

BRITISH COLUMBIA

FRUIT *and* FARM

MAGAZINE



Vol. X., No. 7

JULY, 1917



Plentiful Profits Can Be Made from Sheep in B. C.

**The Man
Who
Works on
a Farm**

—or in the woods—or the mines—the man who hunts or prospects—who follows a calling that gives hard knocks to Footwear should wear

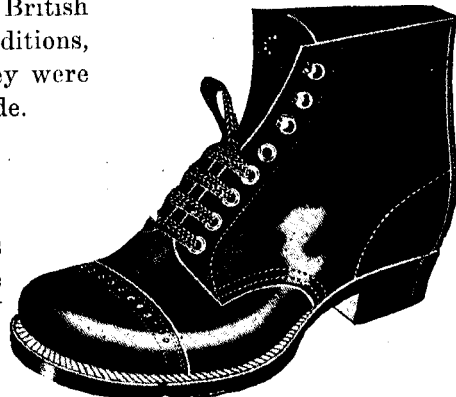
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There's a "Leckie" for you all, and each "Leckie" in its respective field has not a peer in the world.

Each is a wear-resisting, weather-defying, comfort-giving article of footwear particularly suitable for British Columbia conditions, for which they were specially made.

The name on every pair, but remember "The Quality goes IN before the Name goes ON that's a

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The motive power of the Twentieth Century is electricity supplied from the central station.

All the lumber and shingle mills in the Fraser Valley are now using electric power from our lines.

Electricity, reliability, economy—these are the advantages that induced the mill owners to adopt electric power.

Mr. Farmer, are you in line with progress in installing electricity on your farm?

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Vancouver New Westminster Victoria



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We offer a complete list of Fruit and Ornametal Trees, Small Fruits, in fact everything that is hardy and desirable for the garden and profitable for the orchard. Large stock of strictly first-class goods at reasonable, honest prices—all home grown. Inspection of nurseries solicited. Price list on application.

**LAYRITZ NURSERIES
VICTORIA, B.C.**

Established 1890.

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Fruit and Farm Magazine

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

Vol. X.—No. 7

Vancouver, British Columbia

\$1.00 per year
in Advance

Extra Convention of the B. C. Dairymen's Association, Held at Kelowna, Okanagan Valley, June 22nd and 23rd, 1917

At the annual convention of the association, held in the city of Nanaimo, Vancouver Island, last January, members from the Okanagan Valley urged upon the association to hold the next annual convention at Kelowna. It was felt, however, that the annual meeting, which has always been held in different points on the Island and Lower Mainland, should remain in the older dairy districts, and a promise was given them that if possible an extra convention would be arranged for the up-country districts, and to take place some time during the summer. Accordingly arrangements were completed for a two-days' convention to be held in Kelowna on June 22nd and 23rd. Local business men and farmers of the district, under the direction of Michael Hereron, local director of the association, greatly assisted the acting secretary in arranging details.

First Day.

The morning session consisted of demonstrations in placing and judging dairy cattle and horses at the farm of Mr. Leslie Dilworth by Prof. J. A. McLean, of the B. C. University, and Prof. W. T. McDonald, Provincial Live Stock Commissioner, and much useful and valuable information was given to the farmers for their guidance in the breeding or purchase of these animals.

Afternoon Session.

After a most satisfactory picnic lunch served in an adjoining grove by the ladies of the community, the afternoon session was opened by an address of welcome by Mr. J. W. Jones, local member of the legislature who, in a few well-chosen and happy words, welcomed the speakers and delegates to the district, and told of the rapid development of dairying in the district. Two years ago there were but few cows, and a little dairy butter was made and traded off for the usual family groceries in the local stores. A co-operative creamery was established in the spring of 1915, and over one hundred thousand pounds of butter will be made during the current year. Until two years ago there were no silos in the district. The first one was built as a demonstration silo by the Department of Agriculture on the farm of Mr. Hereron in the fall of 1915. At the present time there are some thirty in the district, and many more are being built this year. The Kelowna district is one of the very best in British Columbia for the growing of the two great dairy fodders, corn and alfalfa.

Professor McLean's talk on "Feeding Dairy Cattle" was full of valuable information regarding suitable feeds for the economical production of milk. Mr. T. A. F. Wiancko, Provincial Dairy Instructor, talked on the "Causes of Variations in Cream Tests," and brought out some valua-

ble points for the guidance of the cream producer, and made it quite plain that the blame for variations can seldom be placed upon the hard-working and patient butter-maker.

