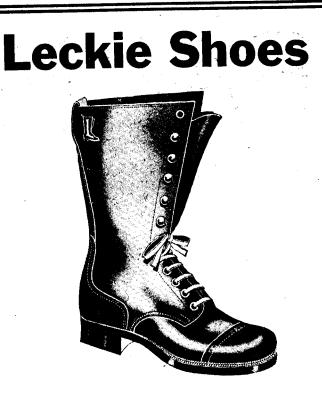


B. C. Fruit and Farm wishes you a Happy, Prosperous New Year.

615 YORKSHIRE BUILDING, VANCOUVER, B. C.

15c A COPY \$1.00; A YEAR



For the Farmer, Logger, Miner, Prospector, etc. Also Dress Boo's for the City Man, equally as strong.

MADE IN THE WEST FOR WESTERNERS

Plan your improvements during the winter

Electric Power

Plan your improvements during the winter. on your farm will enable you to increase your production at a minimum of expense.

The reliability, economy and elasticity of electric power make it the best hired man.

Consult our power experts—it costs you nothing.

BCElectric

Vancouver

New Westminster

Victoria

TABLE OF CONTENTS FOR JANUARY

The New Minister of Agriculture 1129
Alexandra Ranch, Tranquille 1131-1132
Necessity of Packing and Grading Schools 1133
By MR. F. E. LOVEDAY, Dominion Fruit Inspector.
Growth of British Columbia Fruit Industry 1134
North and South Okanagan Farmers' Institutes Conference 1135-1137
Editorial 1138-1139
Beekceping 1142
Annual Dinner of Fraser Valley Fruit Grow- ers 1145-1146
The Bacon Hog and the British Market, 1146-1147
Labor Must Be Provided for Harvesting Small Fruit Crop of Fraser Valley
Gardening for the Home 1149-1150 By H. M. EDDIE, F.R.H.S.
Poultry Section 1151
Women's Section 1152



Although early yet, the wise planter does not wait until his neighbors' trees begin to bloom, but plans out

and orders in time what will be required and thus secures the special varieties and size of stock he wants. Now is the time to place your orders and we either will ship at once or reserve the stock you specify until you are ready to receive it.

We have all the Fruit Trees and Small Fruits in best assortment and large quantities. In addition we grow Ornamentals: Shade Trees, Flowering Shrubs, Roses, Climbers, Evergreens, etc in endless variety, and all sizes, and of strictly first-class quality to choose from.

Inspection of Nurseries solicited. Price lists on application.

LAYRITZ NURSERIES VICTORIA, B.C.

Establshed 1890.

BRITISH COLUMBIA Fruit and Farm Magazine

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

Vol. IX.-No. 1

Vancouver, British Columbia

[\$1.00 per year in Advance

The New Minister of Agriculture

The selection of "Honest" John Oliver as the Minister of Agriculture in the new government of British Columbia will be most pleasing to the whole of the farming population of the province. He was the logical choice for the position. It was never doubted that he would get the portfolio. He is not the only farmer in the House, but, with the possible exception of Hon. Ralph Smith, there is no member of the present legislature on the Liberal side who has had the parliamentary experience he has, and, altogether outside his own department, it is admitted that his advice and experience will be of the greatest assistance to the new Premier and his confreres.

John Oliver is a "strong" man. He has courage and he has ideas. He is a farmer and a successful one, in spite of the tremendous amount of time he has given to public matters. He is in closer touch with the British Columbia farmer and knows his problems as perhaps no other man in the province does. It is not doubted that he will grip those problems with certainty and effectiveness. He has great natural capacity. Much will be expected of him, and everyone believes he will do the best that is in him to fulfill those expectations.

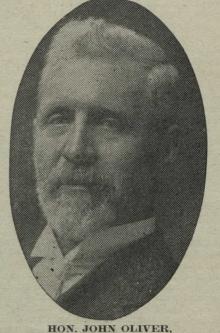
Born in Old Country.

John Oliver was born in Hartington, Derbyshire, England, July 31, 1856, and is a son of Robert and Emma (Lomas) Oliver. His parents emigrated to America in 1870 and located in Ontario, where the father still resides.

His early advantages were limited, his schooling being terminated at the age of eleven years in order that he might become a wage earner. For three years thereafter he worked in the lead and iron mines of Derbyshire, and at the expiration of that time came to Canada. He located in the village of Maryboro, Wellington County, working on a farm in the summer and in the woods in the winter until the spring of 1877. In that year he continued his journey westward, with British Columbia as his goal. The railroad had not been extended beyond Winnipeg at that time, and the journey was a long and tiresome one. He came by way of Omaha to San Francisco, taking the boat at that point for Victoria, where he arrived on the 5th of May, 1877. Immediately thereafter he obtained employment with an engineering party who were making surveys for the government, now the Canadian Pacific.

Homesteaded in Surrey.

In the autumn of the same year, Mr. Oliver took up a homestead in Surrey, his holding comprising 160 acres, and turned his attention to farming. He cleared about ten acres and engaged in its further development until about 1880, when he secured his present farm in the Delta, which also contains 160 acres. This land was not only wild, but during at least half the year it was under water. In January, 1893, the home farm was covered to a depth of at least 3 1-2 feet with sea water, but by dyking and underdraining it was gradually reclaimed. Mr. Oliver was one of the very first to extensively introduce



HON. JOHN OLIVER, British Columbia's New Minister of Agriculture.

the system of underdraining in the Delta, using six-inch cedar boards placed in a triangular position about three feet below the surface and running to the dykes, these being put down from two to three rods apart. Such underdrains, it is stated, last from 12 to 15 years, and Mr. Oliver has about 37 miles of them on his farm.

Despite the fact that the preparation of his place for cultivation required years of labor and much expense, the effort was worth while, owing to the wonderful fertility of the soil. In those early years the improvement of his place moved slowly, as he was engaged for much of his time asisting other people with their dykes and underdraining, and also built one of the first roads crossing the main trunk road in Ladner. Those days were strenuous ones, not only for him, but for many of the farmers on the low lands, for they found that while their dykes would take care of the usual tides, there were occasions when they were quite inadequate, and their land was repeatedly flooded, the loss frequently being serious. Experience brought knowledge, however, and through the united efforts of the settlers, conditions were remedied and in 1892 the municipal dyking system was installed. At that time Mr. Oliver re-dyked his own land, and continued his underdraining operations, until his whole acreage was thoroughly drained. The expense was very great, but the result more than repaid the whole outlay. Every year since that time excellent crops have been harvested, and John Oliver is today one of the most prosperous farmers in the Delta.

Engaged in Threshing.

In 1888, Mr. Oliver purchased a threshing outfit, and as he found there was money in that business, he added two more threshers to his outfit, and has kept them steadily operating the greater part of the time since. Saw-milling on a large scale was also engaged in by Mr. Oliver. A large amount of municipal work has also been done by Mr. Oliver and his son, William Arthur Oliver.

On June 20, 1886, Mr. Oliver married Miss Elizabeth Woodward, of Cheshire, England, and they have eight children, as follows: Robert, William Arthur, John Thomas, Charles Edward, Joseph, Elizabeth Alice, at home; Sarah Ellen, a highschool student, and Mildred Emma, who is attending the common schools. William Arthur, the second boy, has chosen to remain on the farm. The other four boys were given their preliminary education by a private tutor at home, and have since received a thorough education in McGill. Mr. Oliver has for years taken an active interest in politics, both local and federal. In 1900 he was elected to represent the Delta in the legislature, holding that position for nine years. He was defeated in the landslide which occurred

in 1911. His record in the House is an excellent one, and the nickname, "Honest John" Oliver, has been well earned. His standards of citizenship are of the highest, and his actions have always been tree from the slightest suspicion. He has always insisted on anything with which he has been connected being conducted in the open, and in the execution of his official duties he has been as careful and painstaking as he has always been with his own affairs. He is a man of independent thought and does what he thinks is right regardless of consequences. A striking instance of his high sense of duty was seen in his insistence in 1903 of an investigation of

certain government realty transactions of which he had grown suspicious. The investigation was held and confirmed his suspicions and as a result crown grants issued to the C. P. R. for nearly 700,000 acres of coal and oil lands, were cancelled by statute. The records of this enquiry are still a source of amazement to those who become acquainted with the facts.

Time leaves little impress on "Honest John" and his monumental work last session in preparing data and material for Mr. Brewster and Mr. McDonald, showed that he is as capable of long and sustained research as in the old days when his unflagging industry resulted in the Columbia and Western investigation, drew the warm admiration of such a clever counsel as the present Mr. Justice Duff, of the Supreme Court of Canada, who was his adviser. His great natural capacity amply compensates for the drawbacks of a limited education.

DISABLED CANADIAN SOLDIERS What is Being Done to Restore Their Ability.

The Military Hospitals Commission at Ottawa states that 2,081 soldiers were under its care at the beginning of this month. Of these 426 were at Sanatoria for tuberculosis, and 1616 at convalescent hospitals, 682 of the latter being out-patients, while 39 members of the force were in asylums for the insane. Of the 426 cases of tuberculosis, it may be added, almost exactly half were discovered in time to prevent them from leaving Canada for the seat of war.

According to a statement prepared by the militia department, up to October 5th, 1916, the number of soldiers sent back to Canada because of medical unfitness was 6208. Of these 961 were suffering from wounds, shell shock, or the effects of gas; 122 were insane; 245 were afflicted with tuberculosis, while the remainder, 4880, were suffering from other diseases and disabilities.

All Canadians ought to know what is being done by the military hospitals commission, acting on behalf of the whole body of citizens, for the restoration of thetr wounded defenders to a position of selfsupport and independence.

Every disabled soldier is medically examined on arriving at Quebec. If he is no longer in need of hospital treatment, he is sent home free of expense and discharged with a pension or gratuity according to the extent of his disability.

If he needs further treatment, he is taken to the hospital or santorium where the treatment most suitable to his case is available, and, if possible, to that which is nearest his home. Men who cannot resume their former work on discharge from hospital are advised and enabled to take special training for new occupations. This is provided free of cost, and while the men are being trained the Dominion government maintains them and their families.

Helped to Get Work.

Men needing artificial limibs are taken to Toronto, where these limbs are made and supplied without charge. Men with serious nerve disorders are treated specially in the Ontario Military Hospital at Cobourg.

Each provincial government has appointed a commission to help discharged men in securing steady and remunerative work. The Dominion government, and other authorities and employers, systematically give preference to returned soldiers when filling vacant positions.

The public can and should co-operate heartily in this urgently necessary work by encouraging the men to take fullest advantagee of the curative and educational opportunities given them, and afterwards by seeing that they get work. Local committees have been formed for this purpose in many towns, but much more has to be done in this way.

The treatment, most carefully carried out in accordance with the latest discoveries and the proved results of medical experience, includes many forms of strengthening exercises, often requiring special and costly apparatus; the scientific use of electricity, massage and continuous baths for affected limbs, with wise deiting and fresh air as a matter of course.

Classes Are Held.

Occupation is often as necessary and beneficial as rest itself, in its curative and strengthening effect on body and mind. Classes are therefore held at the hospitals, for instruction and practice in many arts and industries, such as carpentry and woodcarving, metal and leather working, typewriting and bookkeeping, mechanical drawing and elementary engineering, gardening, beekeeping and poultry-raising.

These all help to increase the capacity of the patients, and to lessen the effect of any injury they have received, by getting them into practice for such industries as they can profitably undertake. The medical and educational officers try first to discover what each man is most likely to succeed at, and then to fit him for it as thoroughly as possible.

It has been wisely decided that no, man shall forfeit any part of his pension on account of his industry and enterprise in improving his own financial position.

Let our readers write without hesitation to the secretary of the Military Hospitals Commission at Ottawa or to the provincial commission at the provincial capital, asking any further information they may desire, or giving any practical suggestions resulting from thought or experience.

NEW FARM MANAGER LEAVES FOR AGASSIZ

Brandon Agricultural Expert Will Succeed Mr. Moore at Experimental Farm

Mr. W. H. Hicks, assistant superintendent of the Experimental Farm at Brandon, has been appointed to the position of acting superintendent of the experimental farm at Agassiz, B. C., succeeding Mr. P. H. Moore, who has taken up a ranching appointment on Vancouver Island. Mr. Hicks left Brandon for the west today.

Formerly assistant at the Experiment Station at Lacombe, Alberta, Mr. Hicks was transferred to Brandon farm two years ago. Graduating from the Manitoba Agricultural College in 1914, he has been doing meritorious service in the interests of agriculture ever since.

ADVERTISING B. C. FRUIT

A fairly comprehensive advertising campaign, covering the prairie provinces principally, has been conducted by the B. C. Fruit Growers' Association this summer, but a still bigger, more ambitious scheme is mapped out for next year. And it will be needed. The production of fruit in British Columbia during the past three or four years has been increasing rapidly, and it is estimated that within four years the province will produce at least 150 per cent. more fruit than she is at the present time.

A market must be found for this product. The prairie market is a growing one, but it is certain that it will not be able to take all the fruit we can produce, even with the great increase in population which is almost certain to come to it.



Synopsis of Coal Mining Regulations

COAL mining rights of the Dominion, in Manitoba, Saskatchewan and Alberta, the Yukon Territory, the North-West Territories and in a portion of the Province of British Columbia, may be leased for a term of 21 years, renewable for a further term of 21 years at an annual rental of \$1 an acre. Not more than 2,560 acres will be leased to one applicant.

Application for a lease may 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 shall be furnished at least once a year.

The lease shall include the coal mining rights only, rescinded by Chap. 27 of 4-5 George V. assented to 12th June, 1914.

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.—83575.

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.

家外

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

B. C. FRUIT AND FARM

Alexandra Ranch at Kamloops, Selling Purebred Cattle. Model Property at Tranquille Gives Farmers and Stockmen of Kamloops District a Grand Opportunity to Improve Their Herds---Berkshire Hogs Give Good Returns.

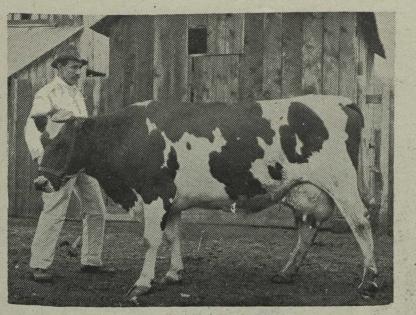
Over fifty years ago, when the late William Fortune took up land along Kamloops Lake, he little thought that he was laying the foundation for a ranch which stands supreme in the interior of the province for its pure bred live stock and mixed farm products.

Some nine years ago, when the British Columbia Anti-Tuberculosis Society was farmer who accepts the opportunity to secure bulls or cows is starting in the right direction to a successful business.

Pure Bred Stock

Amongst the stock now at the Alexandra ranch might be mentioned the sire, Colony Rag Apple Aaggie, son of Aaggie Cornucopia Newman, who was a proven son of the Aaggie's dam made a very creditable record at less than two years of age, while her sire carries 75 per cent. of the blood of the world's famous bull Pontiac Korndyke.

In the herd, Colony Meta Korndyke freshened at less than two years and produced 66 pounds of milk per diem, finishing her yearly semi-official test with 10,-906 pounds of milk and 425 pounds of but-



"Arjubah Aaggie Pieterje,"

seeking a site for a sanitarium for the treatment of the disease, the Fortune estate was considered and later purchased. Immediately after the ranch was run as a business strictly apart from the Sanitarium, under a manager, who, in handling the product, charged the institution the same as any other customer.

