain; 17,000 lbs. Marquit wheat; 7,255 lbs. Minnesota No. 13 Corn (special strain), and Quebec No. 28 (acclimated); 2,240 lbs. mangel seed, Sludgstop (registered Denmark); 2,800 lbs. Northern Crown Variegated and Grimm's alfalfa.

Owing to the great scarcity of reliable grain seeds, strong representations were made to the provincial government to secure the necessary seed for farmers for the year's crop. Accordingly, the department, after a considerable amount of difficulty, was successful in securing ten carloads of wheat and oats, which were delivered at the following distributing centres: Victoria, Vancouver, Kamloops, Vernon, Nelson, Midway. The seed was supplied to farmers,

What is a Mutual Life Company?

A Mutual Company is an association of policy-holders organized for the sole purpose of furnishing Life Insurance at the lowest cost, consistent with absolute safety.

In the year 1869 the Mutual Life of Canada was established under a Dominion Charter. This is the ONLY Canadian Company which is MUTUAL, and where all profits go solely to the policyholders. No stockholders to absorb profits.

If you will only examine our policies and see ACTUAL RESULTS of British Columbia policies before you place your application, I am satisfied you will be interested and become a policyholder in

"CANADA'S ONLY MUTUAL"

Investigation costs you nothing. Write, call or phone for rates to

WILLIAM J. TWISS,

District Manager

317-320 Rogers Building
Vancouver, B. C.



Since Senefelder discovered the secret of printing in colors from stone every decade has contributed some important advance in the art of Lithography.

The oldest established color printing and lithographing house in British Columbia, known as the B. C. Printing and Litho, Ltd., is abreast of the times with all the latest improvements in types and machinery.

In its studios are designed labels which are shipped from the canneries to every quarter of the globe. It specializes in the engraving and printing of municipal bonds and stock certificates, and prints from types as well as from stone, anything from a visiting card to a mammoth poster.

Its output of labels alone for 1915 touched forty million. An output such as this should convince you that it can serve you as well and cheaper than our friends can on the other side of the line. Remember, every dollar you spend in B. C. helps to build up the Province.

Our representative will shortly be visiting the Okanagan and other fruit districts. Before placing your order for this season's labels mail a card for prices and specimens.

B.C. PRINTING & LITHO.
LIMITED

901 Homer Street, Vancouver.

Phones: Seymour 3233 and 3234

who signed a note for repayment due December 1st, 1915. Very excellent crops, on the whole have been secured from this seed, crops of 100 bushels per acre and over in cats not being uncommon. The total amount of seed supplied to settlers was limited to 1,000 lbs. A certain quantity of potato seed was also distributed, in certain necessitous circumstances. Increase in the grain yield of the province last year amounting to about 50 per cent was undoubtedly largely due to the good quality of seed supplied through this medium, and also owing to the farmers' institutes plan of seed distribution. The expenditure in this connection was approximately \$22,000.

Many Pamphlets Distributed.

During 1915 the department of agriculture distributed 98,040 departmental publications. According to Deputy Minister of Agriculture W. E. Scott, there seems to be a misapprehension among some institute members as to the methods adopted in distributing departmental publications. Mr. Scott says: "With the very rapid extension in institute work, and the large membership roll which we now have, and also owing to the fact that the post office department of the Federal government has withdrawn the free mailing privileges previously enjoyed, it was considered advisable by the department to alter methods of distribution. Accordingly all institute secretaries were advised that in future distribution would not be made direct from the department, but would have to be undertaken by institute secretaries.

"When a new bulletin, circular or report is ready for distribution, all institute secretaries are sent a copy, with the request that they notify the department as to how many copies they want for the use of their members. On receipt of a reply from the secretary, these are sent in bulk, and distribution must be undertaken by him.

"Another reason for effecting this change was that there was a great wastage taking place when we sent direct to all members every bulletin issued. For instance, a farmer who was interested solely in stock-raising and dairying, and had no interest in fruit-growing, would receive, by the old method, all our bulletins and circulars on horticulture. All secretaries have our list of publications. Let institute members go to their secretaries therefore, and get what they want."

Another matter Mr. Scott calls attention to is the advisability from a purely business standpoint of bonding secretaries, many of whom handle large sums of money, in purchasing powder and general supplies. If anything should happen to go wrong the institute directors are severally and jointly responsible. It is further pointed out that it is against the provision of the act to elect president, vice-president and secretary at the annual general meeting. These must be elected by the directorate following the annual meeting.

Deputy Minister Optimistic.

Speaking generally of the work of the institutes throughout the province the deputy minister of agriculture reports as follows: "It gives me pleasure to report that institute co-operative work has largely increased. Very many institutes are doing work which is most beneficial to members in the purchasing of supplies, foodstuffs, fencing materials, powder, etc., on a co-operative wholesale basis, thus resulting in a very material saving to individual members. This work may be featured and extended by Institutes.

"Co-operation in the purchasing of supplies and also in the marketing of produce is the main fundamental of institute work, and if carried out along sound business lines, will do more than anything else to create interest in your institute work.

"Show a farmer how he can save dollars by co-operative buying and selling, and he will become your ardent supporter. It has been successfully demonstrated by other countries, and I am thankful to say is also being now realized in this province, that co-operative effort directed along sound business lines is the keynote of success in farming, as in all other business undertakings.

"Let me appeal, then, to all farmers to sink their differences and come together for the protection of their common interests. Let farming be run upon more businesslike lines. Individualistic action is the greatest hindrance to the successful prosecution of agriculture, but concerted action spells success.

"Those who have the distribution and sale of your produce have got you at their mercy, and you have to accept what they like to offer you. Why? Because these people are perfectly organized, and you are not. Is it not time that we put an end to this state of affairs, which is becoming intolerable? This can only be done by organized co-operation amongst you farmers. No government can do it for you. It is your own business, but the government is ready and has shown its willingness to stand behind you.

"Farmers, be up and doing, therefore. Support your co-operative creameries, your co-operative fruit growers' associations, and other similar organizations. Instead of standing aside, get in and help these associations by your practical support, and by your advice, to run the business along the best and most economical lines. Always remember the underlying principles of co-operative work must be that the wish of the majority must rule."

B. C. Fruit Growers' Convention Continued from page 882

Before the convention closed the members presented a wrist watch to the retiring president, Mr. W. C. Ricardo. He has been president of the association for the past four years and his advice and wise leadership have been most invaluable.

Another presentation was made in the shape of a purse of \$125 to Mr. R. M. Winslow, secretary of the association, chiefly for his work in connection with the securing of a higher tariff on apples entering Canada. The meeting first voted to take \$100 out of the \$1,400 in the treasury to make the gift to Mr. Winslow, but after the motion was passed, it was found that a civil servant could not accept such a grant. A collection was accordingly taken up, with the result that Mr. Winslow is all the better off.

A hearty vote of thanks was voted to the Hon. Martin Burrell, minister of agriculture in the Dominion cabinet, for the interest he has shown in the fruit industry in British Columbia, and also for what he did to bring about the increase in the apple tariff. "If it hadn't been for the encouragement from Mr. Martin Burrell, we wouldn't have won the fight. The other members at Ottawa were chilly towards our demands," said Mr. Ricardo.



Blocks wheels and
takes profits.

**MICA
AXLE
GREASE**

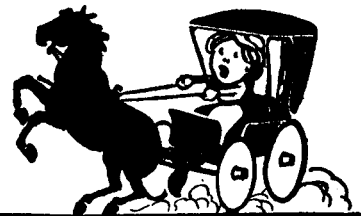
Kills friction and
makes profits.