Prof. L. Stevenson, superintendent of the Dominion Experimental Farm at Sidney, Vancouver Island, took for his subject "Corn and Its Relation to the Dairy Industry," and emphasized the importance of proper cultivation and seed selection for maximum production. He believed that corn and alfalfa such as can be grown in the Okanagan would solve the problem of producing milk and cream at a minimum cost.

The session closed with an interesting talk on "Hogs" by G. S. Harris, Moresby Isle. As money makers when skim milk and good alfalfa or clover pasture are available, pigs cannot be beaten. They take but little time to look after, and if kept out of doors largely during the summer season and comfortably and cleanly housed during the winter, they become a most valuable adjunct to the dairy industry.

Evening Session.

The evening session was held in the school house at Rutland, about six miles from Kelowna. The farmers in this section are becoming very enthusiastic dairymen, and on their small holdings are going in for intensive methods. Corn, alfalfa and roots are grown largely between rows of fruit trees, and having plenty of water available for irrigation, this method can be followed without damage to the fruit trees.

Dr. S. F. Tolmie, B. C. representative of the Dominion Live Stock Branch, opened the evening's programme with a live talk on "Contagious Abortion, Milk Fever, and Bloating," and pointed out the essentials in handling these dread diseases.

P. H. Moore, now of Alderley Farm, Royal Oak, V. I., but until recently superintendent of the Dominion Experimental Farm at Agassiz, gave some very valuable pointers on the making of clover silage. He recommends a mixture of 9 lbs. red clover, 3½ lbs. alsike, 1½ lbs. white clover, and 2 lbs. rye grass. Clover silage is more profitable than summer pasture, and is one of the most abundant of early spring crops. Alfalfa can be handled in the same manner. The silo is especially valuable in years when rain interferes with successful curing of alfalfa or clover for hay. These crops can be put into the silo in the wettest of weather with most excellent results.

Prof. P. A. Boving, of the University of British Columbia, followed with a talk on "The Production of Roots," and emphasized the importance of early seeding and sufficient seed to insure a full stand. Cultivation must be thorough, and thinning done early, in order to keep ahead of weeds.

"It has made milking easy
work in my barn"

South Vancouver, B.C., Dec. 5, 1916

Gentlemen:—

I have been using the Empire Mechanical Milker now for nine months, during which it has never gone on strike, or lost a day; it never talks back, and is ever ready to do its work. It has made milking easy work in my barn.

Its simplicity is its cardinal virtue; little to get out of gear, and easily righted. To the man who is milking cows for a living, if you are at all skeptical, see the machine in use.

J. CROWLEY.

**EMPIRE
MECHANICAL MILKERS**

are always on the job, and are certainly worth your investigation.

For Illustrated Booklet and full information address Dept. 4.

THE EMPIRE CREAM SEPARATOR CO.
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Deputy Minister Wm. E. Scott, of the Department of Agriculture, urged upon those present the importance of increased production to meet the Empire's needs. He expressed himself as particularly pleased with the progress made by the dairymen of the Okanagan Valley, and hoped that extra conventions, such as this, be held by the association each year.

Concurrently with the Rutland meeting, Prof. W. T. McDonald, Provincial Live Stock Commissioner, addressed the Boys' and Girls' Club at the Board of Trade rooms, Kelowna. There was a good turnout, and Professor McDonald expressed himself as greatly pleased with the work of the club.

Second Day.

The programme opened in the morning with a field road demonstration at the Bankhead Ranch—one of the largest of the fruit ranches, where dairying is carried on as a paying side line. Mr. L. E. Taylor, the manager, is an enthusiastic grower of corn and roots; in fact, he won by a good margin the first prize for corn at the Provincial Seed Fair at Armstrong, B. C., last year.

After profitably spending about an hour discussing corn and roots, the crowd were served with Bankhead strawberries and cream fresh from the field and dairy. A dozen or more motor cars took the visitors and speakers through the Glenmore Valley a distance of about 10 miles to Ellison, where at the farm of Mr. Hereron a further talk on alfalfa and corn was delivered by Professor Stevenson. Here the alfalfa cutting and curing was in actual operation, and never before had anyone present seen finer or greener cured alfalfa.