With plenty of rich farm land, and prolific ranges, modern appliances were installed and up-to-date buildings constructed. Raising pure bred stock was commenced and this work has brought the Alexandra ranch to the fore in that part of the province. The choice in cattle was the Holstein and Berkshire swine.

Several years ago the Department of Agriculture took up the matter of importation and after careful investigation the Holstein breed was found to be most suitable. For general dairy purposes it has been found that this breed was all that could be desired. In a recent test taken by Prof. Eccles, of the Missouri Agricultural College, with different breeds of dairy herds, it was found that the Holstein produced more butter fat for the amount of food eaten than any other. The facilities for purchasing gave the officials an opportunity to secure the best cows and bulls, and the nucleus of several of the finest herds of dairy cattle in the province was secured from these purchases.

The original animals in the Alexandra herd were purchased from the Colony farm at Coquitlam, where the government has established a large farm in connection with the Mental Hospital. These animals are the very best blood in Canada and the famous sire, Aaggie Cornucopia Johanna Lad, Jr., and the great thirty-two pound cow, Margie Newman. Aaggie Cornucopia Johanna Lad, Jr., has 34 daughters holding official records, 18 having records of from



MR. D. W. STRACHAN, Manager.

ter fat in \$12 days. Colony Birdie Rag Apple is the daughter of Birdie 2 Netherland, who produced 102.8 pounds of butter in thirty adys. Her father, as well as that of Colony Meta Korndyke, was Rag Apple



The 150-ton Ensilage at Alexandra Ranch,

20 to 28.30 pounds of butter in seven days. Margie Newman produced 32.79 pounds of butter in 7 days and 131.19 in 30 days; also, she produced 3555.10 lbs. of milk in 30 days. Margie Newman held the world's one-day milk record. Colony Rag Apple

Korndyke VII, full brother to Rag Apple VIII, who sold for \$25,000 a year ago. This was the highest price ever paid for a Holstein up to that date. Another fine animal is Azubah Aaggie Pieterje, who holds a fine official record as a three-year-old. She is a very beautiful type of dairy animal, and has never been beaten, to our knowledge, in the show ring. Colony Vronka Korndyke, another of the Alexandra herd, is a heavy milk producer, which is also very rich, yielding when tested by a government inspector 5 per cent. butter.

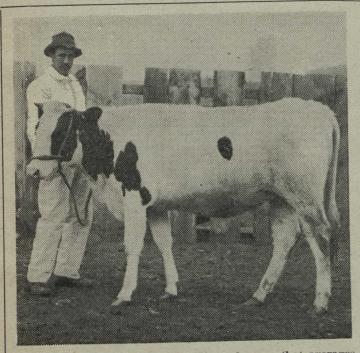
Several Fine Young Bulls

It is from these dams that the Kamloops farmer has an opportunity of securing stock. At the present time there are a number of fine young bulls in the herd for sale. The youngster shown in the pho'o is a son of Azubah Aaggie Pieterje. He has her splendid constitution and conformation, while on the sire's side he inherits a long line of heavy milk producing ancestry. Ininvestigate the advancement which has been made. In two years the herd has been built up to such an extent by this sire that it would be hardly recognizable as the same.

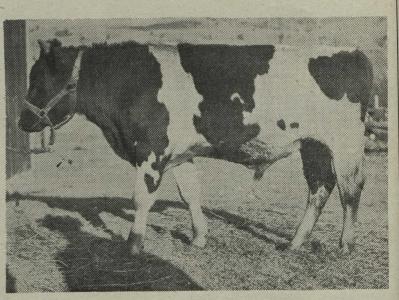
Sheep Breeding

In the sheep branch, the Cotswold breed, which was the choice of the former owner, was found to be the best, and the flock which was started by Mr. Fortune was purchased and added to by the present management of the ranch. The value of this animal can easily be recognized when it is mentioned that the yield per fleece this year averaged over thirteen pounds each. The breeding of Cotswolds is being carried on and there will be some fine animals for sale next year. through the revenue of the ranch alone, and any business that is transacted comes in the same manner as between firms or individuals. The fact that the government assists indigent patients at the Sanatarium on a per diem basis has given rise to the impression that the entire financing was carried on in the same way.

The work which has been done in bringing this pure bred stock to the Alexandra ranch has given the farmers of the Kamloops district an opportunity that they cannot well afford to overlook. The purchase of stock there enables the buyer to go and inspect, satisfy himself as to pedigree and save the freight from outside points. Anyone interested in any way should make it



"Colony Birdie Ormsby II," daughter of a cow that averages over 100 lbs. per month.



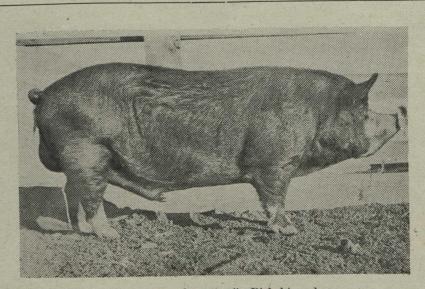
A son of "Arjubah Aaggie Pieterje" and a promising youngster.

tending purchasers can secure these bulls at prices far below that asked by old and well established breeders. Every farmer who has been considering the purchase of new stock this winter is invited to visit the ranch and secure any information available in regard to the stock.

Berkshire swine is another line that is being developed at the Alexandra ranch. The Berkshire is one of the oldest breed of hogs and has stood the test of many years. They are very quick maturers, easily fattened, hardy and prolific. Their fine grained flesh and excellent shape make them very desirable for the block. Wi h these good qualities, they are the pork par excellence for the producer, the butcher or consumer.

The farmer who has the establishment of a piggery in mind could not do better than commence with the Berkshire. As a business proposition they cannot be surpassed. The sire, whose photograph we show, has never been beaten in the show ring. It shows the fine hardy type of animal that it is, and the possibilities of profit from such animals.

• The farmer who is interested in this stock should endeavor to visit the ranch and



"Straghmore Augustus," Birkshire boar.

In connection with the Alexandra ranch, it is well to point out that it is not run nor assisted by the provincial government. The ranch is operated strictly apart from the Sanatarium and must survive or fall by its own effort. The herds have been secured a point to visit there, where Mr. D. W. Strachan, the manager, will be pleased to supply all information in his power. Enquiries by mail should be addressed to Mr-Strachan, at Tranquille post office, which will receive prompt attention.

Necessity of Packing and Grading Schools pointed out by Mr. F. E. Loveday,

Dominion Fruit Inspector.

It is more and more forced on one's convictions that the standard of packing and grading British Columbia fruits is not sufficiently stable to meet the requirements of the trade. It has not the definite certainty of the American product. Buyers have not the surety and encouragement to deal with British Columbia shippers, outside of the large organizations, and are naturally rather dubious about purchasing outright when their experience, more often than not, is that the pack is light and the grade unsatisfactory. How often one sees good fruit poorly packed, and how often a good pack containing about 75 per cent splendid fruit and spoiled from a commercial viewpoint by the inclusion of 25 per cent. poor fruit. All this must be remedied before B. C. can take her rightful position in the markets.

The industry is increasing its output rapidly. In the Coast region, Vancouver Island, Chilliwack and other districts have found it necessary to make carlot shipments of apples and pears to prairie points. and have these shipments proved satisfactory? Have there not been rebates asked for on many of these shipments? And was not the cause of dispute in every case poor packing or grading? It is absoluteely essential that we standardize our pack and grade before breaking into these fields, instead of first supplying an unsatisfactory article and then trying to live down a bad reputation. The small shippers in districts like Hammond and Haney get little encouragement from their customers because of the unreliability of their pack and grade. Conditions Better in Interior.

Conditions in the Upper Country very different, but the need for schools is just as urgent. Nearly all the growers ship through large shipping concerns, but their difficulty is getting trained help to maintain their standard pack. The war has taken practically all the men packers, women have come forward, and have proved their worth, but not in sufficient quantities. The chief danger lies in the fact that the Orientals are getting into the business and unless a strenuous effort is made fruit packing will be another industry lost to the white people.

A moment's consideration of the vegetable and fishing industries on our own coast, the stone fruitgrowing industry of California, will emphasize the imminent danger overshadowing fruit packing in the Okanagan. In Britain, France, and in fact all the warring countries the women have taken up the burden of continuing the business of those who have gone to fight against autocracy and oppression, and here in British Columbia the need is too urgent that one of our greatest industries be still "a white man's job" when the boys return. It is the women who, by coming forward, and through their Women's Institutes, etc., appeal for packing schools in order to learn the business, can save it from irredeemably going into Oriental hands.

A Big Industry.

Roughly, about \$70,000 was paid this season for packing tree fruits. How much of this money would be circulated amongst the white tradespeople if the Orientals get control? How much longer will it be before they are in the fruitgrowing end of it? And if they get into that, how long will it be before the country is thoroughly infected with disease? One has only to follow the results of leasing vegetable lands to Chinamen in the coast districts to appreciate just how thoroughly they can infect a country.

The horticultural department of the government of British Columbia has circularized the boards of trade and farmers' institutes with reference to instituting packing schools, and it is hoped that there will be a ready response. Any responsible body can make an application for a school, and all those interested should write at once to the horticultural department at Victoria, B. C.

F. E. LOVEDAY,

Dominion Fruit Inspector.

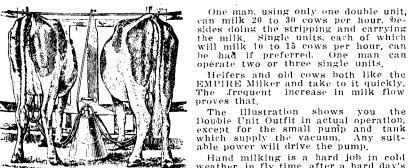
CHILLIWACK

FOR SALE—House and large lot in Chilliwack, "the garden of British Columbia"; seven-room house, electric light, city water, garden full of flowers, fruit and vegetables; five minutes' walk to postoffice and cars; fishing the year round; shooting in season; fifteen swarms of bees in Langrtroth hives, producing hundreds of pounds of honey. See owner on the place. M. J. Henry, Chilliwack.

EMPIRE

CREAM SEPARATORS

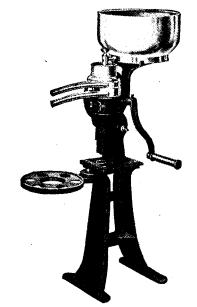
EMPIRE **MECHANICAL MILKER**



EMPIRE Milker takes care of a job nobody likes. Pays you a hand some milked regularly, quickly and uniformly.

The EMPIRE Milker is a fine machine. Absolutely reliable. Successful everywhere. Guaranteed by the Empire Cream Separator Company. See for yourself how simple, sure and reliable it is. Will be glad to show it to you at your first opportunity.

Gently massages the teats after each spurt of milk. Does not use compressed air. Only one pipe line needed—it can be run wherever convenient,



Absolutely satisfy the men and women who are looking for quality and who judge construction and fine workmanship by the "sound" and the "feel" of the machine when running.

EMPIRES

are remarkable for smooth, quiet running.

> Used by Three Generations

EMPIRE CREAM SEPARATOR CO. OF CANADA, LTD.

Heifers and old cows both like the EMPIRE Milker and take to it quickly. The frequent increase in milk flow

Manufacturers of Mechanical Milkers, Cream Separators, Gasoline Engines and other Machinery. C. L. Merritt, Provincial Agent, 207 Hastings St., W., Vancouver, B. C. Telephone Seymour 3613.

Growth of the British Columbia Fruit Industry.

Estimated That Fruit Production of the Okanagan for 1916 Will Run Close to 3500 Cars

The growth in the fruit-growing industry in the Province of British Columbia is indicated by a report of the operations of one of the principal fruitselling agencies in the interior, the United Growers, which was issued recently. The shipping season practically ended about December 15, and up to that time this company alone had shipped over 1800 cars of fruit. This is an advance of over 300 cars on the record for 1915, and indicates a very large increase in the apple production, as peaches, pears and plums were a very short crop this season. The United Growers act as the central selling agency for about 10 local fruit unions between Salmon Arm and Penticton, and their operations have been quite as satisfactory with regard to prices received as they have been in the amount of goods handled. A particularly gratifying feature of their business has been the wide distribution obtained. This is a point to which the managers of this company are devoting much attention, as they consider that the development of an export trade will provide a solution for many of the problems with which fruitgrowers are now faced.

During the season the company, in addition to supplying their prairie and local customers and the coast cities, exported 68,000 boxes of apples, equivalent to 161 cars, and could have sent out a great deal more if shipping space had been available. The distribution was made as follows:

	Boxes.
Australia and New Zealand	33,500
South Africa	8,400
Great Britain	16.390
South America	1,950
New York City	1,800
Dakota and other N. W. States	1,860
Quebec and Ontario	18,950

The Okanagan United Growers, it is said, handles between 50 and 60 per cent of the output of fruit in the Okanagan, and when asked to make an estimate of the total output of the valley, the manager said he believed the Okanagan would ship not less than 3500 cars of fruit and farm produce this year. This: he figured, would run to at least \$1,750,000, and would mark an increase of about \$500,000 on the output of 1915.

If this estimate can be relied upon, the increase in the production of fruit in the province is a remarkable one. The total production of fruit in 1915 for the whole of the province was 1,638 cars, as shown in a report published in Fruit and Farm last month, and this statement of Manager Jackson of the United Growers would indicate that at least 3000 cars of fruit have been handled in the province this year. This is indeed most encouraging.

Mr. Jackson believes the returns to the growers this year will be considered fairly satisfactory. A slightly higher price for the better grades of fruit has been obtained, and a slightly lower one for the poorer qualities. The fact that the dealers have been able to go into the markets of the United States, and such a fruit province as Ontario, pay freight on a long haul, and still compete successfully, is an exceedingly promising indication of what the fruitgrowers of this province may expect when the industry is placed on the really firm business basis which is being aimed and looked for.

The fruit business in the province, this authority continues, has now reached the point where it is almost imperative that better facilities for handling, and a big increase in storage capacity at the various centres be provided. The production is increasing every year, at what may be considered a rapid rate, the average for the past five years being not less than 200,000 boxes, and the car shortage and handling facilities were this year a really serious problem, which will have to be remedied if the growth is maintained.

One thing which cut the profits of the growers this year to some extent has been the increase in the cost of material used in packing, practically every requisite having shown a sharp advance. This has been met in a measure by a reduction in the handling of the fruit at the packing houses.

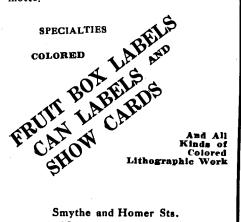


We take this opportunity of thanking our numerous customers for the liberal support accorded to us throughout 1916, and trust that this support will be extended to us in the year to come.

Our aim has been

QUALITY, PRICE AND PROMPTNESS To enable us to live up to this motto we have endeavored to secure as large a stock of papers, colors, etc., as is possible at this time, in addition to which we are adding to our plant one of the latest two-color lithographic presses, and we think we can faithfully fulfill all the reasonable calls made upon us.

We woud ask our patrons to order early and enable us to live up to the above motto.



Vancouver, B.C.

Vancouver, B. C.

) we sell

EVERYTHING

The Right Shoe for Farm Use



WE SELL FOR LESS

WOODWARD DEPARTMENT STORES, LTD. VANCOUVER, B. C.

Get It At

Write for our General Catalogue and a copy of the G, I. A. W. News, Say you saw it in The B. C. Fruit & Farm.

North and South Okanagan Farmers' Institutes Conference.