Dealers Everywhere

**The Imperial Oil Company
Limited**

BRANCHES IN ALL CITIES

"JUDGE SAMSON and DELILAH or the TRAGEDIES OF LIFE," a beautiful book, just published, by Curtis J. Beedle, of the Seattle Bar; for copy, send \$1.00, or cheque, to the publisher, C. J. Beedle, Seattle, Washington.



Do You Consider
Wear and Tear

On your harness when you
figure your profits for the
year? Ordinarily that's a
big item but you can make
it negligible by using

**EUREKA
HARNESS OIL**

Keeps the leather soft and
prevents cracking. Adds
years to harness life.

Dealers Everywhere

**The Imperial Oil Company
Limited**

BRANCHES IN ALL CITIES

Threepence worth of oxalic acid dissolved in a pint and a half of hot water, and one ounce of oil of thyme, makes a good liquid for polishing brass.

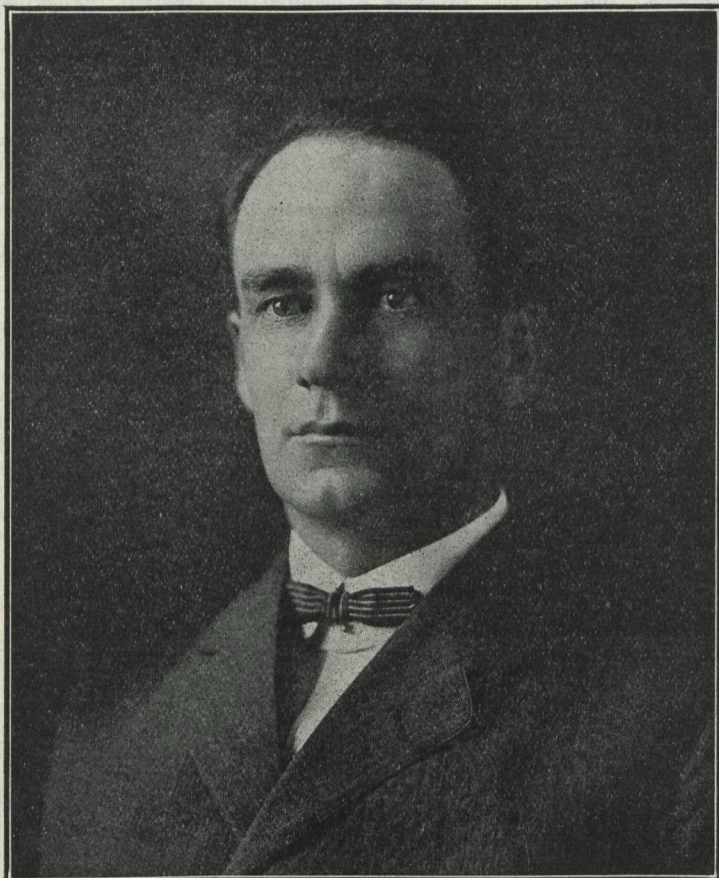
College Training and the Farmer

An Address delivered by Dean Klinck of Provincial University to the Farmers' Institute Meeting in Victoria.

One of the many interesting addresses given at the convention in Victoria last month was that of Dean Klinck of the University of British Columbia, who addressed the Farmers' Institute convention.

"The present status of agricultural education is the climax of a long line of evolution," said the Dean. "It has developed

solution of our agricultural problems, although agriculture has received a great deal of attention from city people during the last eight or ten years. There has been so much talk that many people have become really enthusiastic about it. City people have talked agricultural education so believe it. And some have gone so far as



DEAN KLINCK OF THE UNIVERSITY OF BRITISH COLUMBIA.

many sides, and has, and should have, some bearing on all interests and occupations. It aims to serve two constituencies, first, the agricultural community; and second, the civic community.

"Contrary to the opinions held by many persons, we cannot look to the city for the long and so enthusiastically that they now

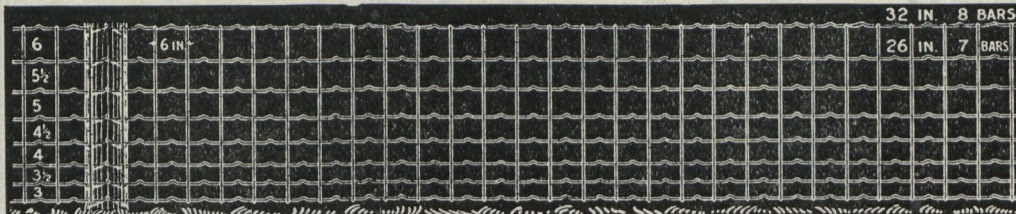
to urge others to take up agriculture. But the conditions still exist that for one man who goes to the city from the country, hundreds go from the country to the city.

"Many of the young men in the country should go to the city because they are not rural-minded, and if a man's mind is not on his work he cannot be successful. But

"PITTSBURGH PERFECT" HOG FENCING

(MADE IN CANADA)

Genuinely double galvanized, every joint welded by electricity, every rod guaranteed perfect. Write for Catalogue showing styles for all purposes—Field, Ranch, Farm, Poultry, and Lawn.



DISTRIBUTORS FOR BRITISH COLUMBIA

A. I. JOHNSON & CO.

844 CAMBIE STREET VANCOUVER, B. C.

Please mention B. C. Fruit and Farm Magazine when writing to Advertisers.

The fact that it is at present impossible to secure supplies of Potash for agriculture has made it necessary for us to prepare new brands of Chemical Fertilizers for the season of 1916. We commend the following lines to your attention, and feel sure that you will find their use very profitable.

MIXED FERTILIZERS.

- "IMPERIAL."
- "COLONIAL."
- "LAWN SPECIAL."

- NITRATE OF SODA.
- SUPERPHOSPHATE OF LIME.
- THOMAS PHOSPHATE, (Basic Slag).
- BONE MEAL.
- LIME-SULPHUR SOLUTION.
- SOLUBLE SULPHUR COMPOUND.
- NICOTINE SULPHATE (40 Per Cent. Actual Nicotine)
- ARSENATE OF LEAD.
- SULPHATE OF IRON.

THE VICTORIA CHEMICAL CO., LIMITED

VICTORIA, B. C.

Ask for our 1916 Catalogue.

ENQUIRY FOR MR. EDDIE.

Q. (J. B. Vancouver)—When pruning my current bushes. I noticed that the pith is gone from the inside of branch. Is this caused by an insect or is it a natural phenomenon. I find this, on all wood over a year old.

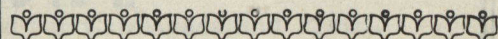
A representative of Fruit and Farm Magazine called on the management of the B. C. Nurseries a few days ago, when he found this firm busy with the distribution of this season's orders.

They are this year trying a new method in the handling of trees.

A large lot has been leased and the ground carefully prepared and as the shipments come in, the large cases are opened and unpacked, the contents carefully assorted and marked are planted in the prepared beds in rows, according to classification.

The lot having the appearance of a large nursery attracts much attention, and those coming in to buy can readily go through the different trees, plants and ornamental shrubs and more easily make their selections.

Our representative was struck by the healthy and clean appearance of the various stock.



A Breeder's Card this size will cost only \$1.25 per month. Advertise the stock you may wish to sell.



many in the city are ready to go to the country, but they lack the knowledge which they must have to work on farms before they can undertake the work with success. The desire of such men to get this knowledge accounts for the fact that in the New England States most of the men in the agricultural colleges are from the cities.

"The country life movement is raised by the country people to keep in the country people who are better adapted to country than city life.