At 12:30 a. m. an adjournment was made to the nearby Ellison school, where the ladies of the community, under the leadership of the Ellison Girls' Club, furnished a picnic lunch, such as only country people can put up, consisting of great platters of cold chicken, ham and other cold meats, salads, home-baked bread, and the finest of butter from the local creamery, strawberries and cream, ice cream and cake, etc. Some eighty sat down, and the way they stored away the good things was worth going a long way to see. After lunch, J. W. Berry, of Langley Prairie, and E. Dodsley Barrow, member for Chilliwack in the local legislature, spoke interestingly on "Co-operation," and urged farmers to study particularly the marketing end of their profession.

A motor trip through twelve to fifteen miles of the finest orchards and farm lands of the Okanagan Valley brought the convention to a close, and everyone went home feeling that the convention was one of the best in the history of the association.

FOOD SITUATION IS GRAVE, DECLARES MINISTER OF MARINE

"The greatest economy and frugality must be exercised, and that condition will continue to exist between now and the next harvest, in order that the people of the British Isles may have sufficient food for their wants. As a matter of fact the condition is so serious that for three or four weeks before we left Great Britain no potatoes at all were served at the hotel where we were staying or at any hotel in the city of London. Sugar was extremely scarce, and flour was scarce and had to be carefully husbanded. At the hotel where we were staying, under the order of the director of food supply, Lord Davenport, only a small portion of bread was served to the guests at each meal, and we saw no such thing as white bread, because the wheat flour was being mixed with rye and with meal made from barley, in order to make the wheat flour go as far as possible."

The above statement was made by Hon. J. D. Hazen, Minister of Marine and Fisheries, in parliament upon his return from England, where he attended the Imperial war cabinet. They are serious words made in all seriousness by one who knows whereof he is speaking. Every Canadian can do his part in the next six months—the vital ones of the war—in eliminating waste and in practising real economy in food stuffs.

The Logan Berry

The Prolific Logan Berry at Sardis.

"We may state regarding the Logan-berry, no berry introduced in the past 100 years has been of such great value to humanity and the world at large as the Logan berry. It is now cultivated all over the civilized world and succeeds in almost all climes and lands. In Europe it is a great success, also Australia, New Zealand, South America, etc. In the colder portions of the United States it will do well, if the canes are protected in the winter time, and this is easily accomplished as the vines and trailers are easily covered and uncovered.



The Loganberry is put to more uses than any other berry fruit known. In the Pacific Northwest it is evaporated in large quantities and shipped to Alaska; also large quantities are used for making Loganberry juice, which is used extensively in the confectionary arts, and for making a cooling, refreshing drink; also for seasoning and flavoring ice cream, cakes, etc. It is one of the best canning berries in the world; also for making pies, jams, jellies, short-cakes for both winter and summer use. The demand for Loganberry fruit from the canneries all over the country is enormous.

The Loganberry is a very productive fruit, thriving well in all soils and climates. It is very early and a long-continued fruiting vine. It is a very large berry, and the fruits average large from the earliest to the latest pickings. The fruit is a deep red-dish-maroon color, with a sharp, brisk, acid flavor which charms all. The Loganberry has a trailing prostrate habit of growth."—National Nurseryman.

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



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

Department of Agriculture
Victoria, B. C.

(Re Stumping Machines.)

To Secretaries of Farmers' Institutes:

Sir,—Many requests have been received from Farmers' Institutes that stumping machines be supplied by the department to Farmers' Institutes who will be responsible for the payments.

I have received the authorization of the Hon. the Minister, to supply a limited number of stumping outfits on a deferred payment basis. Arrangements have accordingly been made with the A. J. Kirstin Company and the Columbia Block & Tool Company to supply these machines at a specially reduced price to Institutes.

I am forwarding you under separate cover catalogues and descriptions of these two outfits.

It must be distinctly understood that the department assumes no responsibility and makes no recommendations regarding the comparative efficiency of different types of machines. Your superintendent has witnessed several demonstrations of machines supplied by each of the above companies and they appear to do most excellent work.

The terms under which these machines will be supplied to Institutes are as follows:

1. Application must be made by the Institute on the form supplied by the department and signed by the president, vice-president and directors, also by five members of the Institute.