At a conference of members and delegates of the Farmers' Institutes of the electoral district of North Okanagan held at Armstrong on December 7, it was decided to form a District Institute to be composed of elected representatives from the affiliated institutes within the boundaries of the electoral district.

This meeting was convened to be held in conjunction with the Provincial Seed Fair and was attended by members of the Farmers' and Women's Institutes, municipal councils, school boards, agricultural, fruit, dairy, educational, ministerial and other associations. The sessions at 2 and 7:30 p.m. in the old council chamber in the "Brick Block" were well attended.

At the request of President Patten, of the Spallumcheen Farmers' Institute, Mr. J. R. Brown, of the Advisory Board, Central Farmers' Institute of British Columbia, occupied the chair. After the opening of the meeting with prayer by Rev. P. Henderson, of the Armstrong Ministerial Association, the chairman in his address explained that the meeting was one of a series fixed for Kelowna, December 5; Vernon, December 6; Armstrong, Decem-ber 7; Revelstoke, December 9; and Kamloops, December 11, with the object of considering the formation of electoral district institutes and hearing addresses on agricultural topics by Mesers. W. E. Scott, deputy minister of agriculture; J. W. Gibson, M.A., director of agricultural educa-tion; H. O. English, soil and crop instructor; S. H. Hopkins, assistant live stock commissioner, of Victoria, and also papers and speeches by local talent. He reported well attended meetings at Kelowna and Vernon, and conveyed messages of good will, fraternity and co-operation which were emphasized and sent on to Revelstoke and Kamloops. Kelowna, after a careful canvass of the situation, had arranged for a district institute for South Okanagan, requested the Education Department to enable certain pupils to help in the fruit season, and urged the Department of Agriculture to establish labor bureaus in the province.

Increasing Membership,

Interesting reports were given from a number of institutes showing memberships ranging from 33 to 202, and indicating a very satisfactory and, in some cases, very encouraging amount of work done.

Mrs. Andrews gave an interesting sketch of the Salmon Valley Women's Institute. It showed active, forward work, a special feature of which was the winning of several valuable prices. Mrs. Furniss read a paper prepared by Mrs. J. H. Miller, secretary of the Vernon Women's Institute, covering the work of the year. It showed a membership of 85 and that a large amount of efficient work had been accomplished.

Letters of regret at inability to be present but expressive of success to the objects of the meeting, were read from Hon. H. C. Brewster, Premier of B. C.; Hon. John Oliver, Minister of Agriculture; Mr. Price Ellison; Mayor Smith, of Vernon, president of the Union of Municipalities of B. C.; President J. W. Berry, of the Provincial School Trustees' Asociation: Inspector Anstey, Vernon; President W. O. Buchanan, of the Associated Boards of Trade of B. C.; and Mrs. Allison, secretary of the Oyama School Board, the latter two also submitting papers of interest. Principal Freeman, of the Armstrong

High School, read a very interesting and instructive paper on "Agriculture and the Empire." It was well received and was Empire." considered one of the best of the local contributions.

The reports, resolutions and papers were referred to a committee consisting of a delegate from each institute, the convenor being President Patten, of Armstrong.

"Get Together" Meetings.

After a number of brief, interesting remarks in a fraternal spirit by other representative men, led by Mayor Wright, of Armstrong, in his usual happy strain, Deputy Minister Scott was introduced. His address was brimful and running over with good things which secured the rapt attention of his hearers. Among other points made, he stated that the objects of these meetings was largely to get the views of the farmers and to learn of their difficulties, as well as to give information. At the coast a number of "get together" meetings had been announced for the purpose of promoting common interests by means of co-operation. The labor difficulties were recounted. The advantages of the appliance of scientific knowledge were pointed out. The production and use of better seed, of more and better stock, and of necessary drainage were specially indicated. The products obtained by Mr. and Mrs. Chalmers, of Thrums, were given in detail and showed a return of \$2,000 from 71-2 acres. The farm shoulld be made self-supporting. The practice of seling or slaughtering heifer calves was condemned. Alfalfa and corn were advocated for fodder, and the use of the silo urged. The number built was about 300. The men on the department field staff were from the farm and had acquired efficient agricultural college training.

Co-operation,

Agriculture in British Columbia had been neglected for real estate speculation, but past errors were now being rectified, resulting in decreased importations of The advantages of co-operafoodstuffs. tion over individual action were pointed out, the success of the Okanagan United Growers being used as an illustration, thousands of dollars being saved to the the farmers. Farmers' institutes should be live, active organizations ready to take advantage of the benefits to be derived from co-operative buying and selling. The Creston Institute was quoted in this respect their purchases being away up in the thousands.

The social element should not be overlooked but fostered and promoted. The organization of Women's Institutes was a powerful factor in this respect in addition to the value of their own special functions in the community. A high estimate was placed on the work of the Women's Institutes and it was urged that more be organized. In the purchase of blasting powder the department had arranged for the saving of money to institute members in original cost and in railway rates. The field crop competitions were doing a good work in promoting the growing of better crops and it was urged that more growers take part in them. The work of the Boys' and Girls' Clubs under Prof. McDonald was alluded to in glowing terms. The best potatoes shown in provincial competitions were grown by boys and girls. A special

feature of the meeting at Vernon recently was the presentation of these prizes, the keen interest taken in the club's pig raising contest being particularly noticeable.

Pure Bred Sires.

The assistance rendered by the Provincial and Dominion authorities in the purchase of pure bred sires, implements, etc., and the distribution of selected seed was explained. Pruning and packing classes were carried on systematically at suitable points and good results had been reported regularly.

Many other matters were touched upon, including a reference to number and excellence of the present Seed Fair exhibits and valuable suggestions made in his characteristic, encouraging but forceful manner, and upon resuming his seat, Mr. Scott received the hearty applause of the audience.

Mr. Scott had invited discussion upon local questions and it now followed in a lively fashion resulting in Mr. Scott having some additional problems to deal with at Victoria.

A Bad Policy.

The sale and slaughter of heifer calves gave rise to an interesting debate as the result of a motion by Mrs. Kenyon, of Ewing's Landing, to make such action a criminal offence during the war period. It was pointed out that American buyers were securing a large number of Canadian calves for export. Mr. Scott finally undertook the drafting of a resolution dealing with the submitting of the matter to the Dominion authorities.

Evening Session.

At the evening session, Mr. J. W. Gibson, director of agricultural education, gave a well received address in his usual earnest, sincere, eloquent and optimistic manner. He alluded to the hearty manner in which he was assisted since the commencement of his dulies in B. C., over two years ago, by Mr. Scott and the officials of his department. This harmonious ac-tion had added very greatly to the value of his work. The absolute necessity for the conservation of our resources at the present juncture and for the increasing of our products was pointed out. The function of agricultural education was to help in fitting our boys and girls for their life work. The importance of agriculture to the nation was pointed out and it was placed in the front rank. The boys and girls were assisted by means of school gardens, competitions, etc., to appreciate the value of what they were dealing with and to take a real interest in the animals, plants, etc. Knowledge and culture would be derived from their own operations. In the school studies there was not too much of the literary, but too little of something else and a plea was entered on behalf of

more agricultural work. Mr. Gibson enlarged upon the beneficial results to be derived from co-operative action by the Farmers' and Women's Institutes, and also upon the splendid influence effected for betterment by the school fairs that have been held successfully at different points. The boys and girls have taken part in raising funds for patriotic causes and contribution for the relief of the needy Belgian children. He was desirous of having the boys and girls during 1917 by their own efforts raise in British Co-lumbia the sum of \$50,000 for patriotic purposes.

Agricultural Education

The course of work in agricultural education for the public and high schools was outlined and specific cases of good results already achieved were alluded to. Instructor Britton, who is in charge of this subject in the schools of Armstrong, Spallumcheen and Vernon, is carrying on an excellent work and the results would in due time be very beneficial.

In his able address, Mr. Gibson referred to and strongly emphasized a number of points made by Mr. Freeman in his afternoon paper along the lines of co-operation. At the close, the applause of the audience indicated their appreciation of one of the finest and most appropriate orations delivered in the district for some time.

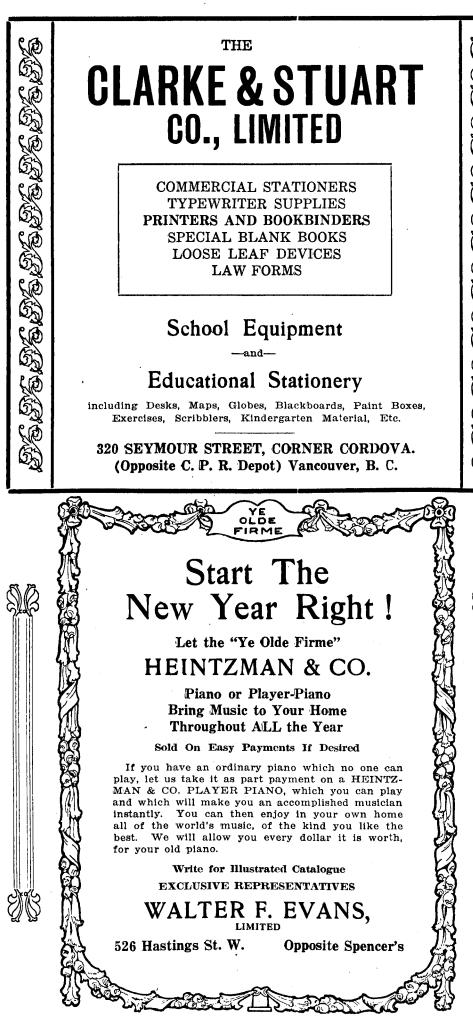
Soils and Crops

Mr. H. O. English, soil and crop in-structor, was next called upon and gave a practical talk on the subjects of his department, including the seed fair at Armstrong, of which he was in charge. A larger number of entries than usual had been made and the quality was greatly improved. Seed for home use should be grown at home and not imported. The value of the silo was emphasized and the growing of alfalfa and corn for fodder was urged. The number of silos in use had increased in a short time from 12 to 800. In growing their own seed farmers should experiment at first and gradually work it up to a commercial enterprise. That there is money in it may be seen by investigating the course of trade. There is a duty of 10 per cent on imported grass seed, 71-2 per cent war tax and the retailer makes about 100 per cent, thus showing an increase from 100 to 235. Field crop competitions had been very helpful in this respect. An instance was adduced of a crop of 21 tons of potatoes to the acre as a result of using improved seed. While ordinary seed was sold at \$9 to \$10 at the evaporator, this stock brought good seed prices. There is a sleady demand for good seed. The Americans were securing their supply on the prairies. An example was given of a return of 165 lbs. of parsnip seed off 1-16 acre which was sold at 50c a lb. wholesale. The work was done by hand at an expense per acre of \$450. Registered seed can be produced from stock grown from registered seed, the crop to be registered before it is cut. Do not use dirty land. A thin crop is usually the best.

President Taylor, of South Okanagan, the winner of corn prizes, upon request, gave a brief but very choicely-worded address on his manner of cultivation. Both speakers are easy and fluent of address.

High-grade Stock

In the absence of Professor McDonald, who was unavoidably detained at Victoria, Mr. S. H. Hopkins, assistant live stock commissioner, was called upon and gave a very effective address in which he dealt with the great advantages accruing to the owners and users of pure-bred and high grade stock, as compared with the results in the case of scrub stock. Example after example was given in Mr. Hopkins' lucid, polished style, which served to carry conviction in each case. Alluding to a point made in Mr. Gibson's address on agricultural education in its bearing on the future career of the boys and girls, he instanced the presentation of the prizes by himself at Vernon the previous evening, in the pig-raising contest by members of the Boys' and Girls' Club there. He had judged the pigs and read the essays. One of the winner's pigs, eight months old, weighed 260 pounds, and was sold for \$26.



and the prize was \$6. The reading of the essay on "How I Raised My Pig," by a ten-year-old prize winner at Vernon, elicited the hearty approval of the result of the policy of the department in conducting the club competitions.

The chief points in connection with the handling of several different kinds of live stock were dealt with and the beneficial results of the recent arrival of pure-bred and grade dairy stock in the valley were indicated. Advice was given as to securing pure-bred sires through the Provincial and Dominion authorities and also as to payment in certain cases, of the expenses of buyers of stock.

K. C. MACDONALD

Mr. K. C. MacDonald, M.P.P. for North Okanagan, was next called upon and gave a brief but inspiring address in which he expressed his pleasure at being present to meet so many of his contsituents, to hear their discussion and to learn what would afterwards be of assistance to him in dealing with their difficulties in the legislature. It would be his aim to do all in his power to assist in promoting the interests of all classes in his constituency, and especially those of the farming community. The doctor's remarks elicited a round of hearty applause.

The last paper on the programme was read by Mr. J. E. Britton, instructor in elementary agriculture, his subject being "Agriculture and the School." Mr. Britton took charge of the work in the schools of Armstrong, Spallumcheen and Vernon at the beginning of the present term and is said to be succeeding admirably. This was his first appearance before an institute meeting since his arrival from Ontario, and if the value of his paper is the measure of his worth, his future success is assured.

A District Institute

The matter of the formation of a District Institute was next taken up. It was moved by Mr. C. W. Little of Mara, sec-onded by L. W. Patten of Armstrong, and carried unanimously, "That a district in-stitute be formed in the Provincial Electoral District of North Okanagan, to be known as the North Okanagan District Farmers' Intsitute, to be composed of elected representatives of the local affiliated institutes who will elect one representative for each 100 members or fraction thereof, whose duties will be principally to consider and consolidate all resolutions and matters to be submitted to the Department of Agriculture by the accredited delegates of the District Institute."

Resolutions

The following resolutions passed by the South Okanagan District Institute and forwarded for consideration were unanimously endorsed and sent on to Revelstoke

and Kamloops for further consideration: (1) Whereas, the consensus of opinion among the local Farmers' Institutes in South Okanagan is towards more hearty co-operation in their institute work,

Be It Resolved, that a District Institute be formed in the Provincial Electoral District of South Okanagan and including Peniicton and Kaleden, this District Institute to be composed of elected representatives from the different local institutes who will each elect one representative for each fifty members or fraction thereof.

(2) Owing to the abnormal conditions created by the war, making it virtually impossible to get laborers to harvest our

Whereas, it is essential that, instead of curtailing our agricultural production, we should increase it; and

Whereas, there is much available labor amongst our older boys and girls who are

• .

called from work in August just when the rush is on;

Be It Resolved, that the members of the South Okanagan District Institute, in session assembled, request the Department of Education to permit school boards to postpone the opening of schools for the higher grades tenable these pupils to assist in picking and packing the fruit;

And further, that a copy of this resolution be sent to the institutes in North Okanagan, Salmon Arm, Kamloops and Revelstoke, requesting that they deal with it as they see fit.

(3) Whereas, the shortage of agricultural labor due to the removal of so many men from the country districts to fight for the defence of the Empire, is creating a serious situation, especially in the fruit-growing districts, and

Whereas, the prospect of a further scarcity of labor for the season of 1917 calls for prompt action of serious loss from unharvested crops and also a great curtailment of agricultural production is to be avoided:

Therefore Be It Resolved, that this meeting of the South Okanagan District Institute urge upon the Department of Agriculture of the province the necessity of establishing labor bureaus in the different centres for the purpose of mobilizing all capable of rendering assistance and making their labor available where it is most required; and this meeting further suggests that these bureaus be under the supervision of a competent official of the Provincial Department of Agriculture, using the present organizations of the Farmers' Institutes or Boards of Trade.