"One of the greatest misconceptions of city people is that anyone can farm. There are only a few speakers who have any right to tell an audience what farming really is. And these men can readily be determined. This country has never suffered from a dearth of advisers to farmers. The government is advised what to do with the farmer, and from the government the farmer gets advice as to what he should do with the land. Most of these men who do the talking are no more qualified to give advice on agriculture than most of us are to manage a bank or railroad.

"But the result of the persistent campaign on agricultural education in the press and on the platform has brought the public to believe three things: first, that the virgin fertility of the country is being depleted as a result of ignorance and the wasteful practices of improvident farmers; second, that the farmers are growing rich, while the man in the city is suffering from the high cost of living; third, that the only remedy lies in a movement back to the land and the adoption of intensive farming similar to that in vogue in Europe.

"When the first agricultural college was founded, most farmers laughed at sending

their boys to school to learn farming. The schools were criticized on all sides. The farms in connection with the farming colleges were condemned because they did not pay. But these criticisms were made by persons who forgot that there was no more reason to make an agricultural college pay in cash than to have a theological college pay dividends.

"A college of agriculture is not established by any government to make money. It is concerned chiefly with teaching, research and extension work. This is the common conception of the functions of an agricultural college. But if I had my way, I would place its purposes in the other order, first research, then teaching and extension work, because I am firmly convinced that before you can carry on the best teaching there must be a sound foundation of established facts upon which the knowledge which is imparted is based.

"Today, I am grieved to say, there is a tradition in the East that the agricultural college of any university should not be on the same campus as the other faculties. This is a great pity, because, if agriculture is all we claim it to be, it is a profession that calls for as long and arduous training as any of the so-called learned professions, so much so that agricultural students should not be required to be isolated and herded by themselves.

"For 30 years the only agricultural college in Canada was at Guelph. But as the conviction grew that since so many men and women gain their living by labor more technical education was essential, other colleges sprang up, in 1905 an agricultural college was established in Truro, in 1906 at Winnipeg, in 1907 at St. Anne's by Sir

William McDonald, 1911 at Saskatoon, 1914 at Fredericton, 1915 at the University at Edmonton and at the University of British Columbia, the course in the latter being now open to the junior and senior years in arts.

"During the last few years the standards in the agricultural colleges have risen so much that matriculation standing is required in most of the colleges. In the better agricultural colleges the work has become so much specialized that in some cases 1000 distinct courses are offered. The curricula are being divided into subjects and groups to an extent that would have been thought impossible even ten years ago. This process of subdivision and specialization will continue. But we will also have to realize that it is necessary to co-ordinate as well as to subdivide the work.

"There is in most agricultural colleges now a two-year course, intensely practical, and giving a man enough of the sciences to enable him to work intelligently, and a four-year course mostly for students who do not go back on the farms but enter teaching, the government service or agricultural journalism.

"From all walks of life comes an increasing demand for instruction in agriculture. Take, for instance, the young teacher going into the agricultural community. If in her college course she had had a short course of 25 lectures on the problems of the rural community, she would be able to discuss her work much more intelligently and would in many ways be a much more efficient teacher.

"One of the great functions of the agricultural college is to fill the need for investigation to discover scientific truths.

Getting Business With Good Stationery

GOOD STATIONERY will attract and hold the attention and command the respect of the Wholesale House or the Broker through whom you reach the consumer. Your Stationery is an index to your standing. If it is cheap and shoddy your business ability will be judged accord-

ingly, with the result that your products passing through the hands of men who **know** will net you small returns.

If you can appreciate Business Getting Printing of a High Grade send your next order to

Ward, Ellwood & Pound, Ltd.

PRINTERS

318 Homer St.

Vancouver, B.C.

Mail Orders receive our prompt Personal Attention

The difficulty in the agricultural colleges of the United States and Canada is that the men on the staff have so much teaching and lecturing that they have no time for research. Research work requires a great amount of time. It takes nine years of very careful work before one can originate a new species of grain. After all, progress in agricultural education depends upon investigating agricultural uncertainties. But the time devoted to this seems to some persons to be wholly divorced from what is practical. To answer this I need only remind you that when Mendel discovered Mendel's law of species, he did not make or bother about the practical application of it. But 40 years afterwards, Mendel's work was made the basis of all breeding."

URGE TUBERCULIN TESTS.

Notwithstanding the opposition raised in some sections two years ago, the Provincial Government is now being urged to continue the tuberculin testing of cattle. Last month a joint committee from the Live Stock Breeders' Association and the Dairymen's Association of British Columbia, comprising Messrs. Barry, Yangley, Webb and Barrow, Chilliwack; George Sangster, Victoria; and Duncan, Comox, approached the government in this matter, and also for the purpose of asking for a bill to cover the licensing of all creameries, cheese factories, milk depots, milk dealers and milk buyers. The delegation proposed that all milk testers should be examined with regard to their familiarity with the Babcock test.

It was freely claimed that in many instances the testers were not well acquainted with this particular test method and the result was the farmers selling the milk did not get proper returns on butter fat. They were also at the mercy of city buyers who might or might not be dishonest.

Referring to the tuberculin tests of cattle the delegation assured the government that the breeders and dairymen had every confidence in the ability of the provincial veterinary surgeons to make accurate estimates of the value of the stock which might be destroyed after the tuberculin tests. The great importance of this work in keeping up the standard of beef and dairy cattle in the province was referred to by the delegation.

DAIRY AND STOCK

Sheep fill man's stomach and warm his back, and yet a good many farmers will have nothing to do with them.

Certified milk is becoming more and more the vogue. Presently some enterprising stockman will be offering certified cows for sale.

A good cow will always command a good price, regardless of market conditions. Therefore, it pays to go in for good cows, whether to keep or to sell.

A loud-smelling hog pen is an offense to the entire neighborhood, and there is no excuse for it nowadays, nor for a filthy hog wallow with its menace to hog health.

Spring fever is apt to be very prevalent in April. Perhaps the horses, too, have a touch of "that tired feeling." Better not rush ahead too fast till the teams become hardened to their work.

THE

CLARKE & STUART CO., LIMITED

COMMERCIAL STATIONERS
TYPEWRITER SUPPLIES
PRINTERS AND BOOKBINDERS
SPECIAL BLANK BOOKS
LOOSE LEAF DEVICES
LAW FORMS

SCHOOL OUTFITTERS
Desks, Globes, Maps, Blackboards, — Catalogue of Educational Supplies and Kindergarten Materials Mailed on Request.

MILITARY MANUALS
Mail Orders Receive Prompt and Careful Attention.

320 SEYMOUR STREET, CORNER CORDOVA
(Opposite C.P.R. Depot) VANCOUVER, B.C.

"MR. FARMER"
Do you know that
**SWARTZ BROTHERS, 153 WATER ST.,
VANCOUVER, B. C.**
Sell more strawberries for the
B. C. FARMERS
Than any other commission house in Van-
couver, B. C.
WHY?
Because we get the best prices that can be
procured and guarantee prompt returns
within 36 hours after goods are sold.
**GIVE US A TRIAL WITH YOUR NEXT
SHIPMENT OF FRUIT OR VEGETABLES
and
BE CONVINCED.**
Our charge is 12½ per cent commission.
Write for particulars.
SWARTZ BROTHERS.

Stability The Essential Requirement
of the Experienced Investor

Conservative investors seeking safety
and a good return will find the B. C.
Municipal Bonds we handle to be a safe
and profitable investment.
As Fiscal Agents, we offer today City
of Salmon Arm Debentures at a price to
yield 7-8 per cent. net, interest pay-
able half yearly. Circular on request.