2. Freight charges on the machines must be paid by the Institute from the factory.

3. Terms of payment—One-third on delivery, one-third in one year and remaining third in two years.

4. No interest will be charged on unpaid balances.

5. Interest at 10 per cent. will be charged on overdue payments.

6. Institutes that fail to make their payments promptly will not receive their per capita grant on account of membership, but this sum will be devoted towards the payments due.

It is recommended that all Institutes securing these machines adopt a plan whereby a fixed charge of so much per diem be paid by members who use the machine. By this means a fund will be provided towards paying the cost of the machine and the depreciation in value.

Prices

The A. J. Kirstin Company machines. Prices are F. O. B. Sault Ste. Marie, the following being the special rates quoted to the department. Model 8—Net price, \$36.34; weight, 183 pounds. Model 9—Net price, \$50.49; weight, 223 pounds. Model 10—Net price, \$58.52; weight, 273 pounds. Model 11—Net price, \$74.59; weight, 377 pounds. Model 12—Net price, \$84.53; weight, 417 pounds. Model 15—Net price, \$97.15; weight, 342 pounds. Model 16—Price \$117.81; weight, 409 pounds. Model 17—Price, \$127.37; weight, 458 pounds. Model 18—Price \$151.09; weight, 586 pounds. Horse power stump puller—Prices from \$59.21 to \$232.95.

The Columbia Block & Tool Company—Prices f.o.b. Vancouver, \$160 for June and July delivery. See page 11 of catalogue for details.

I have the honor to be, sir, your obedient servant.

WM. E. SCOTT,
Deputy Minister and Superintendent of Institutes.

Men's Suit Values

Our regular model sack suit for conservative dressers is our big selling line. It comes in a great variety of colored patterns in worsteds and tweeds, and also in West of England navy blue serge. These suits are designed by the best tailoring experts in Canada, and the finishing touches to your exact measurement are added in our own workshops.

PRICES:

\$15, \$18, \$20,
\$25, \$30, \$35
and \$40

N.B.—If you fancy the more extreme styles don't forget we carry them, too.

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Wm. Dick

Limited

Two Big Stores for Men

33, 47-49 Hastings Street E.

Vancouver, B. C.

Company Organized to Take Over the Famous Basque Ranch Near Ashcroft

Sheep, Hogs, Potatoes, Beans and Alfalfa to be Produced on Large Scale.



Potato Digger in Operation on Basque Ranch.

The famous Basque Ranch, one of the oldest and best-known ranches in British Columbia, with an area of 5,000 acres, situate 190 miles east of Vancouver on the main lines of the C. P. R. and the C. N. R., in the Ashcroft district, has been taken over by a company formed by and including well-known Vancouver business men.

The president of the company, Mr. W. H. Hammond, who has been the owner and manager of the Basque Ranch since 1910, is a recognized agriculturist and stock breeder, who has solved the problem of farming irrigated lands on a large scale.

The company is fortunate in retaining the services and advice of Mr. Hammond, having made a very favorable agreement with him whereby he continues in the active management of the concern for the next ten years, or so long as his services are required.

Associated with him will be such well-known men as Mr. William Savage, barrister, of Vancouver; Mr. G. J. Hammond, Vancouver; Mr. Albert Whyte, and Mr. W. C. Findlay, 509 Richards Street, Vancouver, the latter also acting as secretary and treasurer.

The solicitors for the company are Messrs. McLellan, Savage and White, Vancouver, and James Murphy, Ashcroft. Bankers, Standard Bank, Vancouver, B. C., and Northern Crown Bank, Ashcroft, B. C., while the auditor is Mr. E. H. Giske, Vancouver, B. C.

The company proposes to go largely into sheep raising, and the Basque Ranch has proved admirably adapted to this industry.

At Macabe Ranch, close to Basque, many sheep are most successfully raised, 3,500 head sheared there this spring produced 10 pounds of wool to the head, which was sold at 47 cents per pound.

An expert, who has had considerable experience in raising sheep and knowing a great deal of the ranges in Montana, after visiting the ranch, expresses the opinion that there is not to be found grazing facilities or ranges more adaptable for raising sheep than he has seen on Basque Ranch, where there is plenty of water, unlimited

range for summer, as well as good rolling hills close up for winter range, and alfalfa which is grown on the ranch. Remarkable also is the fact that this expert sheepman has found in abundance growing on the hills around Basque Ranch the flower "Bitter Root," supposed to be grown only in Montana.