MR. FRUIT SHIPPER:

Do you know that SWARTZ BROTH-ERS, 155 Water Street, Vancouver, B.C., sell more fruit for the British Colum-via Farmer than any other commission house in Vancouver, B. C.

WHY?

Because it is the home product that the people want. We aim to please our customers and help the B. C. Farmers.

We guarantee returns hours after goods are sold. thirty-six

Give us a trial with your next ship-ment of fruit and be convinced.

Our commission is 15 p.c. on all goods except on hot house stock.

Write for particulars. SWARTZ BROS.

It Is Not Long Till Spring

when you will be planning your Garden or Orchard. NOW is the time to be thinking and planning what you will plant. Don't leave it too late, but give us the opportunity NOW of making a few suggestions. and planning NOW of mot

IN SMALL FRUITS THE STRAWBERRY comes among the very first. We have the newest and very best varieties, as follows: newest and very best varieties, as ionows: **DR. BURRILL**—Mid-season. Called "The Million Dollar Herry." **MAGIC GEM**—Mid-season to late. **KELLOGG'S PRIZE**—The berry without a fault. **HELEN DAVIS**—Early. fruit large and very fine quality. **GOODELL**—Originated on Pacific Coast—succeeds anywhere. **MAGON**—The greatest commercial berry known.

We have fine plants of all the above varieties, CURRANTS—In all deading varieties, including Fay's, Victoria, Black Naples, etc. GOOSEBERRIES—Oregon Champion, the mildew-proof and money-making variety. RASPBERRIES—Cuthbert, S. Regis, and other leading kinds. LOGAN BERRIES—One of the best investments we know of. Canning and Juice making are coming industries in B. C.

The above and many other specialties are grown at our Nurseries at Sardis, near Chilliwack, B. C., and form just a part of our full line of CHOICE FRUIT TREES, SHRUBS, ROSES AND ORNAMENTALS.

Do not fail to write us about your needs, and do it now.

Our large descriptive Catalogue is at your service, also our artistic and exclusive Rose Catalogue—either or both sent by return mail, as we want your order EARLY. We can do the fullest justice to orders sent in AT ONCE. Your trees are then reserved Rose Cataloguein good time.

We can at all times find room for the right kind of man to represent us in the sale of our well-known "QUALITY" trees. Write for particulars.

BRITISH COLUMBIA NURSERIES CO., LTD.

1493 SEVENTH AVENUE WEST,

VANCOUVER, B. C.

NOTICE HIDES WANTED

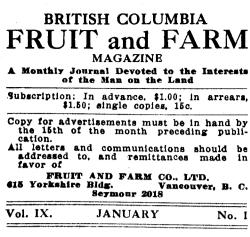
We wish to call farmers' attention to the fact that we are now in a position to purchase HIDES for the Fraser River Tannery, which we have purchased and enlarged.

We will pay highest market prices for calf and light cow hides.

Ship direct to FRASER RIVER TANNERY

New Westminster, B. C.

And notify J. LECKIE CO., LTD., Vancouver, B. C.



NATIONAL SERVICE

EDITORIAL

The National Service Board of Canada, as is expressed in a statement recently issued to the press, has been charged with the duty of making investigations and formulating plans that will in some measure provide for those adjustments in our national life that will enable the production of the agricultural and other basic industries of the country to be kept at that high point of efficiency so absolutely essential to the successful prosecution of the war, and at the same time provide for the release of men from their present employment who are physically fit and suitable age for service overseas.

Sir Robert Borden, the Premier of Canada, together with Mr. R. B. Bennett, chairman of the commission, recently paid a visit to Vancouver, and their appeal was of such a nature that no one who heard it could fail to be impressed with the imperative necessity of "organizing the full power of the nation in terms of human energy" for the prosecu ion of the war and the maintenance of the essential productiveness of the country.

Since the war began 370,000 men have enlisted for overseas. Of these 258,000 have crossed the ocean, and over 100,000 are on the battle line, but during the last four months enlistments have woefully fallen off, and, having regard to future needs, it is generally recognized that the time has come for a most urgent appeal. Conscription is not desired. But the war is far from ended and it may have to come if adequate response is not made to the appeal to the people to recognize their duty to the state. It is essential that the men and the women of Canada shall serve the nation in those capacities in which their services may be of the most value, and that men of military age place themselves voluntarily at the service of the state for military duty.

An inventory of the man-power of Canada will shortly be commenced by the commission. Cards in which certain information will be asked for will shortly be sent out to all, and it is urged that these be filled out and returned as speedily as possible in order that definite knowledge of the whole resources of the country from a man-power standpoint may be secured by the authorities.

CANADIAN FARM PRODUCTION

A bulletin issued by the Dominion census and statistics office reports on the yield, quality and value of the Canadian root and fodder crops of 1916, the acreage and condition on October 31 of fall wheat sown for 1917 and the progress of fall plowing.

The total area this year under root and fodder crops, consisting of potatoes, turnips etc., hay and clover, alfalfa, fodder corn and sugar beets, amounts to about 8,980,000 acres, which is practically the same as in 1915; but the total is made up of an increase of about 100,000 acres under hay and clover, the total area of which is nearly eight million acres, and a decrease for each of the other relatively smaller crops. In total value, at local prices, these crops amount for 1916 to \$249,882,000, as compared with \$229,508,-000 for 1915. The yield of hay and clover this year is the record one of 14,799,000 tons, an average of 1.86 tons per acre, which is the highest yield on record for this crop in Canada. The average value per ton is \$11.50, as compared with over \$14 last year. Potatoes are again upon the whole a poor crop, this result being due to unfavorable conditions in Quebec and Ontario, where the average yield per acre is for Ontario 61 bushels, as compared with 92 bushels. In the maritime provinces the potato yield is good, being 206 bushels per acre for Prince Edward Island, 201 bushels per acre for Nova Scotia and 192 bushels per acre for New Brunswick. The average price per bushel for potatoes is 81 cents for Canada, 95 cents for Prince Edward Island, 89 cents for New Brunswick, 97 cents for Quebec and \$1.28 for Ontario. Fair yields of potatoes are recorded for the prairie provinces, the averages being between 170 and 177 bushels, with prices of 92 and 93 cents per bushel in Manitoba and Saskatchewan, and 84 cents in Alberta. In British Columbia the average yield per acre is 189 bushels and the price 70 cents per bushel. The quality of the tubers is between 89 and 95 per cent of the standard for the maritime provinces, over 90 per cent for Manitoba and Saskatchewan and 84 per cent for Alberta and British Columbia. For Quebec and Ontario the quality is 76 and 77 per cent.

Owing to the dry condition of the soil in Ontario difficulties were experienced in the plowing and seeding of fall wheat. By October 31 only 656,000 acres were sown, as compared with 820,000 acres in 1915, a decrease of 164,100 acres, or 20 per cent. In Alberta also there is a decrease of 36,-500 acres, or 14 per cent, viz., from 260,-500 acres to 224,000 acres. For all Canada the area estimated to be sown to fall wheat is 899,300 acres, as compared with 1,100,800 acres, a decrease of 201,500 acres, or 18 per cent. The condition of fall wheat on October 31 for all Canada is 76 per cent of the standard as compared with 88 per cent last year and 97 per cent in 1914. Of the total land in Canada intended for next year's crops 51 per cent is estimated to have been plowed by October 31, the percentage proportions in the west being 47 for Manitoba, 28 for Saskatchewan and 21 for Alberta.

SPECULATORS BUSY

The nation-wide enquiry which has been proceeding in the United States points with increasing directness, it is stated, to the conclusion that the soaring prices of certain necessaries of life are due in part at least to the manipulations of speculators who have combined to force quotations upward. In fact officials say that some of the combinations are almost criminal in character.

The investigation is as yet in its infancy, but a mass of information has been gathered, and while it has not been thoroughly digested, sufficient has been disclosed to justify the above conclusion, despite the fact that in many cases natural economic conditions does account for some of the increases. Butter, it is said, has not advanced beyond a price which it might be normally expected to go under the present circumstances, but the price of eggs is said to be unwarrantably high. Primarily the probe was expected to cover only coal and food stuffs, but leads have been disclosed which seem to warrant the conclusion that the price of such commodities as leather and clothing have been "forced" up, and the investigation will likely be extended over a much broader field than was anticipated in the beginning.

Roughly officials estimate the advance in the price of food stuffs in the United States during the present year at 45 per cent., while the department of agriculture reports an average shortage in staple farm products of only 15 per cent. The aiscovery of immense quantities of certain food stuffs in warehouses has been made, but it has also been disclosed that there is no federal authority for supervision of such warehouses

THE FARMER NOT TO BLAME

The average man is not disposed to blame the farmer for the present high prices of farm produce. The difficulty is generally believed, and in many cases correctly so, to lie somewhere between the producer and the consumer. It is true the farmer is reaping some of the benefit from the ruling high prices, but there is apparently much more warrant for the tremendous increases in those lines than can be shown for the great rise in the prices of certain manufacturers.

Wheat has more than doubled in price, but it is well known that the Canadian wheat crop is scarcely more than half a crop and that there is a world-wide shortage of that cereal. This is true of other crops, and it is doubtful if the farmer, except in certain favored sections, has been able to improve his position very greatly on account of the high prices. That he is able to improve it even to a limited extent is a matter for congratulation not only to the farmer but to the nation gen-Prosperity for the farmer means erally. prosperity for the whole country and the kind of prosperity that counts.

The farmer for years has not been making anything like the money he should have been, and this without doubt accounts very largely for the failure of the back to the land movement. Make farming a paying business and that question would be quickly solved. This is shown by the fact that, with the moderate presperity which has come to the farmers of this country during the past two years, there is evidence of a real movement from the crowded centres of the world to the land.

WOMEN AND THE VOTE

The insinuation that the woman in politics is not or would not be her own mistress might as well now be thrown into the discard, along with other groundless beliefs and traditional prejudices. This is shown in an unmistakable manner in the recent voting in the State of Illinois. In the voting on November 7 the women of that state went to the polls in number

that must have been a surprise even to the leaders of the suffrage movement as it was to all others. Before the registration of the voters for the election of 1916 began no claim running in excess of 300,000 votes was made on behalf of the women, even by their leaders, but it is now known that the total female vote for the state will run between 800,000 and 900,000, a number three times greater than was at first anticipated.

It is commonly admitted too that in Illinois the votes of women practically swung the election. The claim that they voted as women rather than as American citizens is nowhere sustained. Neither is it true that they voted with their husbands, or as their husbands voted, or that they were "unduly" influenced. There is nothing to show that they were any less free and independent than the men. On the contrary there is abundant evidence to show that they voted according to their individual predilection and judgment, just like men.

MILKMEN GET TOGETHER

The efforts of the milk-producers of the Fraser Valley to get together and form a co-operative dairymen's association promises exceedingly well, and it is to be hoped will succeed. The day of individual marketing is fast passing away. Organization and co-operation is the watchword in all lines, and if the farmer is to protect himself he must fall into line. Even in the face of the fair prices which have been ruling for the past few years, he has not been making very much money, and there is not much question that the indiscriminate marketing has had much to do with it.

Meetings of dairymen have been held throughout the various municipalities in the Valley during the past two weeks, and at this writing fully 90 per cent. of the milkproducers have signed an agreement to join the association. It is pointed out that the output of the dairies of the Valley now amounts to over \$2,000,000, and represents a capital investment of not less than \$10,-000,000. The expressed object of the assoeiation is to secure control of the production and its marketing, and by co-operation to at all times secure a reasonable profit without raising the price to the consumer.

It is stated that the association has already secured a credit of \$100,000 with the banks to begin operations with. Each shipper joining the association will be required to take shares in the company in proportion to the amount of milk shipped. This will be payable 25 per cent. cash and the balance \$4 per share per month. The association, when in operation, will guarantee to take all the milk produced and to pay semi-monthly. There will also be an improved system of milk-testing, and none but inspectors with government certificates will be employed, these to be changed to different districts from time to time.

WHERE DID HE GET IT?

John D. Rockefeller's fortune, now estimated at more than two billion dollars is more than the estimate of the total wealth in any one of the following states: Arizona, Delaware, Maine, Mississippi, Montana, Nevada, Florida, Idaho, New Mexico, Oregon, Rhode Island Utah. Has Mr. Rockefeller done more for society than the population of each one of these states? An economic system which makes possible such an accu mulation of wealth by any single individual does seem to have something wrong with it.

CANADIAN TRADE

The growth in Canadian trade still continues to be marked, and at the present rate of increase it is stated that the total trade for the year will aggregate at least two billion dollars.

The total trade for the month was \$186,-066,351, compared with \$154,225,481 in November, 1915.

In the eight months of the fiscal year the aggregate was \$1,499,255,952, against \$863,670,349 in the corresponding period last year.

Domestic merchandise sent abroad in November totalled \$109,558,950, an increase of seventeen millions, while in the eight months it made the remarkable growth from \$419,362,646 to \$731,459,639.

Agricultural exports in eight months were \$270,237,892, an increase of \$110,000,000. Manufactures exported in the same period were \$263,580,148, against \$97,588,572 a vear ago.

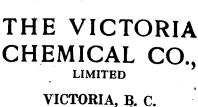
Imports in November were \$72,954,950, an increase of \$27,000,000; while in the eight months they were \$557,235,197, compared with \$308,705,317.

FOR RENT

FOR RENT-Ten-acre farm on Lulu Island near good road; now under cultivation and has been for number of years. Will rent at reasonable price to good farmer. Apply Box 2, Fruit and Farm Magazine, 615 Yorkshire Bldg., Vancouver.

The Maximum Yield

of each and every acre is demanded by present conditions. The use of our Chemical Fertilizers will aid you to meet this demand. If you think it over you will see that ten tons of potatoes from one acre is much more profitable than twelve tons from two acres. Our fertilizers will improve the Quality of your products as well as the Quantity, and thus you have a double advantage. The intelligent use of our fertilizers increases the fertility of the soil from year to year.



Write for Our Catalogue.

CUTHBERTSON'S INFANTS' WEAR

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

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

Please ask or write for illustrated catalogue and price list.

T.B. Cuthbertson & Co.Ltd. Men's Furnishers and Hatters **3** Stores Vancouver, B. C.

WALNUT TREES

Seven hundred English and Franauette, from 3 feet to 8 feet, 15c to \$1.00 each, as to size. Laburnums from 10c to 50c. Filberts, all sizes and prices. Chilliwack grown seeds in season, berry plants, currants, perennial flowering plants for fall planting. Price list free.

TOMS BROS.

Chilliwack. B. C.



B. C. FRUIT AND FARM

WHAT IS NEEDED FOR THE SUCCESSFUL MARKETING OF B. C. FRUIT CROP

A getting together on the part of the growers and by so doing lessening the per cent cost of doing business is perhaps the most important consideration. Concentration is a form of co-operation, a struggle for big business. The old days of each farmer hauling his little produce to the market and selling it, or trading it, have gone by in favor of the great railways. But the producers have always been conservative, clinging to the old ways of doing things, and fearing to break away and take the plunge into the new. The great geniuses of modern business have not taken up the matter of marketing, except to exploit the producers. The necessity of concentration, like co-operation, is the necessity of meeting modern business conditions. There is no reason why the small producers cannot become a part of a great business just the same as thousands of small stockholders help to make up the great railway system.