**CANADIAN FINANCIERS TRUST
COMPANY**
Head Office, 839 Hastings Street W.
Vancouver, B. C.
Patrick Donnelly, General Manager

Successful Farmers

Use

McCORMICK FARM MACHINERY

We carry a complete stock. Send for Catalogues and Prices.

MARK DUMOND

HARDWARE, FARM MACHINERY,
POULTRY AND BEE SUPPLIES

1048 Main Street. Vancouver, B. C.

Farmers' Institute Annual Convention

The seventeenth annual convention of the Farmers' Institutes of British Columbia was held in Victoria during the past month, some 75 delegates and ten officers being in attendance. A number of valuable addresses were delivered during the session and the general discussion on matters pertaining to agricultural interests in the province were of the usual useful instructive and helpful nature. Deputy Minister of Agriculture Scott delivered an optimistic address. He declared that agriculture was really one of the foremost industries of the province instead of being one of the most backward, as is generally believed. He pointed out that the agricultural production in the province last year amounted to \$31,000,000, and he also announced that agricultural imports for last year had decreased from \$24,000,000 in 1914 to \$16,000,000, which he considered one of the most encouraging features of the agricultural situation. Speaking in part Mr. Scott said:

"There has been a very gratifying increase, both in the numbers and quality of livestock raised in the province, and farmers seem to be realizing the truth of the adage that the keeping of livestock on the farm is the basis of all true agriculture.

"Dairying conditions show a marked improvement. Much more butter is being manufactured than heretofore, owing to the decreased demand for milk.

"The cow-testing associations formed during the last few years in the province by this department have been doing valuable work in the districts in which they have been established, and are resulting in the elimination of the boarders in our dairy herds.

"The poultry industry shows a falling off of 40 per cent. This was caused by the very high price of grain in 1915, which caused poultrymen to get rid of a large proportion of their laying stock. This may prove to be a blessing in disguise, as poultrymen have been able to get rid of their inferior birds, and will be able to rapidly breed up again from the best birds, which they have naturally, retained.

"As dairying progresses, so does hog-raising, and whilst there has been no material increase in the number of hogs kept, owing to the abnormally high price of mill feeds and grains which obtained during the first nine months of the past year, the quality of hogs kept shows a marked improvement, and this phase of the live stock industry gives promise of satisfactory development.

"Renewed interest is being taken in the sheep industry, and a considerable number of good grade ewes have been imported into the Southern Interior districts, with results eminently satisfactory to those who brought them in.

"The panther and dog question is a very serious menace to those interested in the sheep industry in Coast districts especially, and until drastic action is taken, especially with reference to dogs, farmers will not go into the sheep raising industry to any extent. It is to be sincerely hoped that some action will be taken on this matter without any loss of time."

Premier Bowser Addresses Convention.

Premier Bowser spoke to the convention, giving an outline of the Agricultural Cred-

its Act through which it is planned the farmers of the province may borrow money to increase their production. After explaining that the delay in bringing in the act was because of the high price of money he predicted that the government would shortly have between one and two million dollars at its disposal to be loaned to farmers. The premier stated he was making arrangements to create the office of minister of agriculture separate from that of minister of finance.

On the opening day much discussion centered about the question of public markets. Delegates from the interior declared that in Revelstoke and other places public markets, where the farmers sold their produce, had flourished until the Chinese saw the profit in the industry and took up truck farming, peddling their produce from house to house in all the cities. Some delegates advocated asking the government to pass a law controlling peddling on the streets, but it was pointed out that such a law was unconstitutional, as no man could be prevented from taking out his wares and selling to what customers he might meet. It was finally decided to turn the matter over to a committee which will go thoroughly into the whole question of public markets, in their relation to the producers and consumers.

Doukhobors and Gopher Problems.

One delegate declared that the farmers of Nelson had worse than the Chinese to compete with. He said that while the Chinese might work for seven cents a day and their board, the Doukhobors were willing to work for nothing.

The habits of the Doukhobors were also questioned considerably when the convention came to consider the possibility of dealing effectively with the gopher pest. Delegates living near Doukhobor sections declared that because of the Doukhobor aversion to taking life, it is their custom to trap gophers, throw them into large cages and carry them off their own land to dump them on some neighbor's property. The convention expressed the opinion that such actions did not commend themselves to the farmers of British Columbia.

Some delegates asked for action on the part of the government to force holders of large areas of unimproved land to exterminate the gophers on their property. They said that although the farmers might kill all the vermin on their own land, other vermin poured over the boundaries from the wild land as soon as the work of extermination was completed. Under these conditions they said there was no object in the farmers trying to rid themselves of the pests. It was declared that the government was also guilty in letting thousands of gophers infest their wild land and the roadways.

One farmer said that it cost him \$55 last year for ammunition used in killing gophers in his fields. Others said that conditions were very serious in some parts, as the gophers infest all the roadways, railway tracks, graveyards and vacant lands, making conditions unbearable for the farmer. It was asserted that gophers were

doing five times as much damage to the farmers as noxious weeds.

A committee was finally appointed to go into the whole gopher question, to devise the best means of dealing with the pests, and to see whether the government will contribute part of the expense. Some objection was taken to the proposal to pay boys bounties for gophers' tails, on the ground that in Alberta, where this plan had been tried, the boys had caught the gophers, clipped their tails and turned them loose again.

The advisability of fostering farmers' cooperative exchanges was urged. Members from the Interior showed that when some of the exchanges were in operation there, farmers received \$4 a crate for strawberries shipped to the Northwest. After the exchanges failed, the farmers were at the mercy of the wholesalers and the commission men, who forced down the price paid to the farmers to \$1.50 to \$1.75 a crate. Fruit bought at these rates, the delegates

The ESQUIMALT & NANAIMO RAILWAY CO.

Vancouver Island, B.C.

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

A beautiful, healthy climate—fine soil, and a great and rapidly increasing demand for butter, milk and cream (fine creameries in each district)—a cash market for poultry and eggs, large profits from mixed farming and vegetable products.

A complete modern educational system—free, undenominational—primary and high schools on the beautiful Island of Vancouver.

Descriptive pamphlets and full information on application to

L. H. SOLLY

Land Agent, E. & N. Rly.

VICTORIA, B. C.

declared, was immediately resold by the wholesalers in Calgary at \$4 a crate, the same price as the farmers had realized when the exchanges were in operation.

Insurgents in the Convention.

Piquancy was added to the convention proceedings by the regularly constituted committee on resolutions throwing out a resolution passed by the Richmond Farmers' Institute demanding that the government limit the assessment of farm lands to what these lands are worth for farm purposes. Mr. McBride of South Vancouver led the insurgents who held a meeting maintaining that because of the land speculation in the province farm lands have been assessed at from three to forty-five times their actual worth as farming land. The insurgents had their resolution printed and spread broadcast and asked that the subjects to be considered in convention be decided wholly by the members of the convention. The matter of the resolution was finally disposed of for the time being by the appointment of a committee to lay the question before the government. The resolution read as follows:

"Whereas, owing to land speculation in or adjacent to cities in British Columbia, farm lands have been assessed from three to forty-five times as much as said lands are actually worth for farm purposes;

"Whereas, many farmers have had to mortgage their farms to pay excessive taxes, which in some instances are nine times as much as said lands will rent for, although cleared and improved by the settler, and in consequence thereof, some of said lands have been sold for taxes;

"Whereas, the present Assessment Act has been the cause of expensive litigation annually, which settlers cannot afford;

"Whereas, in cities and municipalities where there is no tax on improvements, farmers have been, and are, actually taxed on the cost of clearing their land;

"Whereas, a few years ago, the farmers, through the Central Farmers' Institute of British Columbia, asked the provincial government to limit the assessment of farm lands, while cultivated by bona fide settlers, to what said lands are actually worth for farm purposes, but without getting any satisfaction from the government:

"Therefore be it resolved by the officers and members of the Richmond Farmers' Institute, that we again ask the provincial government to amend the Municipal Assessment Act, limiting the assessment of farm lands, while cultivated by bona fide settlers, to what said lands are worth for farm purposes, on the basis of the Ontario Assessment Act, and further that in cities and municipalities where there is no tax on improvements, the cost of clearing farm lands shall be deducted from the assessment value;

"And that copies of this resolution be forwarded to the provincial government, the Central Farmers' Institute of British Columbia, and the Press."