When I said co-operation should be on a broad platform, so the small producer could stand on it as well as the big, I meant, among other things, the grower, who had his customers to ship to direct, should be permitted to do so. That is a form of direct business benefitting both; but that form of business markets such a small per cent. of the crops, that, admirable as it is, it is not the solution of the marketing problem. Middlemen, or distribution agencies, are also a necessity, and contration means the goods should be gathered into one channel and distributed through that channel to the retail trade.

Producer Must Control.

It is a law of nature that all things start from the soil, and we would naturally think that a fair price should be given the producers and all charges for transportation and distribution be added on and passed on to the consumer. But that is not the way it works out. The consumer pays what he can afford to pay. If too high for him he does without as much as possible, and what he pays is passed back through the retailer, wholesaler, broker, transportation company, etc., whatever is left, if anything, the producer gets. We could not exist a day without the producer, and so little do we consider him, that we force him to gamble with nature for a crop, then we gamble with his crop to see how little we can give him for it.

Every great business is conducted on the most modern lines. The greatest business of all, is that of farm production, and the success of that is the marketing of what is produced. The producers have had very little help in that, other than volumes of advise. The Windy Talker, the Schemer, the Failure, have all had a try at it—at the cost of the producer. The handlers of the cities have not been bonded and licenced as they should have been. No reliable information has been given the producer as to who were responsible dealers in the cities and towns. He was left to find out in a very costly way. Concentration would of course cut out the unreliable handlers; concentration would pass the goods mainly through one reliable channel; eliminate the costly competition between so many handlers, competing and fighting with each other for the business, would lessen the waste to a considerable extent, and very

greatly lessen the cost of handling. Just to illustrate, let us take the Great International Harvester Company. This is made up of a large number of manufacturers of farm machinery, the individual manufacturers each endeavor to manufacture the best and most modern machine, then they combine in selling; they do not turn their products over to some foreign company to sell for them, and be dependent on their good or bad service. They market themselves. Contrast their marketing with the way the farm producer markets.

Concentration would throw the goods through one channel, eliminating costly competition among wholesalers, saving in waste, and less the per cent. cost of marketing. In my next article I will take up supervision, reaching the public, getting its goodwill and support, and the necessity of a tariff of costs in reaching the markets, public to both producer and consumer.

ANNUAL MEETING OF BRITISH COLUMBIA DAIRYMEN'S ASSOCIATION

The annual meeting of the British Columbia Dairymen's Association will be held at Nanaimo on Thursday and Friday, January 25 and 26. Milk and cream competitions will be open to producers in British Columbiai. Entries must be sent to T. A. F. Wianeko, the secretary, Department of Agriculture, Victoria, who will send all information as to methods of shipment, of exhibits. etc. Liberal prizes are being offered.

BOXES

CANADIAN EXPLOSIVES LIMITED Head Western Office: Victoria, B. C. **District Offices:** Vancouver, B. C. Pr. Rupert, F. C. Nelson, B. C. Edmonton, Al'a. EVERYTHING IN THE EXPLOSIVE LINE S. J. FEE. Have YOU Tried Our Low Freezing Stumping Powder CORRESPONDENCE SOLICITED. Write for Pamphlet BASKETS "STANDARD" ASSET" "REPUTATION AS AN 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.

"STANDARD" CRATES

VENEER

PROVISIONS OF MANITOBA FARM LOAN BILL

An outline of the Manitoba Farm Loan Bill contains a number of provisions which make it of particular interest, and that it has been well received is shown by the fact that a body of representatives of the various municipalities of that province in conference recently passed a resolution endorsing the plan unanimously.

The purpose of the bill, as given in a revised memorandum, is to provide capital for agricultural development and create a standard form of investment based on farm mortgages, and to create securities, issue bonds, and to loan money for such purposes. It creates an organization to be called The Manitoba Rural Credits Association, the head office of which shall be in the City of Winnipeg. Provision is made for an authorized capital of \$1,000,000, divided into 40,000 shares of \$25 each.

The association shall be authorized to issue bonds from time to time to an amount which shall not exceed 90 per cent of the amount of the underlying security, viz., the mortgages which shall have been placed. The bonds shall bear interest at the rate of 5 per cent. per annum, payable halfyearly, shall be guaranteed by the province, shall be free of all local taxation and shall be disposed of by the Treasury Department.

A Board of Management

There shall be a board of management consisting of five members. The chairman shall be know as the commissioner and shall be appointed by the government. Two members shall be appointed by the Union of Municipalities and two by the Lieutenant-Governor-in-Council, and two of such members shall represent the political party in power, and two the party which received the next largest number of votes.

For the purpose of preventing the association from being commercialized, the capital of the association shall always be vested in the government and the borrowers. The paid-up capital shall always determine the total investment of the association, as it must always represent the difference between the mortgages, which are the underlying security, and the bonds. The government may subscribe for the first \$100,000 of the shares, and every borrower shall subscribe for at least 5 per cent. of his loan in shares of the association.

Municipalities Supervise Loans

The municipalities shall be the unit of the organization and no money shall be loaned until a bylaw has been passed by the ratepayers bringing the act into operation in that municipality. A committee shall be appointed by the municipal council, but need not necessarily consist of its own members, who shall supervise all loans arising in that municipality, and recommend same to the board.

For the purpose of reducing the cost of borrowing, the registrars of the different land titles offices shall be authorized to receive mortgages, register the same, and report on the title without charge to the association. Where mortgages are in arrears of either principal or interest, or farms are deteriorating on account of neglect or mismanagement, the board may take proceedings to foreclose upon its own initiative or upon the advice of the municipal committee.

(Continued on Page 1142)

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

By C. G. Percival, M.D.

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

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

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

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

The ailments which have been commonly, almost habitually, traced to autointoxication are: Languor, Headache, Insomnia, Biliousness, Melancholia, Nervous Prostration, Digestive Troubles, Eruptions of the skin, rheumatism, neuralgia, kidney disturbance, liver troubles.

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

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

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

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

Now, if laxative drugs were thorough in removing this waste, there could be no arraignment against them. But they are at best only partially effective and temporary in their results, and if persisted in soon cease to be effective at all. Their effect is, at best, the forcing of the system to throw off a noxious element, and they therefore "jolt" nature instead of assisting her.

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

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

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

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

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

Hence, for twenty-five years he has made this his life's study and practice until today this long experience is represented in the "J. B. L. Cascade." During all these years of specializing, as may be readily appreciated, most interesting and valuable knowledge is all summed up in a most interesting way, and will be sent to you on request, without cost or other obligations, if you will simply address Chas. A. Tyrrell, M.D., Room 896, 280 College Street, Toronto, and mention having read this article in the Vancouver Fruit and Farm.

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

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

Beekeeping in British Columbia

HONEYDEW

The article by my friend Mr. John Brooks in November Fruit and Farm, on honeydew, is good, and I am pleased that he has brought the matter in a forcible way to the attention of beekcepers and the public. It is not my intention to criticize his article, except in a friendly way, but rather to enlarge on it, giving the experience of a number of years and how to avoid extracting it with the better honey.

He (Mr. Brooks) truly says, the word is a misnomer. It is neither a flower secretion or a dew, but the word has come down to us through generations, so I suppose it will last to the end. That it is a secretion of plant lice, as Mr. Brooks says, I do not think is always the case.

The Abbie de Saurages, in 1763, described two species of honeydew. Beran says: "Honeydew usually appears on the leaves as a viscid transparent substance." Messrs. Kirby and Spence, in their work on Entomology, give a description of honeydew furnished by aphides, stating that it is an ejection, not a secretion, of aphides, as stated by Mr. Brooks. M. Bonnier, a noted French authority, speaks of two kinds, one the ejections of aphides, the other he calls the "true" honeydew is from the exudations of the leaves and bark. He says: "I have seen bees harvesting the sweet liquid of the aphides and the true honeydew at the same time," and also "seen trees covered with an abundant honeydew, although there was not a single louse on the limbs." Langstroth says: "It is difficult at all times to ascertain the special source of honeydew, whether from the trees or aphides." Prof. Smith, in Economic Entomology, a standard authority, says: "Plant lice are commonly known" and calls "attention to the presence of a pair of little tubes near the end of the abdomen, these are called honey tubes, and from them is ejected a sweetish liquid called honey dew. When food is abundant the amount of sap they take from the plant is so great that they omit it in little streams. Sometimes the vegetation beneath the tree is thoroughly coated. It is attractive to bees, who take it readily." Mr. Bonnier also says: "We must not confound the three kinds of sweets-1st, the nectar of flowers; 2nd, the true honeydew from the surface of leaves; 3rd the ejections of aphides.'

Gathered When Nectar Scarce.

In the quotations given I have abbreviated as much as possible to save space, but have given enough to make clear the statement that there is two kinds of so-called honeydew. I will now give you a few of my observations as regards this liquid on the mainland of British Columbia.

Honeydew, from plants, is plentiful and is gathered in every season of scarcity of nectar. If fireweed fails, or partly fails in July, which is too often, the bees will turn to the plants and gather the exudation as long as warm weather lasts. I have noticed this repeatedly, and have always made it a point to take my surplus supers off as soon as fireweed fails. I was a little late this last season, through pressure of other business, and now I have about 200 pounds of clear honeydew from about 50 colonies, which I will feed back in the spring. Further along I will tell how I separated and extracted the honeydew. When I saw an item in the Vancouver papers that an "expert" had seen bees gathering, for the first time, from salal berries. I laughed, and remarked to my wife, "nothing but honeydew; I have seen it often before," for salal is about the first thing the bees touch when they start gathering honeydew.

There has been but one season in over twenty, according to my observations, that bees have gathered from the ejections of aphides; at all other times it has been from exudation of plants or trees. This particular season was about ten or twelve years ago; the whole crop of honey was ruined. Clover and fireweed was almost a total failure, every living plant was infested with lice, the ground, even under the ferns, was sticky with their ejections, and bees stored almost nothing else but honeydew from June to October.

I have noticed that honeydew gathered from the leaves and bark of plants, sugars or granulates, very quickly, that it is stringy or ropy, while that from aphides never granulates, always remains a mass like heated glue, and is not stringy. This is my own observation; I have never seen it stated before. The nearest statement is from Mr. Bonnier, who says that the "liquid from aphides has very little sugar," the aphides consuming the sugar and ejecting the sap; hence there is very little sugar left to granulate. Last season aphides were very scarce, and the liquid the bees gathered sugared over the surface, even before it was taken from the hive.

May Be Left in Combs.

I have never seen any ill effects from leaving honeydew in the brood combs during winter; it is nearly all uncapped and is consumed by the bees long before they are confined to the hive any length of time by cold.

Whenever I am so careless as to let my bees store this stuff in the surplus supers I take out every comb and hold it up to the light, when the colored cells can be easily seen. These are placed by themselves, uncapping only the few cells of honeydew that are sealed, and run the lot through the extractor. Then clean up and uncap and extract the sealed combs of good honey. If combs are wired every bit of honeydew may be thrown out and the balance extracted at another operation, and the nearest combs will not be injured by the operation. I now have about 200 pounds of this stuff, as stated before, that I have separated by the above method. It takes a little extra time but pays.

I fully agree with Mr. Brooks' criticism on putting this stuff on the market. A lot of it has been sold for honey, which will only disgust the purchaser. There is room for considerable education on the subject. Numbers of beekeepers that I know of paid no attention to honeydew; did not know what it was, extracting it along with what little clover honey there happened to be in the hive.

W. H. LEWIS.

þ d d

đ

a

đ

đ

f

p lo

0

e

fe

b

f

f

w

n

t] h

т

u

ly

n

st

u;

h

SI

Ce

A 01

w di

h

ey

th

A; in

si

h

ot

in

ea

nc ou

 \mathbf{F}_{1}

PROVISIONS OF MANITOBA FARM LOAN BILL---Continued

All loans shall be secured by a first mortgage on the farm in the municipality in question. Each loan shall be repayable in a' fixed number of annual instalments, with interest at a rate not exceeding 5 per cent., and a second charge for administration and profit not to exceed 1 per cent. on the unpaid principal, the two rates combined constituting the annual interest on the mortgage. The annual instalments to be applied to the reduction of the principal so as to extinguish the loan within an agreed upon period of not less than 20 years or more than 40 years.



SO-CALLED STAGGERS IN HORSE CAUSED BY THE INGESTION OF COMMON BRACKEN

At a meeting of the B. C. Veterinary Association, held in the Hotel Vancouver, on December 6th, a preliminary communication was made to the members of the association by Drs. Hadwen and Bruce of the Veterinary Research Laboratory, Agassiz, on the results of their researches in regard to a disease which occurs amongst horses in the coast region of B. C.

During the months of February and January of last winter many horses died with what farmers have been in the habit of calling staggers. This disease is characterized by uncertain gait, loss of equiliibrium, general unthriftyness, with no loss of appetite. In some small communities losses were especially heavy. In one village out of 24 horses owned by 11 farmers, 16 died of staggers, four recovered and the remaining four did not take the disease. This is no doubt a larger percentage of mortality than is usually the case, but on making careful inquiries similar cases could be found in every country district along the banks of the Fraser, and on Vancouver Island. Dr. F. Torrance, veterinary director general, upon ascertaining these facts, gave authority for the experiments that were conducted later, and which resulted in the proof that Bracken was the cause of the disease. These experiments were fully described before the association, and though they are not yet completed, it was decided that publicity should be given with a view to warning horse owners about the danger of feeding fern to their animals during the coming winter. Remedies were forthcoming, and seeing that the cause of the disease has been definitely traced to poisoning by bracken, it is hoped that the losses which occurred last winter will be obviated. The facts presented to the society are briefly as follows:

Experiment No. 1-Two healthy horses were confined in a stable. One horse was fed on hay, from which all the ferns had been picked, the other animal received the ferns with a proportion of hay; no other food was given to either animal, and they were not allowed any exercise. The experiment began on April 1st, and on April 29th the horse which was receiving the ferny hay showed slight signs of intoxiication. This symptom (staggers) became worse until on May 1st the animal had practically lost its sense of equilibrium and would nearly fall when made to get over in the stall. On May 2nd it fell down and was unable to regain its feet. On the fourth it had become so ill it was killed to end its Sufferings. The other horse, which had re-ceived no fern, remained perfectly well. A similar experiment was conducted later on with the same results. The horse to which the ferny hay was fed developed the disease and was destroyed, and the control horse romained perfectly well. A third experiment has just been completed. In this case ferny hay purchased locally at Agassiz was fed just as received, resulting in the death of the horse on the thirtysixth day of the experiment. This animal had previously served as a control to another horse that died, clearly demonstrating that it was the bracken which was the cause of the trouble, as no ill effects were noticed in this animal when fed on the hay out of which the ferns had been picked. Further experiments are under way, and



facts are being ascertained, as to the exact toxin or poison which is probably present in bracken. The disease as it occurs on the average farm is brought about in the following manner:

Fern is found in a great amount of the hay grown in the lower parts of the province, especially so on newly-cleared farms, and it was on such farms that the disease was most common last winter. During the severe weather we experienced in the early part of the year, animals were confined indoors for a long period, in some sections hay was short and none too liberal an allowance given to each animal, the result being that horses that would otherwise have left the fern in their mangers were forced to eat it. (As a general rule horses do not eat bracken unless forced to, with the exception of greedy animals that eat their bedding, which often consists of the ferns they have rejected out of the hay). These horses in nearly all cases received but little else than hay in the shape of food. Where animals were given plenty of hay and roots, with occasional feeds of bran and oats, no troubles of this nature occurred, and in the city stables no cases were reported. It is evident from this that a small amount of bracken may be eaten with impunity, but that large amounts, coupled with unhygenic surroundings and lack of variety in diet bring on the trouble.

Can Be Successfully Treated.

Careful weighing tests have been made and it was found that what is usually called ferny hay contains in the neighborhood of 30 per cent. bracken. The amount required to bring on staggers was found to be about 200 pounds, fed at the rate of five to six pounds a day over a period of some 30 days. Though the cause of this disease had not been definitely established heretofore, veterinarians have been quite successful in treating the malady, if they were called early enough, and when at all possible farmers are strongly advised to summon such professional aid as is available. Where this is not possible the animal must be treated by the farmer himself. The lecturers testfied to valuable information which had been given them by Drs. Tolmie and Darby, especially as regard statistics and treatment of the affec-Probably the safest form of treattion. ment for a farmer who is obliged to treat his own animals, it first of all to remove the ferny hay and to substitute good clean hay. A dose of raw linseed oil should next be administered, taking especial care that none of the liquid falls into the lungs. Warm bran mashes and roots should be given. The horse should be well blanketted and kept as quiet as possible, owing to its nervous excl:ability. Warmth is a great aid in combatting the affection, whilst a cold, drafty stable tends to' lower the vitality.

Summary.

It has been proved experimentally that the so-called staggers of horses is caused by their eating the common bracken; the disease should then be called bracken poisoning.

The disease has been reproduced by feeding bracken in both winter and summer, proving that cold is not a necessary factor in the production of the disease. However a cold, drafty stable lowers vitality and farmers are advised to take especial care of their horses during the severe weather; to keep them warm, well supplied with roots and to give them occasional bran mashes.

Horses should not be left tied up for long periods without exercise, as this tends to constipate the animals .

Above all, fern should be eliminated from the hay they are given and also from their bedding.

A Dominion government bulletin describing this disease will be issued upon the completion of the experiments.



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.

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

ESQUIMALT & NANAIMO RAILWAY CO.

The

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.

Get a Farm of Your Own TAKE 20 YEARS TO PAY

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-twentleth down, balance within twenty years. In irri-gation districts, loan for farm build-ings, 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 get-ting 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.

Resources C, P. R, CALGARY . Alberta

Alice (in Brooklyn Citizen): "Why are you taking up botany?" Kitty: "Because my fiance is interested in a plant of some kind and I want to be able to converse intelligently with him about his business.

Annual Dinner of Fraser Valley Fruit Growers

The annual dinner of the Mission-Hatzic Fruit Growers held in the Imperial Hall at Mission City on Dec. 10, at which many of the speakers referred strongly to the absolute necessity for more and cheaper help in the annual fruit harvest, and without hesitation pronounced the admission of Chinese or Japanese as the cnly way out of a bad situation.

Banquet a Success

Plates were set for 150 people and some were compelled to wait for the second table. As an indication of what the fertille Fraser Valley can produce, everything on the menu, with the exception of the oranges and grapes, was of local production.

The guests, besides the fruit growers and their wives, included members of the Board of 'Irade and government officiels, while interspersed with the various speeches and excellent toast list were instrumental and vocal numbers rendered by Miss Grace Portsmouth, Mrs. Shook and Messrs. Osborne, Watson and Aish. The chair was occupied by President J. A. Catherwood of the Growers, who read letters of regret from Deputy Minister W. E. Scott, Inspector Winslow and R. Helems of the Dominion Express Company at their inability to attend.

The first toast of the evening was "The Army and Navy," responded to by Sergt. Harry Atherton and Mr. Thibault. Sergt. Atherton pointed out to the growers that they could greatly assist the returned soldiers to supplement pensions and that this Would be far better than removing the Chinese headtax.

Field Seeds

VANCOUVER

VICTORIA

Royal Standard

In responding to the toast, "The Horticultural Branch of the Agricultural Department," Prairis Markets Commissioner D. E. McTaggart emphasized the fact that business management was one of the main features that the growers had to consider. He advocated an educational campaign through advertising, pointing out the value of Mission-Hatzic fruits.

Great Fruit Waste

The toast to the fruit growers was the signal for the real discussion of the labor question, and the half score of Japanese growers in attendance and members of the association displayed keen interest in the discussion.

President Catherwood, after expressing regret at the non-arrival of Mr. McVety, gave a little early history of the Mission-Hatzic fruit growing industry, and remarked on the great attendance at this, the second annual banquet.

Mr. Catherwood referred back to 1884, when s'eamers transported small fruit from the district. In the early days, he stated, strawberries were the principal fruit, and for a quarter of a century held the field. From that period, however, raspberries took the ascendancy and have maintained it ever since. He stated that last year 11 complete cars of raspberries were shipped, while this year there were 30 carloads, of which 13 were shipped, eight or ten went to the canning plant, and there were some individual shipments. He declared that from five to seven carloads were never picked out of the total crop. "As a carload is valued at \$1016," stated Mr. Catherwood, "the loss this season was between \$6000 and \$7000." He declared that next season there would be a greater acreage and consequently more fruit to pick. He regretted that Mr. McVety was not present, for the growers were anxious to go thoroughly into the labor situation and welcomed any practical solution. They wished to lay all the facts before organized labor and would be only too pleased if from that source a solution could be obtained. They had hoped that a meeting with Mr. McVety could be arranged in the near future.

1145

Mr. Knight, one of the larger growers, told of the hundreds of thousand of dollars expenses of the growers preparing their land. At \$1.50 per crate for raspberries, wages were too high. Cheaper labor was all important, and there must be a be ter understanding between the labor unions, the government and the growers. He felt sure that when organized labor understands the real conditions some method could be devised.

Mr. T. Catchpole declared that as a citizen he was averse to importing foreign labor if he could get out of it; he would prefer white labor, but under present conditions they could not secure enough at the wages they were forced to pay. He declared that there was not enough co-operation among the growers. Secretary E. Osborne declared that all the growers asked for was a fighting chance to live, a chance to get rid of mosquitoes, cheaper transportation for the pickers, cheaper la-

CO., LIMITED

NEW WESTMINSTER

"Produce More in 1917." Hon, Martin Burreli Minister of Agriculture.

E are extending our already extensive field seed business for 1917. It it the desire of the Canadian Government that the people produce as much as possible during the ensuing year, and we are arranging with the leading dealers throughout British Columbia and Alberta to carry complete line of BOYAL STANDARD FIELD SEEDS. These seeds are the

a complete line of ROYAL STANDARD FIELD SEEDS. These seeds are the choicest it is possible to secure in the world's markets. They are Government Inspected and carefully selected for purity.

Seeds should be purchased early, as prices inevitably advance as the season progresses. In all probability the mark et will be short and it will be difficult later in the year to make purchases.

Order ROYAL STANDARD Field Seeds NOW. If your dealer cannot supply you, write us and we will ship to you direct.

GRAIN

Write today for full information and price lists

NANAIMO

VANCOUVER, B. C.

MILLING

bor and cheaper freight rates for their shipments.

He contended that it was impossible to employ returned soldiers in berry-picking, in fact it would be an injustice to them. Disabled soldiers should have easier work. He stated that \$2 could not be paid per day for picking.

He declared that a few days ago a deputation of prominent Japanese waited on the committee and suggested that Japanese would be better than Chinese. He suggested that the government allow more Japanese to come in and thought that next year 1200 should be allowed to enter, with 1000 the following year.

Wanted 100,000 Chinese.

Mr. William McDonald, the next speaker, declared that the labor question was the serious problem. He emphatically endorsed the recent Chinese headtax removal resolution and declared that the Orientals were the best men for the work. He declared that what was wanted was one hundred thousand Chinese. This remark was greeted by hoots and groans at the lower end of the hall, occupied by the Japanese. Mr. McDonald took exception to the published statement of Mr. McVety, and stated that the course of the fruit growers was the height of patriotism.

Mr. Frank Shook, the largest grower of the district, stated that the main things were extermination of the mosquito, cheaper labor and more of it and better distribution. He stated that the average fruit farm represented \$700 per acre, and this was some investment to consider. He declared that practically all the young men that were any good have gone to the front. He preferred white help, but declared this could not be secured. The price of fruit was established and the growers had no power over the quotations.

Mr. Shook took strong exception to the close

statement of Mr. McVety that the growers were unpatriotic. He said practically all the growers had from one to several members now in the trenches. He declared that he would never refuse a position to a returned soldier, and all applying would be given a chance. He was sure, however, that they would not do.

Need 3000 Pickers.

He estimated next season's crop at 120,-000 crates, and that at least 3000 pickers would be required. He would welcome any solution from organized labor.

Mr. W. J. Manson strongly endorsed the remarks of Mr. McTaggart in reference to the publicity campaign and complimented the latter on his excellent address. In reference to the recent Chinese resolution passed, Mr. Manson warned the growers to go "canny" in that direction, and pointed out that it was easy to open the floodgates of immigration, but very hard to again close them.

THE BACON HOG AND THE BRITISH MARKET By John Bright, Live Stock Commissioner, and H. S. Arkell, Assistant Commissioner

Out of the existing abnormal war conditions there is flung to Canada a challenge of trade expansion. About the development of an export business in bacon centres one of the most important issues. The future of an industry worth over \$25,000,000 annually must be safeguarded and extended, and upon the immediate and united efforts of all the controlling units employed in every department of that industry ultimate success depends.

We are in danger of snatching at the ant hill and missing the mountain. We have taken advantage of the good prices that have ruled since the advent of the warand rightly so. But we have made no definite efforts to provide for the future. Unless some determined policy of expansion is acted upon at this opportune time, our swine industry, which has already dwindled to dangerous proportions, may degenerate into nothing better than a local trade. It is time to pull up; unconsciously we have been slipping down hill at a tremendous rate.

In the last estimated census there were

on June 30, 1916, fewer hogs in Canada than at any time in the past decade. In fact, since 1911 there has been a marked decrease in every province of the Dominion. During the past five years the total number of hogs in Canada has decreased by almost one million head.

Particularly unfortunate is this ominous decrease in the face of the rare opportunity that is offered us to further extend our "Wiltshire side" trade with the British market, a trade that for the year ending De-

To all "Fruit and Farm" Readers and Subscribers

Greetings

1917 will need all our Toope and Courage. May the coming year bring you many blessings, which will de more appreciated, because more bardly won.

Let us share those blessings

WARD, ELLWOOD & POUND, Limited Printers

318 Homer Street, Vancouver, B.C.

cember 31, 1915, we valued at approximately \$15,957,652.

Our Opportunity

This opportunity that is ours is the outcome of the circumstances of war and will not repeat itself. Con.mercial conditions of a few years back exist no more, oldestablished trade pacts have been disrupted and commercial relations of the past, hitherto seemingly substantial and proof against competition, have, in many instances, been completely obliterated. It is these lost significant features of the situation which create our opportunity, and as a consequence make definite the way before us. Countries that were in the bacon business at a time when we knew little of the existence of the bacon hog have lost commercial advantage, and countries that formerly had their grip tight fastened on the British market are reduced to a common lavel with their youngeri competitor.

Whatever there may have been of prejudice in the past must be dovetailed into the suggestive facts of the present and the significant outlook of the future. Possibilities exist today, born of the world's war upheaval, which place the bacon industry in an absolutely new situation, divorcing it from conditions formerly obtaining, and offering an open field, with Canada in a most favorable position to establish wider trade connections, not only for the present, but, as well, permanently, for the future.

Change in Situation

The situation in respect to the British bacon market has changed, and, while Danish bacon may still be considered the standard for all bacons consumed in the British Isles, her former impregnable position in the British market has been disrupted. The war has proved a great leveller. The swine industry of Denmark has suffered very severely. Her killings have been greatly reduced owing to lack of feed supplies and the breeding and general pig stock of the country has been much diminished. More significant still, is the fact that her trade relations with Great Britain has been materially weakened and her exports to that country greatly reduced. Germany has entered the Danish market, has outbid Great Britain and caused a trend of trade eastward instead of westward. This temporary rift may develop significant proportions and there exist strong possibilities that Denmark may further and yet further reduce her trade with the United Kingdom.

Canadian trade returns show that from 1904 to 1914, the year of the declaration of war, our export bacon trade materially decreased. British trade returns, on the other hand, show that Denmark's exports increased each succeeding year from 1905 to 1914

Since that time, however, Denmark's exports to Great Britain show the tremendous decrease of over 73,000,000 pounds, while those of the Dominion have increased in a most marked degree, as the following figures go to prove. Our export for the fiscal year ending March 31, 1914, amounted to 23,620,861 pounds; for 1915, to 72,-036,025 pounds; for 1916, 144,150,309 pounds. In fact, we increased our trade during 1915 just as much as Denmark decreased hers.

The position occupied by the United States must not be ignored. In 1913, that country exported bacon to Great Britain to the Value of \$29,754,475; in 1914, of 26,057,745, and in 1915 of \$61,978,773. It must be fully understood, however, that the United States does not produce Wiltshire sides, these be-

THIS SHOULD BE A YEAR OF **HIGH EFFICIENCY !**

THE coming year should find every British subject 100 per cent efficient. It is to be a year that will require the greatest fortitude, courage and cheerfulness on the part of every individual, those keeping the home fires burning as well as those at the fighting front. Personal efficiency is the watchword.

 \mathbf{A}^{ND} perfect efficiency is first of all a matter of perfect health; and this in turn is largely a matter of perfect teeth.

MY "Perfect" Crowns and Bridges . . . named "perfect" because really per-fect and guaranteed so . . . here is the ideal method of replacing the lost natural teeth . . . most difficult of detection because made in conformity with your natural teeth in shape and shade . . . fit and feel perfect too.

My new copyrighted booklet explaining in detail this perfect method of replacing the lost natural teeth will be sent to you on request.



Phone or write for free appointment.

Vancouver's Greatest Dentist. HASTINGS AND ABBOTT STREETS Vancouver, B. C.

Opposite Woodward's Phone Seymour 5444

ing the distinctive product of the bacon hog. Her system of feeding, the inherent character of her swine, do not permit of it. At the same time, the enormous increase in her trade must not be overlooked. While she may not compete directly against us, product for product, her very positive presence in the market urges us to stronger efforts.

These facts point out two things very plainly: the one, that our strongest competitor, Denmark, has allowed us to absorb a great part of her former trade; the other, that we are more than ever bound to slay with the production of the Wiltshire side, the product of the bacon hog. The United States has and will evidently continue to control the fat hog trade.

A Standard Product

If we are to make our Canadian product the bacon of the British people, then the words "Canadian Wiltshire Sides" must be a guarantee of standard type and quality. Failure to meet the requirements of the trade by not producing the desired uniformity of type is a condition which must not be tolerated. The British market demands a certain type, quality and weight, and we must conform to market requirements. Close adherence to type by the farmer, together with proper feeding, also a similar degree of care in the curing and marketing of the product by the packer, will steadily build up a reputation for quality and uniformity, such that its position on the British market in relation to other brands will be steadily improved. The British market is inexorable in its demand for the choicest quality.

Buying Basis

Serious consideration must be given to the question of payment according to quality. If there is to be any concerted effort on the part of the farmers to produce a special type of hog, then they are entitled to consistent recognition by way of a premium in payment for select stuff. The inauguration of the system of buying on f.o.b. basis marked the beginning of the steady decline in production since 1904. This system has resulted in part in the doing away with the grading of hogs, or at least in deferring it until they enter the packing house for slaughter. It means that all kinds, fat, thin and prime alike, bring the same price, irrespective of the suitability for the bacon trade.