University President Gives Address.

Dr. F. F. Westbrook, president of the University of British Columbia, addressed the convention at length.

"Britain has always been a good sportsman, sportsman enough to learn from her enemies," said the president. "We can well take a leaf out of Germany's book as regards what she has done to handle intelligently her national resources.

"About a year before the war, Germany appointed a food commission of experts. On this commission, as we would expect, there were agricultural experts, but there was also a geologist on it, because of the need of knowledge of solids. There was even a physiologist, because he knew what food is necessary to sustain human life and in what quantities of food were needed. After a few weeks this commission was able to publish a concise report, expressing in terms of calories the daily needs of Germany and to what extent she would be able to meet these needs and go on with the war if she were cut off from the outside.

"We can profitably learn from Germany in the material efficiency she has shown. We in this country too, if we are to progress intelligently, must have a plan. If in time of peace we are to prepare for war, it is no less true that in time of war we must prepare for peace. We must be thinking about tomorrow. We may look forward to the removal of a great part of the population of Great Britain and her wealth after the war. In this emigration we must all hope that Canada will deserve to become the centre of both the population and wealth."

Dr. Westbrook then told how the increase in production of farms last year, partly through the production and patriotic campaign and the distribution of the best seeds under government supervision, had more than compensated for the \$90,000,000 Canada spent last year in munitions of war. He pointed out the importance of agriculture to the nation at this time and the place it occupies in the scheme of national progress and economy, which make it deserving of the closest study.

"I am maintaining and am more and more convinced of it," he continued, "that agriculture is a profession which requires more versatility, energy, sociological science, patience, ability to work and a lot of other attributes than most of the other so-called professions. You will note that the first appointment that we made in the University of British Columbia was that of the Dean of Agriculture; next that of the Dean of Applied Science. I consider that these two are of paramount importance.

"Everybody at the present time is a little distracted and trying to make the important decision as to whether his duties lies here or on the other side. Before this is through it may require all of us. We hope it won't. But I don't want this war to stop until it suits us."

Concluded on page 909



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.

If It's
Fruit or Vegetable
Boxes
ASK US ABOUT IT

PACIFIC BOX

COMPANY LIMITED

VANCOUVER, B. C.

Phones S. 8890-8891

North End Cambie St. Bridge

If it's any other
kind of
Boxes or Crates
ASK US ABOUT IT

WOMEN'S SECTION

British Columbia Women's Institutes

Motto—"FOR HOME AND COUNTRY"

UPPER SUMAS INSTITUTE

The Upper Sumas Women's Institute met at the home of Mrs. M. McGillivray on March 9. After the usual business was transacted a most favorable report was given by the committee collecting for the Patriotic and Belgium Relief Funds.

The sum of \$71.60 was sent to the Canadian Patriotic Fund and \$43.25 to the Belgium Relief Fund. The sum of \$6.00 has been received since March 2, which the secretary will forward.

Mrs. Skinner gave a very interesting paper on her trip to the Panama Exposition which was much enjoyed by all. Members present were Mesdames F. York, Skinner, W. Fraser, F. Munroe, M. McGillivray, W. Porter, W. Fadder, F. York, Cameron, A. Campbell. Visiting ladies: Mrs. Newton, Victoria, and Mrs. Chadsey, Chilliwack.

The annual meeting was held at the home of Mrs. T. F. York, Huntingdon, on Feb. 24th, it being impossible to hold it earlier on account of the severe storms. The following officers were elected:

Honorary president, Mrs. J. W. Winson; president, Mrs. W. H. Fadden; vice-president, Mrs. T. F. York, jun.; secretary-treasurer, Mrs. A. E. Skinner; directors, Mrs. W. Porter, Mrs. A. Campbell, Mrs. W. Fraser; auditors, Mrs. Fraser York, Mrs. M. Murphy.

The secretary gave a report of the Red Cross Work up to December 31st, 1915, which was most gratifying. Receipts for Red Cross work up to December 31st, 1915, \$116.35; expenditures \$151.55; balance on hand \$9.80. Work comprising of the making of pyjamas, socks, towels, scarves, wash cloths, old linen, etc. Our efforts being largely on pyjamas and socks. The meeting adjourned deciding to meet on their usual date, second Thursday in every month.

BARRIERE HAS GOOD REPORT.

Barriere Women's Institute was organized in January, 1915, and a report of the year's work is as follows: In April \$28 was sent to the Patriotic Fund; in September 42 pairs of socks, 10 boxes of tobacco and hospital handkerchiefs were sent to the Red Cross Fund; in December, \$21.30 was sent to the Soldiers' Comfort Club and in January, 1916, \$6.45 was sent for soldiers' comforts. The members are all doing private work in their homes and twice a week parcels are sent to the boys at the front. After the business of the meeting, the ladies sew upon a quilt which, when completed, is to be sold for patriotic purposes. The officers for the year are as follows: President, Mrs. G. A. Borthwick; vice-president, Mrs. J. J. Smith; secretary-treasurer, Mrs. Wm. E. Betts; directors, Mrs. Gallagher, Mrs. Donald Fraser, Miss Alice Carss; auditors, Mrs. W. H. Smith and Mrs. Ralph Knapp.

GOOD MEETINGS AT NARAMATA

The Naramata Women's Institute has had enthusiastic meetings in February and March.

Municipal problems were discussed in February and a keen interest was shown in working for a spring clean-up day, for better school conditions and for the artistic development of the school grounds.

Acting upon committee reports at the March meeting it was decided to supply the school with sanitary towels and to establish an Arbor Day in conjunction with the Farmers' Institute, for the purpose of planting a permanent avenue of trees in front of the school. Fifteen dollars was voted to the Women's Institute Patriotic Funds. Interesting papers were read on "Rose Culture," "Old-Fashioned Flowers," and "Vegetable Gardening."

A Book and Magazine Club was started with a donation of forty volumes.

A number of scrap-books were made by institute members to be sent to the soldiers. Twenty pounds of wool were distributed for knitting. Two pairs of socks were sent to the Daughters of the Empire Sock Day in Vancouver.

It was decided to offer three prizes to the school children for the best bird-boxes and the best collection of dried and named wild flowers.

tees accepted, Miss Hitch gave a first-rate

HATZIC MEETING ON MARCH 16

The Hatzic Woman's Institute held their regular monthly meeting on Thursday, March 16, with an attendance of twenty-six members and several visitors. After the usual routine of business was transacted, and the various reports from sub-committee on "Poultry Raising" which was not only practical, but very interesting both to poultry fanciers and others. A Candy Contest, judged by the visitors, was next on the list, first prize being given to Mrs. W. Stratton, and second prize to Mrs. Metagart. Adjournment was followed by tea and cake and also the exchange of bulbs and plants between members before parting.

PEACHLAND WOMEN'S INSTITUTE

The first meeting of the Women's Institute held in 1916 took place in the Institute Room on Tuesday afternoon, January 25, with a very small attendance. In the absence of the president, Mrs. Vicary, the chair was taken by Mrs. Dryden, vice-president, who conducted the exercises. The secretary's report showed that the institute had not been idle during the past months. The committee appointed to procure a sewing teacher for the town school reported that Mrs. Needham had agreed to give her services. The election of officers was then proceeded with and resulted as follows: President, Mrs. S. Murdin; vice-president, Mrs. Wm. Buchanan; secretary-treasurer, Mrs. J. B. Robinson; director, Mrs. A. Town.

HAZELMERE WOMEN'S INSTITUTE

Hazelmere Women's Institute held their annual meeting on Thursday, Jan. 27. Owing to sickness and the inclement weather there was a small attendance compared with former annual meetings. Reports of the secretary and treasurer showed a good deal of work accomplished during the past year and a balance of upwards of \$27 in the bank. In the past year the institute was able to make cash donations to Surrey Municipal Relief Fund, Red Cross Material Fund and local charity; made seventy-five hospital shirts and twenty-five pairs of socks; send preserved fruit to Columbian

Beauty, Utility and Economy in My Perfect Dentistry

BEAUTY—Beauty in the teeth is a matter of natural appearance. The teeth I use are the most perfect because the most **natural**. They have the translucency of Nature—a new and very desirable quality. They are true to shape and shade. They are made to fit your mouth and to conform to the shape of your face.

UTILITY—Utility is a matter of service, and my **Perfect Crowns and Bridges** are made of the finest gold yet devised by experts for dental work—22-karat in fineness. In the Crowns the gold is 30-gauge in thickness, heavily reinforced at wearing surfaces. The attachments are of platinum—no baser metals than these are used. They are perfectly made for continued good service—guaranteed for ten years.

ECONOMY—There is economy of first cost in Perfect Crowns and Bridges and in Perfect Plates—as well as genuine economy in use. There is nothing better made than these at any price.

Perfect Crowns and Bridges
\$4.00 per Tooth
No Higher Price

Special facilities and conveniences for out-of-town patients. — Phone, write or call for free appointment, examination and advice.

DR. LOWE

Vancouver's Greatest Dentist

Hastings Street, at Abbott
Opposite Woodward's
Vancouver, B. C.
Seymour 5444

Hospital, and ship fruit to South Vancouver Relief Association, per Central Park Women's Institute.

Election of officers resulted as follows: Mrs. T. D. Tucker, president; Mrs. P. Green, first vice-president; Mrs. F. J. Hardwicke, second vice-president; Mrs. E. H. Hardy, secretary-treasurer; Mesdames Hardwicke, Brown, Geo. and Robert McConkey and Osborne being elected directors.

HAZELMERE INSTITUTE

A very interesting and instructive talk on rose culture was given by Mr. M. T. Robinson, of Cloverdale, to the members of the Hazelmere Institute, on March 16. Mr. Robinson spoke on the different treatment the various kinds of roses needed in regard to pruning, spraying, etc., also giving advice on various kinds of spray mixture suitable for roses and giving a list of the most suitable roses to be grown here. He also spoke on the growing of sweet peas, of which he makes a specialty. The members plied him with a number of questions during his remarks, regarding many difficulties they had met with.

This institute is working hard at Red Cross work and expects to continue as long as it is needed. They also expect to hold a flower show this year.

CENTRAL PARK INSTITUTE

Owing to unfavorable weather conditions some of the business pertaining to the annual meeting of the Central Park Women's Institute was carried over to the regular February meeting.

After a hearty vote of thanks to the retiring president, Mrs. Bell, the following officers for 1916 were elected: Directors, Mesdames Bell, Verry, J. B. Todrick, Reid and Ford; president, Mrs. Verry; first vice-president, Mrs. G. C. L. Reid; second vice-president, Mrs. J. B. Todrick. The secretary, Mrs. Thos. Todrick, and the treasurer, Mrs. Somerville, were re-elected. Miss Summers was re-appointed convenor of the Red Cross committee, with Mrs. Stapleton as treasurer. Delegates to the Local Council of Women were appointed as follows: The president, the secretary, and Mesdames Bell, Stapleton and Sutton.

The new president made a stirring appeal for increased activity along Red Cross lines, and a communication from Mrs. Kemp, president of the Consumers' League, was well received. It was decided to have an Institute Rally Day in March.

Central Park Women's Institute has reason to congratulate itself upon the work accomplished in 1915. In addition to relief work done in conjunction with South Vancouver Local Aid Association, many unemployed were given seed, and vacant lots were provided, resulting in profitable gardens. A prisoner of war has been adopted, and regular contributions forwarded on his behalf. The Red Cross committee under the supervision of Miss Summers, has received and expended the sum of \$230 in material for hospital supplies, socks for soldiers, etc. A highly successful Flower Show was held in August and was well attended. Matters relating to home and society have been discussed at the meetings and a lively interest shown in all movements that make for the betterment of conditions in Canada.

Everything points to a year of greater opportunity, and therefore greater activity for the institute and a better record for 1916.

Farmers Institute Annual Convention

Continued from page 907

Pure Bred Sires.

Dr. S. F. Tolmie, of the Dominion Livestock Branch, urged the farmers of the country not to miss the opportunity the Dominion government offered of distributing through the country, free of charge, pure bred sires. He explained that stallions and bulls are distributed in the spring and boars and rams in the fall. All that is necessary to get these free services is for ten farmers to form an association and apply to Dr. Tolmie in Victoria.

He also showed that the introduction of a pure bred sire in a farm in Ontario had resulted in doubling the output of milk from the herd. He advocated community breeding, so that all farmers in one district should keep one breed of cattle. This gives a district free advertising among buyers, who know just what breed of cattle they can get there.

Mr. R. C. Abbott, market commissioner of Vancouver, discussed market problems, pointing out that the success of the city markets in this province has not been very great. He attributed this chiefly to the lack of business management and the failure of the farmers to inspire confidence as to the consistent quality of their goods. In one city, he said, that where a market was opened, there was an attendance of nearly 8,000 persons for the first few weeks, but the attendance began to fall off and soon dropped to 25 persons. Investigation of the causes showed that some of the farmers had been foisting poor quality goods on the public, some were giving short weight, some selling third grade meat at the price of first grade, and others selling cold storage eggs as fresh eggs. Such dealing, he declared, would ruin any business in a short time, and the farmers could not expect the public to be slow in finding out the deceptions that were practiced. "You can beat the public once," he said, "but you can't do it always." Mr. Abbott asked the British Columbia farmers to pay more attention to the appearance of their products and pack them in the best style, as is the habit of the American farmers.

Oppose Day Labor.

Many of the delegates asked that the government substitute day labor for contract in the building of roads.

"The roadwork throughout the rural districts of the province under the present system is given to the nominees of certain parties or to members of certain cliques," said one delegate. "Many of the men who are now working on the roads have never done a fair day's work. The bosses don't know what a fair day's work is. They are wasting money and a lot of time. Under the contract system the work could be done 10 per cent cheaper.

"Another factor is the question of economy. The government under the day labor system introduces a rate of pay into the district that the farmer can't afford to pay. The result is that the farmers can't keep the men working on the farms. They all go to the roads, where they get higher pay and easier hours."

The habits of the Doukhobors in "coming in and doing work on the roads at a price that no man could compete with" also excited the wrath of the convention.

It was finally decided to ask the government to allow the farmers in each district to nominate the road boss in that district.