While there are discriminating drover buyers, not all realize the value of buying on a quality basis. The buyers must realize that they very effectively determine the system of breeding and feeding and that they should, therefore, buy according to grade.

The Type of Hog

On the part of the farmer there must be a positive knowledge of what the bacon hog really is. To produce the lean, mild-cured side known as "Wiltshire" we require a long, deep, smooth pig, possessing a light head and shoulder, an even back, not too wide, but well covered with flesh, yet not fat. The sides from back of shoulder to ham must be deep and long, the rib short and sprung out boldly and dropping almost at right angles, the underline straight and free from flabbiness, the ham smooth and tapering with the maximum amount of flesh on the outside. The pig should stand on strong, but not coarse, well balanced legs and feet and must be vigorous, healthy and a good feeder. This is the kind of pig needed for both home and foreign markets. He is a type, not a breed.

There will always be a number of the heavy type more than sufficient to fill requirements. The stags and aged sows must be disposed of. To market them to the best advantage they should be made as fat as possible as their chief value is for lard, but they are of very little use to the exporter.

As a rule the weight limits of the bacon hog are fixed at 160 to 200 pounds live weight. At the same time, a hog may weigh slightly more than 200 pounds and still make a good Wiltshire side. Most hogs are, however, liable to be too fat after they reach the 200-pound mark.

B. C. FRUIT AND FARM

Labor Must be Provided for Harvesting Small Fruit Crop of Fraser Valley.

Growers Have no Desire to Import Orientals-Suggested Scheme as Last Resort-Must Have Help or Face Ruin.

The attitude of the growers of small fruits in the Fraser Valley in advocating the free admission of Chinese into the province in order to provide a relief for the problem of finding harvesters for their crops, is one that is bringing them in for considerable criticism.

Mr. David Whiteside, M.P.P., speaking at a banquet recently, tendered to Hon. John Oliver, the new minister of agriculture, denounced the attitude as a very short-sighted one. He stated that the proportion of Orientals was already far too great, and cited the remarks of Mr. Henderson to the effect that before the war the proportion of Orientals in British Columbia was one to five. and that now, with the great number of white men at the front, it was one to three, and that the audience were apparently in sympathy with him in his remarks could be gathered from the fact that when he made this statement cries of "shame" arose from various parts of the room.

Mr. Maxwell Smi h, a well-known resident of the Valley, former editor of Fruit and Farm, was even more emphatic in his condemnation of the men who were advocating the admission of the Orientals. As reported in a city daily, he "expressed astonishment that any body of farmers would have the audaci'y to suggest the importation of Orientals so that advantage could be taken of other farmers in the matter of labor."

Similar expressions to these have been heard in a number of other quarters, some people even going so far as to accuse the fruit growers of disloyal y in even suggesting that foreigners should be brought in to compete with the Canadian laborer.

Something on the Other Side

The fruit-growers, however, say that there is another side to the ques'ion, and that if these critics would, instead of offering idle criticism, suggest some relief to a situation which has become simply intolerable, and which, unless relief is found, can have no other result than ruin for many of the men in the small fruit business in the Fraser Valley, it would be much more to the point.

"Not a single one of the fruit-growers of this district," said Mr. E. Osborne, secretary of the Fruit Growers' Association of the Fraser Valley, to a representative of Fruit and Farm the other day, "want to import either Chinese or Japanese into this country, but they see no other possible alternative. They deplore what they believe to be the necessity, perhaps even more than their critics."

Continuing, Mr. Osborne said that they all hoped that some other solution of the problem would be found, and that it would not be necessary to ask that this policy, which was considered a last resort, should be adopted. But something had to be done, not only to provide labor, but to keep down the mosquito pest, which some years was a most serious difficulty.

"For several years," he said, "the growers of the Valley have been increasing their output. The demand has been good, and a genuine attempt was being made to meet it. The people want our berries, but they will not pay more than a certain price for it, and if we are to be compelled to pay for expensive labor, it simply means that we cannot take our crop off, or if we do manage to get it off, could not sell it at a pricethat the people would pay. There has been a steady drain on the labor of the country ever since the war commenced, and with the prospect next year for a crop which will run at least a third more than it was this year, the growers realize that more than half their crop will be left on the bushes if no more help is secured than they had this year."

The Mosquito Pest.

The mosquito pest is one that Mr. Osborne believes can be combatted to a certain extent, at least with the use of oil on the low places in the district. He sta'es that this has been tried in various places with reasonable success. This, of course, he says, cannot be undertaken by the growers themselves, and a movement is on foot to secure municipal or governmental co-operation in a project to test the scheme. It is believed that it would not cost a great deal to try out the idea.

Mr. Osborne is a strong believer in the small fruit industry. The Fraser Valley is peculiarly well suited for the cultivation of small fruit, he claims, and points out

that a man has very much better chances of success in this line on a small piece of land than he could possibly hope to have in a small way in general farming or dairying, and he believes that when the war is over and places are sought for the returning soldiers the industry should not be overlooked. He is convinced that a greater number of people could find profitable and pleasant employment on the land on a given amount of territory in that line than could be in any other branch of horticulture. With reasonable luck he thinks a man could do better on 15 or 20 acres in small fruits than he could with 40 acres in the dairying business.

Oriental Population

In the course of the investigations of the fruit growers into the Orien'al situation, it has been discovered that there are approximately 10,000 Japanese and 40,000 Chinese in the province. Of the Japanese only 500 are on the land, the bulk of that nationality in this country being in the fishing business, though quite a number are employed in the lumbering camps.



1148

Gardening for the Home---Digging

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

At various times in these columns 1 have referred to the desirability of the public making the most of their gardens, and at no time in our generation has the need been more crying than today. If full advantage is taken of the garden, no matter how small, the cost of living will be reduced by the amount of produce you are able to provide for the table.

Those fortunate enough to have large gardens may be able to grow all they require without any special effort, and it is especially to the city dweller and suburbanite that I would plead for a fuller utilization of their garden space.

The first thing of importance is the winter cultivation of the soil. This was fully treated in last month's article, and I will merely reiterate the fact that by digging two spades deep, instead of one, you are really doubling the size of your garden without extending its confines.

without extending its confines. Another way of increasing the output is by taking two crops off the same piece of land wherever possible, such as following up fall planted cabbage and cauliflower, which will be finished by the middle of June, with a sowing of carrots, transplanted leeks, radishes, lettuce or other short season crops.

An early crop of potatoes may be had and dug by the middle of July, when it is still time to put in sowings of plas for fall use, as well as most of the above mentioned short sector crops.

A crop of lettuce or radish may easily be grown on the piece of land on which it is planned to grow the fall cabbage and cauliflower crop, which latter may be planted as late as the middle of June.

Then again, the main crop of potatoes can be followed by fall planted cabbage and cauliflower, which will be time enough planted the end of September.

By the use of a hotbed, early crops of lettues, radish and carrots may be grown to maturity in it, and early crops of peas hay be started in it and planted outside to be followed the same year by some other crops, besides plants for transplanting of cabbage, cauliflower, tomatoes, onions, leeks, and when those are planted in their permanent quarters, a crop of citron, cucumber or other cucurbitaccouus crop may be planted in the worn-out hotbed. Musk melons, which are not very Satisfactory here out of doors, do well in the hotbed, although the bottom is exhaustad if the sashes are drawn up at hights to conserve as much of the sun heat as possible. The musk melons will be over in time for the fall propagating of the summer flower occupants of beds and borders,

There are quite a few long, cold evenings ahead of us this winter yet, and it will be time well spent, if a plan is drawn up of the garden and the most serious attention given to the idea of getting two crops of vegetables on the same piece of land on which only one grew before.

Of particular in erest to owners of small



It is now time to plant these extra large 2-year-old stock. We have never seen better bushes; and the prices, you should see what we are offering them at. From **30**& each up.

RITCHIE'S — 840 Granville Street — Vancouver, B. C.

gardens also is the system of growing fruit trees on walls or fonces.

A small garden may quite easily be monopolized by a few fruit trees, the produce of which would not equal in value what would be obtained from the same garden in vegetables.

I have at different times in these columns given de'ails of fruit culture on walls, but the subject is of such importance that 1 may be pardoned for reverting to it again.

The walls or fences of a garden will have four aspects—northerly, southerly, e.sterly, westerly—and for each of these aspect certain kinds of fruit are adapted. Morello cherries, red, white and black curr.nts will do well on a north or east wall, while apples, pears, plums, sweet cherries and peaches will do well on either of the other two walls. The walls ought to be strung with wires horizontally placed, 1 foot apart, and 1 inch from the surface of the wall, to facilitate tying, which is much b:tter than nailing.

There are many forms of trained wall trees, but the most generally useful are the cordon, horizontal, fan and gridiron. The terms explain themselves, but we must consider to which kind of tree is the different method best adapted. The cordon is best adapted for pears and apples when it is desired to cover a wall quickly. The yearling trees are planted 12 to 15 inches apart and are rigidly kept to a single stem and trained perpendicularly or obliquely, the latter fashion on low walls to give greater length of stem.

In pruning, the growing tip is cut back just a little to cause the buds to develop fruit spurs with just sufficient wood at the tip to carry on the extension of the tree ustil the allott d space is covered. Any wood shoo's which develop clsewhere must be pinched back in summer and cut back to one or two buds in winter.

In starting a horizontal tree—which form is well suited for apple, pear and sweet cherry trees, the yearling trees are planted 12 feet apart and are cut back to 12 inches from the ground. From these cut-backs three or more shoots may develop, but three are e sential to our purpose; one is trained perpendicular and the other two are turned down to the horizontal on opposite sides of the centre one. Next winter the horizontals are shortened back a little merely to make the buds develop, as is the case of the cordon, but the leader is cut back to 12 inches above the first tier, which is the point of origin of the second tier, the same manipulation being carried out each year until the trees meet at all points.

The fan is the shape best suited for plums, morello cherrics and peaches. To start with, the young tree is cut back similar to the last-mentioned, and the three resultant branches trained out fan shape. The following winter the three branches are again cut pretty hard back; two branches are allowed to develop from each and trained out fan shape.

The subsequent training is the same until the space is filled.

Plums may be trained to have the branches 4 inches apart, the breast wood pinched back in summer and pruned back to two buds in winter.

Peaches and morello cherries bear most of their fruit on the previous year's wood and require quite different pruning to the plum; the first year is the same, but there the likeness ends. In winter the young wood is tied in six inches apart all over, and the balance, if any is cut back to the old wood. There must be no summer pruning, as applied to apples, etc.; in spring most of the buds on the young peach wood will develop, and if allowed to grow, would result in acute overcrowding. In early summer when the wood buds have made about an inch of growth, go over the tree and rub off all the buds which it is seen will be superfluous, and tie the others in, as they grow so as not to shade the fruit. As the trees grow older pains must be taken to keep the lower centre of the tree well supplied with young wood; this done by cutting out old branches and encouraging the young. There must, of course, be a framework of old branches on the trees, but these can be covered by tying onto them.



The training of morello cherries is similar to that of the peach, but there is no disbudding in early summer; the young shoots are allowed to develop, and are tied in during winter, the old and superfluous young shoots being removed.

The gridiron form of training is a modification of the cordon and "after the foundation is laid, the pruning is the same.

This form is best suited to red and white currants and gooseberries. The young plant is cut back to 12 inches, and the next summer two shoots are allowed to develop and are trained horizontally in opposite directions; when the growing tips are separated by about 12 inches, they are pinched and two shoots allowed to develop, one to be trained vertically, the other horizontally, until it has made an-other 12 inches of growth, when it also is turned to the vertical. If the plants are planted 4 feet apart, this will result in a wall covered with cordons 12 inches apart.

The trainnig of black currants is different from the others, as they produce their fruit on the young wood of the previous year. In this case the wires ought to be adjusted 6 inches from the wall and the bushes kept behind them, no tying being required. The pruning is similar to that of the bush form of this fruit; preference being given to 'young wood always and overcrowding guarded against,

I have seen black currants 16 feet high against a wall and covered with fruit from top to bottom,

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

DAVID DOUGLAS

For Whom the Noblest of Western Trees is Named.

Douglas was the family name of Lord Selkirk, founder of the Red River Settlement, and it was the name of other men who have been prominent in Western Canada, so that considerable doubt exists in the popular mind as to the parficular man after whom the famous Douglas fir was named. It was found that it was not named after a founder, governor, or chief justice, but after a remarkable man in a humbler sphere of life. It should also be noted, too, that while the name of Douglas will always be associated with the common name of this magnificent tree, yet the scientific name fails to show any connection. It is called scientifically Pseudotsuga, literally, false hemlock. It is not false hemlock. It is a much finer tree than any hemlock, and it is to be hoped that a later generation of botanis's will change the name and give Douglas a place in it.

Regarding Douglas, Dr. Charles S. Sargent, director of Arnold Arboretum at Harvard University, had this to say of him in a footnote in his famous work "Silva of North America":



Always Grow

The Finest in the Land

SEND FOR OUR 1917 SEED ANNUAL DO IT TODAY

WM. RENNIE CO., LIMITED

872 GRANVILLE STREET ALSO AT WINNIPEG, TORONTO AND MONTREAL

READ THIS :

VANCOUVER. B. C.

BE READY FOR SPRING SPRAYING AND ORDER PHYTOPHILINE NOW

WALHACHIN, B. C., Oct. 14th, 1916.

Philtophiline Distributors, Vancouver, B. C. Dear Sirs:

Dear Sirs: I wish to add my name to those who are recommending the use of Phytophiline. I have used as you are aware this article to the value of \$130.00 this year; while it comes expensive, I consider it well worth the money. I have thoroughly tried it out this season, against other sprays and more especially for Green Aphys, and Phytophiline is what I shall use in the future; furthermore it is the only spray that I have found yet that appears to give equally good results, whether used with considerable pressure or very little. You can make what use you like of this communication as I thoroughly believe in it.

I am. Yours faithfully.

WALTER B. HILL.

Three grades—state trouble. Cans postpaid, 50°, and double sizes, 85°, \$1,55° and \$2.80°, Also commercial size, \$12° (sent express collect). Cash with order. PHYTOPHILLINE DISTRIBUTORS, 1455° Eighth Avenue West, Vancouver B. C.

"David Douglas, (1798-1834), a Scotch gardener sent by the Horticultural Society of London to explore the forests of the Northwest Territory, is, from his courage, energy and success in the presence of great difficulties and dangers, and from his untimely and horrible death, a conspicuous figure in the annals of American botanical exploration. Douglas, who had been trained by Sir William Hooker, and had made a short botanical journey in Eastern America in 1823, was sent in 1824, by way of Cape Horn to the Columbia River, where he arrived in April, 1825. He spent two years in Oregon, discovering some important trees, including Abies nobilis (noble fir), Abies amabilis (Lowland fir), and Pinus Lambertiana (sugar pine) the largest of its race.

In March, 1827, Douglas started from Fort Vancouver, on the Columbia River, crossed the continent by Hudson's Bay Company posts, and embarked for England, which he reached in October of the same year. Two years later he left England for the last time and reached the mouth of the Columbia on June 3, 1830, remaining in Oregon until the autumn, when he sailed for Monterey. Here he remained until the next summer, discovering no less than 150 species of undescribed plants, and then sailed for the Sandwich Islands. In the autumn of this year he returned to the

Columbia River, and in the following summer extended his exploration as far north as the Fraser River, in which he was wrecked, losing his collections and instruments, and barely escaping with his life. But the beauties of tropical vegetation lured him from the awful solitude of the sombre fir forests of the northwest, and in October, 1883, he sailed for the Sandwich Islands. Here he passed the winter, and on the 12th of July, 1834, while engaged in exploring the high peaks of the island. he fell into a pit in which a wild bull had been captured and several hours later was found dead and terribly mangled.

"Douglas is said to have introduced two hundred and seventeen species of plants into English gardens, the list including many valuable and beautiful trees, like the redwood, the sugar pine, and the Douglas fir. No other collector has ever reaped such a harvest in American, or associated his name with so many useful plants. By an unfortunate hazard of fate the noble Douglas fir, the most important timbertree introduced by Douglas and one of the most valuable trees in the world, does not, as might well have been the case, perpetuate his name in the language of science, and it is a humble primrose-like alpine herb which commemorates this explorer of forests and discoverer of mighty trees."

PLANT NOW. **DICKSON'S World Famed Roses** We can supply you with the Best of these Hardy Beauties and true to name. Prices range from 30ϕ to \$1.50BRAND'S, 723 Robson Street, Vancouver, B. C.

POULTRY SECTION

PROFITABLE POULTRY FARM (By MICHAEL K. BOYER.)

A rightly managed poultry farm, so located that the expense is not too great in marketing, is sure to be profitable. When farms are established near cities, the market practically is right at the door.

Where farms are more remote from these city markets, a profit can be derived by shipping to the larger cities. In these days of excellent railroad facilities, any poultry plant within 100 miles of a city can reap the benefits of good prices, just as much as those located within easy drive. The cost of shipping is easily offset by the reduced cost of conducting such a plant away from highly taxable land.

The foundations of all poultry farms is egg production. Successful broiler farms are the ones whereon eggs are produced. There is too much risk in buying eggs for hatching broilers. Such broilers as a rule are all sorts and sizes. But it is a mistake to rely solely on broilers. It is better to have a broiler and egg combination.

There are seven distinct branches of poultry farming: Broilers, roasters, eggs, ducklings, goslings, turkeys and squabpigeons. On a farm of about ten acres, where part of it is a grove or an orchard of large fruit trees, and where at a section there is running water so that a pond can be had, it will be found profitable to combine all these seven branches.

A few incubators could be started in December for broilers, and kept running until the last of May. Ducklings could be hatched from March 15th to July 15th. While hatching for broilers a number could be selected from the lot and fed and reared for roasting fowls.

During April and May broody hens could be placed on turkey and goose eggs. The squab-pigeons would require no labor as to hatching and rearing the young, as pigeons attend to that duty themselves. In this way during the heighth of the season there Would be broilers, ducklings and squabs for sale, and during the winter eggs, roasters, goslings and turkeys.

Such a farm would accommodate 400 hens-200 of which should be of the American class, as Wyandottes, Plymouth Rocks or Rhode Island Reds; fifty of the Asiatic class as Light Brahmas, and 150 of the Mediterranean variety like leghorns or Minorcas.

One hundred Pekin ducks would keep the incubators busy during the season. Two hundred and fifty pairs of Homer pigeons, mated, would produce all the squabs that the farm could take care of. Six pairs of Seese and twelve turkeys and a gobbler should produce sufficient of their kind to supply the local demand around the holidays.

Poultry Notes.

Carefulness in dressing poultry pays for the extra pains taken. The pinfeathers must all be removed.

Over-exercise toughens the flesh of even a young fowl. A good breast is half the race for a valuable table fowl. A hen bagging down behind is very unattractive as a carcass. The attempt to properly fatten poultry while on a free range, is to throw away time, money and good eating.

White Leghorns & White Wyandottes

Very vigorous stock, bred for years for heavy egg production, with most successful results.

Headquarters for

STRONG CHICKS AND RELIABL & HATCHING EGGS

Write now for my 1917 Illustrated Catalogue containing valuable information on feeding poultry.

L. F. Solly, Lakeview Poultry Farm WESTHOLME, B. C.

It seems as though nothing is so poorly marketed as poultry. If alive they are in a crowded coop, all sizes and colors. If dressed they are so often unattractive. There is no reason why dressed chickens cannot be put on the market in a more inviting condition. Buyers do not hesitate on price for a nice, clean, tasty article.

There is no better germ-slayer than an ounce of carbolic acid added to a pail of whitewash. Give the walls and ceiling of the henhouse a good coating, working it in rather thick in all cracks and crevices.

It is a mistake to discard a breed on the supposition that it is not a hardy one. Hardiness can be instilled in any breed by proper housing, proper food, proper attention and systematic breeding.

A favorite cholera cure in the west is made as follows: Red pepper, 2 ounces; powdered asafoetida, 2 ounces; carbonate of iron, 4 ounces; powdered ruhbarb, 1 ounce; Spanish brown, 6 ounces; sulphur, 2 ounces. The mixture is made into pellets with flour and water and given three times a day. The mixed powder is added to the soft food as a preventive, giving a tablespoonful twice a week to every two dozen fowls.

In buying feed, remember that white oats is to be preferred to the black, that coarse bran is better than fine, that hulled oats with the hull on, that white corn is not so fattening as the yellow variety, and that Kaffir corn is an excellent grain, and should be more extensively fed.

Fresh eggs find ready buyers and command respect. Bad eggs cause trouble. Spoiled eggs go to the tanners. Condemned eggs, though not spoiled, are sold to the factory for printing calico. Cracked eggs are often sent to the packing houses, where they are separated and canned.

* The late P. H. Jacobs once said that outside of the cold-storage process, which is too expensive for the farmer, there is no mode of preserving eggs so as to keep them fresh for six months. When we use the term "fresh" we mean similar in appearance to an egg newly laid. Even where the cold-storage method is used there is something to observe before the eggs are placed therein, and in any case they differ from those recently removed from the nest. An egg is a perishable article. It may not decay as rapidly as a strawberry, but sooner or later its contents change.

Neatness brings buyers. The best always goes first. Quick growth influences quick

sales. The markets have a surplus of poor stuff. Poultry buyers are educated-they want the best.

The carcass should be dressed immediately after killing. To allow the feathers to remain on for several hours will hasten decomposition.

In France parts of a carcass can be purchased in market—legs, wings, heart or any part wanted. In this country it is the whole thing or nothing.

How strange that epicures who delight in the white-skinned turkey or duck, should be so set against the white-skinned chicken. But it seems nothing will overrule this prejudice.

The only absolutely successful way to ship iced poultry is to use crushed ice. It should be shipped in barrels that are strong with holes in the bottom. First place a layer of excellsior on the bottom of the barrel, then a layer of crushed ice. Lay the fowls neatly together and then cover them with another layer of crushed ice. Keep this up until the barrel is filled. When the top is reached, cover the last layer of fowls with an inch and a half of ice. The finer it is crushed the better. Place over this some excelsior, and over the top burlap. Poultry shipped in this way will never bruise, and arrives in the market in excellent condition. Ice crushed as it is done for bar-rooms is the kind to use in shipping poultry. The crushed ice seems to form a crust in each layer, and keeps the poultry as sweet and nice as when first killed.

"Farm-raised stock" is not always a guarantee of health and vigor. If "farm-raised" fowls are allowed to drink from dirty pools in the barnyards; if they are compelled to roost outdoors in all sorts of weather; if they must hunt their grain among the waste in the manure piles; we had rather take our chances with yarded stock. We like to know what our fowls eat and drink, and how comfortable they are at night.

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



Motto-"FOR HOME AND COUNTRY'

SURREY WOMEN'S INSTITUTE

The Surrey Women's Institute met on Tuesday, December 5, in the Opera House, Cloverdale, Mrs. Whiteley, president, in the chair. There were 37 present.

Mr. Hadcock, military secretary for the Y. M. C. A., gave a most interesting address on the work of his society for the soldiers, showing it to be a substitute as good as circumstances could permit, for the home life the men are compelled to leave behind them. The committee in charge reported that the proceeds of the Junk Day collection had been sold for \$55. After paying a few expenses this will leave over \$50 for the support of the three prisoners of war whom the institute has adopted.

The resolutions passed by the Women's Intsitute conferences last September and October were discussed and fully endorsed by the meeting. Demonstrations in knitting, crochet and tatting were given by Mrs Lane, Mrs, Chaz and Miss Davis.

Members are asked to note that the annual meeting has been postponed from January 2nd to January 9th in order not to conflict with the holidays. A full attendance is specially requested in order to prevent delay in the year's work.

Upper Sumas

The Upper Sumas Women's Intsitute held their annual meeting at the home of Mrs. J. McMurphy, Huntingdon, on December 14. The following officers were clected for 1917: President, Mrs. T. York; vice-president, Mrs. A. Campbell; secretary-treasurer, Mrs. Winson; directors, Mrs. F. York, Mrs. Porter and Mrs. Me-Murphy; Red Cross committee, Mrs. Porter, Mrs. Campbell and Mrs. McMurphy; prisoners of war committee, Mrs. Hart, Mrs. Cobley and Mrs. McMurphy.

The secretary read her report for the year, which shows the splendid work carried on by the institute--\$45.45 sent to Belgium Relief fund; \$16.25 sent to prisoners of war; \$51 sent to "Our Day" fund, while the members knitted seventy pairs of socks and made fifty suits of pyjamas, besides various articles, such as hospital shirts, handkerchiefs, mouth wipes, bandages, slippers, etc.

Atchelitz

The Atchelitz Women's Institute will meet in the Atchelitz hall on Tuesday, December 26th, at 3 pm. A paper will be given on first aid in small accidents.

Chilliwack

The regular meeting of the Chilliwack Women's Institute was held at the home of Mrs. Jas. Munro, Mary street, December 12. The meeting was well attended and the suggestions given for the distribution of Christmas gifts very interesting. The patriotic branch gave a creditable report from the sale of home cooking on December 7.

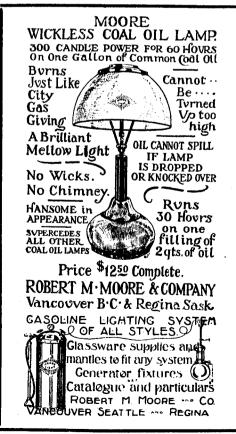
The Chilliwack Women's Institute expect that Mrs. Hadcock, sceretary of military service of the Y. M. C. A., will be in Chilliwack on Sunday, January 21.

Hazelmere News

The Hazelmere Women's Institute held their monthly meeting, Thursday evening, Dec. 14, in Mission church, Hazelmere, the president, Mrs. Tucker, in the chair. Correspondence from the Agricultural Department, from Mrs. Davies, and the League of Honor, was read, discussed and necessary action taken on each.

The members decided to buy a good eight-day clock for Hall's Prairie school, which is to be in place after the holidays. All heard with regret of Miss Hall's resignation as principal, and the secretary was instructed to write to the School Board asking that an experienced male teacher be employed for the ensuing term.

Phairson MacPherson was a Scotsman. Also, he was a coal merchant. Also he was in love, according to the Atlanta Journal. His lassie was a sensible lass, and she knew him to be the richest man in town. But she wanted to be quite sure that he had come by all his money honestly before she decided to marry him. "Hoo is it that yo quote the lowest prices in the toon, and make reductions on them for yer freens, and yet ye make sich enormous profits?" she asked. "Well, it's this way," explained Phairson MacPherson, in an undertone. "And ye'll be no tellin' any one about it, wull ye? Ye see, I knock off two shillings a ton because a customer is a freen o' mine, and then I knock off two hundred-weight a ton because I'm a freen o' his!"



Cashmere Hosiery for Women and Children

Those who anticipate purchasing cashmere hose will do well to make selection from the following lines. We recommend both the qualities and the values to both town people and those who purchase by mail.

- Seamless Cashmere Hose, with special spliced heels and toes, in black; sizes 8½ to 10; 50¢ a pair.
- A variety of light and medium weight seamless and full fashioned lines, in black only; all sizes from 8½ to 10; 756 a pair.
- English All-wool Cashmere Hose, full fashioned, with seamless feet; **85¢** pair.
- Seamless outsize and extra outsize allwool Cashmere Hose, **\$1.00** pair.
- Wolsey British-made All-wood Cashmere Hose, thoroughly shrunk, at **\$1.25** pair.
- Little King ('ashmere Hose, in black or tan; fine 1-1 rib; sizes to 6 sell for **40¢**; 6½, **45¢**; 7 to 8, **50¢**; 8½, **60¢** a pair.
- 2-1 Rib Cashmere Hose, in a cotton mixed quality; sizes 6 to 9½; priced at from **35¢** to **50¢** pair.
- Infants' Wool Hose, in an extra fine rib quality; sizes to 6½, in black, white or tan, **50**¢ pair.
- ('ashmere Finished Hose, in black, white or tan; sizes to 6½; 25¢ pr.

Gordon Arpoale

575 Granville Street







NATIONAL SERVICE

PUBLIC NOTICE is hereby given under the authority of the "War Measures Act, 1914," that during the first week in January, 1917, an inventory will be made by the Post Office Authorities, of every male between the ages of sixteen and sixty-five, residing in Canada.

National Service Cards and addressed envelopes for their return to Ottawa have been placed in the hands of all Postmasters for distribution amongst the persons required to fill in such cards. Every male person of the prescribed ages is required to fill in and return a card enclosed in an envelope within ten days of its receipt.

Any person who fails to receive a card and envelope may obtain the same upon application to the nearest Postmaster.

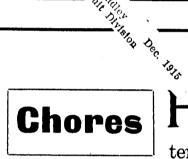
Ottawa, 15th December, 1916.

R. B. BENNETT,

Director General.

1. What is your full name ?	
3. Where do you live? Province	you born ?)
4. Name of city, town, village or Post Office	your amor borner)
StreetNumber	7. In what country was your mother born ?
0. How much time have you lost)	
1. Have you full uso of your arms?	9 If not are you naturalized 2
2. Of your legs ? 13. Of your sight ?	15. Which are you—married, single or a widower? - }
4. Of your hearing?	AC Dimension and the the N
7. What are you working at for a living ?	
8. Whom do you work for ?	
9. Have you a trade or profession ? 20. If so, what ?	
1. Are you working now ? 22. If not, why ?	
23. Would you be willing to change your present work for other necessary work at the same pay during the war?	
4. Are you willing, if your railway fare is paid, to leave where you now live, a	nd go to some other place in Canada to do such work?
GOD SAVE	THE KING

CITY COMFORT FOR COUNTRY HOMES



HAVE you ever figured out the amount of time it took to attend to the different fires in your stoves? The wood and the

coal have to come in and the ashes have to go out and it is a big job to manage it when the stove is in the room and it is absolutely necessary to keep things tidy. Think how easy this is in the cellar when there is only one fire to look after, and where the fire does not go out from the beginning of the Winter until you let it out in the Spring, and then if you burn wood, think of the large wood that can be burned in a hot water boiler and the chopping that is done away with. It makes a lot of time for other more important things to have a Hot Water Boiler in the house.

A Gurney-Oxford Hot Water Heating System means no more work than running a Kitchen Stove. Write us for further information.

THE GURNEY FOUNDRY CO., LIMITED

Toronto and Vancouver