THE
SHIRR-RUFFLE
BUST FORM

A PERFECT
FIGURE
\$1.25

Ruffles
DRAW OUT
FLAT TO
LAUNDRY

SEND for the Easter
Number of Our
Monthly Mail
Order Review. ❀ ❀

Gordon S. Spedale
LIMITED

575 TO 587 GRANVILLE STREET
VANCOUVER, B. C.

The Satisfaction of Owning a
**Good
Watch**

is many times greater than its slight additional cost over an unreliable timekeeper.

We handle the world's best makes of watches, selling them at a fair price and with our own guarantee added to the manufacturer's, written for a 17-jewel Elgin, with a 20-year case at \$15.00

Paul & McDonald,

"The Diamond Men"

413—HASTINGS STREET W.—413

Vancouver, B. C.

Official Watch Inspectors for the
Canadian Northern and Great
Northern Railways.



CATALOGUE NOTICE.

Send 10c in silver or stamps for our Up-to-Date 1916 SPRING AND SUMMER Catalogue, containing over 400 Designs of Ladies', Misses' and Children' Patterns, as well as the latest Embroidery Designs, also a CONCISE AND COMPREHENSIVE ARTICLE ON DRESSMAKING, giving valuable hints to the home dressmaker.

1614—Child's set. Comprising a Yoke Dress, a Slip, and One-piece Drawers.

Cut in 4 sizes: 1, 2, 4 and 5 years. The dress requires 2 1-2 yards, the slip, 2 yards, and the drawers 3-4 yard of 36-inch material, for a 2-year size. Price, 10 cents.

1603-1602—Ladies' Costume.

Waist 1603 cut in 6 sizes: 32, 34, 36, 38, 40 and 42 inches bust measure. Skirt 1602 cut in 6 sizes: 22, 24, 26, 28, 30 and 32 inches waist measure. To make the dress will require 5 7-8 yards of 44-inch material for a 36-inch size. The skirt measures about

3 1-3 yards at the foot. This calls for TWO separate patterns. 10 cents FOR EACH pattern.

1611—Girls' Dress with or without Yoke and Overskirt.

Cut in 4 sizes: 6, 8, 10 and 12 years. It requires 2 3-4 yards of 36-inch material for an 8-year size, without overskirt, and 4 yards with overskirt. Price, 10 cents.

1597—Ladies' Apron.

Cut in 3 sizes: Small, medium and large. It requires for a medium size 5 5-8 yards of 36-inch material. Price, 10 cents.

1598 — Girls' Dress, with or without Jumper Portions.

Cut in 4 sizes: 4, 6, 8 and 10 years. It requires 2 1-2 yards of 36-inch material for skirt and jumper and 1 5-8 yards of 27-inch material for the waist, for a 6-year size. Price 10 cents.

Concluded on page 911

**Yard Wide
Silk Poplin
\$1.45**

Write For Samples.

This is one of the longest wearing silks made and one of the prettiest. It makes up well, holds its color and when in use keeps its shape. This is a silk we can recommend.

We have it in all the new shades—the shades fashion demands and of course the standard colors.

**WRITE FOR FREE SAMPLE
OF SILK POPLIN, SENT
BY RETURN POST**

CREPES 20c

Also write for samples of cotton crepe. If you want a better grade ask for the 50c grade of cotton crepes.

SABA BROS.

THE ORIENTAL STORE
564 GRANVILLE STREET
Vancouver, B. C.

Special 5% Discount for Fruit and Farm Reader

LADIES !

**Order Your Suit or
Coat by Mail.**

You have the same shopping facilities as the city lady if you take advantage of **Our Special Mail Order Service.** Save the time, and cost, of a special trip to Vancouver—send to us for your **Spring Suit, Coat or Skirt.**

ABSOLUTE SATISFACTION OR YOUR MONEY REFUNDED

We manufacture the majority of our suits in our Vancouver workroom, modelling them from prevailing Eastern fashions. Every garment is guaranteed up-to-the-minute in style, the materials are choice, the workmanship and finish are perfect and our values are unapproachable by reason of our large output.

Send for particulars and our self-measurement instructions.

SPRING SUITS 15.50

Distinctive creations in Blue and Black Serges and Gabardines, also checks; big range of new styles—all sizes. Better suits up to \$27.50.

SPORT COATS 6.95

Smart serviceable coats—new cut, new effects, military patch pockets; in white velour also checks. Same coat is sold at \$10.00 in Vancouver. Our price..... \$6.95

"Fruit and Farm,"
April, 1916.

**NEW YORK
Cloak & Suit
Co.**

125-131 Hastings St.

Vancouver, B. C.

Mail this coupon with your order, it entitles you to the special 5 per cent. discount. Positively no discount will be allowed without the coupon.

PATTERNS—Continued

1624-1558—Coat Suit for Misses and Small Women.

Coat 1624 and skirt 1558 are both cut in 4 sizes: 14, 16, 18 and 20 years. It will require 9 yards of 36-inch material to make this suit for a 16-year size. This calls for TWO separate patterns, 10 cents FOR EACH pattern.

1599—Ladies' Maternity Dress.

Cut in 6 sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. It requires 6 yards of 44-inch material for a 36-inch size. The skirt measures about 3 1-4 yards at its lower edge. Price, 10 cents.

NOTICE.

Patterns will be mailed to any address on receipt of coupon and money. Address, Fashion Dept., FRUIT AND FARM, Vancouver, B. C.

Name

Street and No.

City and Province

Pattern No.

Sizes

Aluminum Kitchenware is Worth Higher Price

Utensils of This Material Last More Than Twice as Long as Enameled Ones.

Aluminum utensils for the kitchen cost more than enameled, tin, or granite kitchenware, but are more economical and satisfactory in the long run because of their wearing quality.

The initial cost of aluminum is double that of enameled ware, but it will last more than twice as long. Tin, tinned iron, or agate lined utensils wear out much more rapidly. The enameled or agate ware chips off, whereas aluminum cannot be injured by being dropped or knocked against some object.

Fruit and vegetable acids will have no effect on aluminum, but alkalis are harmful. Alkaline solutions, such as solutions of soda, should not be heated in aluminum utensils. The lime residue on the inside of an aluminum tea kettle may be removed with nitric acid, which forms a thin coating of aluminum oxide and protects the kettle against further action. Hydrochloric or sulphuric acid cannot be used for this purpose as either one would dissolve the aluminum. Aluminum is light and easy to handle.

HOW TO DO THINGS

An orange or lemon put in the box with newly-made sweet cakes will give them a delicate flavor.

A piece of clean muslin wrapped and tied around the prongs of a fork is handy for greasing the griddle or baking pans, and may be burned after use.

Buttons sewed on to thin, weak cloth, stay just about as long as it takes to put them on. But take a bit of stout cloth, lay it on the under side and sew through that, as well as through the button, and you have a job that will last.

Potatoes begin to lose some of their mealiness now, so bake them. Cut a slice from one side, scoop out the middle, mash, season with milk, butter, salt and an egg, beaten light. Put this back in the skin and brown in the oven.

Use large cotton gloves or mittens while working over the stove, reaching into the oven, lifting kettles or moving covers. They are more convenient than iron holders, as they protect the hands from burns while serving the same purpose.

It is nice to bake bread in tin cans for the children's school lunch, as a round slice is just right for sandwiches and has a crust all around that keeps it from breaking. You can use the cans from canned corn, tomatoes or hominy, after cutting the end out smoothly.

When you have oranges or lemons with clean, attractive skins, save the peel for your own home-made candied peel. Boil the peel until tender, then drain; boil again in a heavy syrup until it is ready to candy.

Ambition we must have, and work, too, if we would laugh at Father Time.

It is all right to wash the hands before mixing bread; but make the job better by cleaning the finger nails.

For brittle finger nails anoint the nails at the roots every night with vaseline or dip them in warm sweet oil. This will make them grow better and they will not split.

When cleaning a garment with gasoline, lay the soiled part over a folded Turkish towel; this will absorb the dirty fluid instead of having it spread in a ring on the garment.

In laying away an article for safe-keeping: As you walk away from it, turn, go back, pick it up and replace it; this will fix its location in your mind so that you will not forget where you put it.

Spare some room on your place for a thick clump of bushes for birds to take refuge in; and some berry-bearing shrubs and trees, such as wild cherry, mulberry, dogwood, etc., to furnish them with food.

A potato crate or a big peach basket is handy to carry straw or shavings in, but more or less of the contents will rattle through the cracks and litter up the house or barn. By laying an old bran sack in, we may prevent all the litter. Let's do it.

The carbohydrates are that part of the food that goes to make fat, heat and energy. These elements are burned in the body, and any surplus above that necessary to supply heat and energy is stored in the body as fat, to be drawn on later if insufficient carbohydrates or carbonaceous food is supplied.

One of the worst colds I ever had was caused by putting on thin underclothes too soon in the spring. Since then I have stuck to the thick clothes until they got to sticking pretty closely to me. That's time enough to think of changing.

It is pretty tough to learn that some of the old patent medicines that grandfather used fifty years ago were (and are) com-

We Are Headquarters

FOR

Fruit Wrapping Papers

DUPLIX FRUIT WRAPS

Medium weight, glazed on one side

SULPHITE FRUIT WRAPS

Lightweight, strong, durable and Transparent

Either quality can be supplied in any of the regular standard sizes

We also carry **WHITE BOX LINING** in all standard sizes

LAYER PAPER

CORRUGATED STRAW PAPER

We carry stock of all these lines, and can execute orders promptly.

Mail orders receive special attention.

Smith, Davidson & Wright, Ltd.

Paper Dealers

VANCOUVER, B. C.

posed of table salt, soda, Glauber's salts and whiskey—valueless as a medicine. It was faith that cured. But think of all the hard-earned money wasted!

Many mothers do not realize the pernicious effect of smoking (especially cigarettes) on the growing boy. It has a bad effect on the heart, and reduces the capacity of the lungs, besides stunting the growth. It is a fact that boys that smoke weigh less and are not so tall as their associates that do not smoke.

The average woman will find that a dozen geranium plants of different kinds will give her more satisfaction for house plants, summer and winter, than anything else. They will bloom profusely, give plenty of brightness and color, will stand neglect, will not die easily if a light frost gets a nip at them or if she should forget to water them, and they are almost insect-proof.

APRIL ON THE FARM

The clouds extend themselves over the fields; the earth is moistened, and man is enriched by the bountiful gifts of Providence. "The hail, the winds and the dew become sources of happiness to all around." Sweet, lovely April showers! Ye are renewing the face of nature, and calling forth again all the life and bloom of hill and dale! The valley and groves are again vocal with the melody of birds, and busy industry and health and cheerfulness are everywhere seen. It is now time that farmers pay particular attention to all that is connected with their occupation. "He who trusts to chance for a crop, deserves none, and he generally has what he deserves." He that is negligent and sluggish in this month will be generally so throughout the year, and perhaps all his lifetime; and a shabby farm is portentous of neglected morals, and inclination to idleness, tipping and litigation. Come, then, let us be busy with the plow, that the earth may be thoroughly stirred. No matter how much the ground is tilled with this instrument, more especially if manure should be short.

PROLONGING THE USEFULNESS OF FARM MACHINERY

You can prolong the actual usefulness of your farm machines many years by giving them proper care, as follows:

First—Keeping them housed wherever they are not in use. A neglect in this hastens their depletion almost fifty per cent, according to the statement made by a farm machinery manufacturer. He says: "If the farmer cared for his machinery as he should, there would be need for us to manufacture but one machine where we are now putting out two."

Second—Keeping them well oiled while in use, and chains well lubricated and gears running freely, yet not so far apart that the strain could induce a break. The easier all parts of a machine work the longer that machine will endure.

Third—Looking over all machines carefully before using, repairing where necessary, replacing missing bolts, and by all means keeping burrs tightened. A few loose bolts will soon knock a complicated machine to pieces.

Fourth—Using good sickles and keeping mower knives sharp at all times. When mower knives begin to chug the machine, and grass begins to teeter on the cutterbar, it is high time to take the knives out and resharpen them. Badly broken sickles and dull knives force a strain on the gears that soon wears the life out of the machine.

HORSE TALK

A man of good judgment will never start in the spring work with teams in low condition.

The horses should be fit and hearty, heavy and strong.

Handle them carefully during the first days of plowing. Give frequent breathing spells.

Fit the collars often, and let the air circulate to the heated shoulders and breasts.

Fit the collars and harness carefully, so there will be no delays from galled places.

BOXES

"STANDARD"

BASKETS

"REPUTATION AS AN ASSET"

Our reputation is worth more than our plant! To keep it so is our dearest wish, and you benefit by the effort every time you buy "STANDARD" packages.

"FRUITGROWERS AND SHIPPERS"

If you wish to eliminate that "SAWDUST NUISANCE" in your berries this season, write for samples and prices of our "Standard" Rotary Cut Berry Crates.

British Columbia Manufacturing Co. Ltd.

New Westminster, B.C.

CRATES

"STANDARD"

VENEER

A sore spot looks bad for the owner of a horse, as well as for his driver. With proper care there need never be a sore on a horse.

Take off the harness at the noon hour and put the collars out in the air and sun to dry.

Tap them with a smooth round stick and brush them to get all the irritating dirt and dust out of them.

Give the teams a good grooming, rubbing and brushing the legs well before they are left for the night.

Such care goes a long way in keeping the horses in condition to do heavy and steady work.

Never turn the colts in pasture with hoofs out of shape and toes long.

Level the feet with a rasp. Long toes start ringbones.

Unless the feet are kept level the strain on the soft joints will start unsoundness in legs and joints that will knock the value off an otherwise high-priced colt.

Keep the mare and little colt in out of the spring rains.

Keep them near the barn so they can receive a lot of attention at the right time. A wetting and a chilling may cost you your colt.

DAIRY WISDOM

At this time of the year the watchful eye of the owner must be ever on the job.

A little carelessness in management now will put to naught the feed and care of the whole winter.

The cow may be a machine, but she requires good care and close attention to make her run to the greatest advantage.

The sensitive and delicate organization of the dairy cow is more or less relaxed at this season, and unless good judgment is used, profit will be cut short.

Feed generously.

Guard the freshening cows most carefully from dampness and chill.

Let the new-born calf take its first day's milk direct from the mother. When it is a day old, remove it from the mother, and out of her hearing.

For one week give it milk fresh from its own mother; the next week make each feeding one-half fresh sweet separator milk.

Be sure that the temperature is the same as from the cow, and the same at each feeding.

By the time the calf is from three to four weeks old it should be given all separator milk, with a tablespoonful of flaxseed jelly added.

By adding the flaxseed jelly the fat is supplied in a cheaper form than the butterfat.

Calves will make as good growth on separator milk with flaxseed as on whole milk.

Do not overfeed; watch the calves and watch their bowels. Strict regularity in quantity and time of feeding is most important.

Each calf should be fed by itself out of a clean tin pail, and the pail scoured and scalded the same as a milk pail, each time it is used.