The ranch is splendidly equipped with buildings, farm machinery of all kinds, including threshing machine, potato planters and diggers, bean planters, etc.; also 31 head of work horses, harness and wagons. Potatoes and beans from the Basque Ranch have a distinctive quality and command top prices. Last year 54 carloads of produce were shipped from this ranch.

It has its own side tracks on both railways, and teams drive direct from the fields to side tracks to load cars.

The soil is deep volcanic ash and crops are raised by irrigation. This year 500 acres of potatoes, beans, grain and alfalfa have been planted.

The newly formed company intends to enlarge the water systems and increase the area of land under irrigation to 2,000 acres, purchase 3,500 head of sheep, put in a mill for grinding alfalfa meal, and increase buildings and equipment for the enlarged production.

The call from our government is for greater production, to feed our own and the Allies, and this organization is going to be a big factor therein, and also in reducing the abnormal prices of foodstuffs and clothing.



Gathering Potatoes at Basque Ranch.

Entomological Notes

Readers of Fruit & Farm Magazine are more or less interested in the preservation of their crops, especially if it is a question of preventing the depredations of insects. The losses caused by insects to the crops of this country are enormous and are in most cases beyond the understanding of the average man. The cost of the damage by a single species often runs into hundreds of thousands of dollars annually. Then the importance of the beneficial species which prey on and destroy the injurious forms is now, through such striking examples as the Vedalia ladybird, becoming familiar to all. Aside from their great numbers, writes N. Banks, or their agricultural or their medicinal importance, insects are a source of study, of interest, of pleasure and recreation to an ever-increasing number of naturalists year after year. The pleasure in securing the many beautiful forms, the interest in studying the remarkable structure or the charm in unravelling a peculiar life history has attracted many a busy man as a means of relaxation from the ordinary duties of life. It affords a recreation at once healthful and instructive. The increasing interest in outdoor life, and in nature-study, constantly brings insects into prominence as a group easily observable and replete with interest. A group of men and women interested in the study of insect life in British Columbia, bound together by no greater ties than the love of their work, the advancement of science, and a common interest in the cause of humanity form the B. C. Entomological Society. They are willing to give every assistance in their power to those wishing to know more of this interesting pursuit. Among the number are R. C. Treherne, Dr. E. A. Cameron, M.A., Dominion field entomologists; Dr. S. Hadwin of Agassiz, E. H. Blackmore, president, Victoria, an authority on B. C. geometridae; R. S. Sherman of Vancouver, specialist on B. C. diptera—those insects with but one pair of wings; Mr. J. W. Cockle, Kaslo; G. O. Day, F. E. S. Duncan, A. W. Hanham, Duncan; L. E. Taylor, Kelowna; W. Downes, Victoria, are well versed in the order lepidoptera, butterflies and moths. All the above have rendered great assistance in naming and classifying insects peculiar to B. C., and would be glad to receive specimens for the Provincial Museum and the National Collection at Ottawa. Fruit & Farm management have promoted entomologists the use of a column to assist in popularizing economic and systematic entomology, giving information and announcing the latest discoveries. Williams Hugh, Hon. Sec.-Treas., Box 20, Cloverdale, B. C., will be pleased to give any further information.

Wake Up, Canada!

Who will start on the profitable game of sheep raising?

Professional with 14 years' experience in South America, offers services or knowledge. Apply

J. W. EDMOND,

1150 Commercial Drive, Vancouver.

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BERRY CRATES AND BOXES, Etc.

We carry a full line of Berry Crates, Cherry Boxes, Baskets, Tomato Boxes, Apple Boxes, Pear Boxes, etc. All at the lowest possible prices. Let us know your requirements.

Woodward Department Stores, Limited

VANCOUVER, B. C.

Successful Suitor—Sir, your daughter has promised to become my wife.

Father—Well, don't come to me for sympathy. You might have known something would happen to you, hanging around here five nights a week.—Indianapolis Star.

"Your constituents don't seem to agree with some of your remarks."

"No," replied Senator Sorgham. "A whole lot of people never seem to pay the slightest attention to anything I say except when they disagree with it."—Washington Star.

Wishing to Secure

Good Photographs

for reproduction of any of our TREES, etc., growing in the Province, we offer the following prizes for good prints, any size, all prints to become our property, whether winners or not. Prints to reach us at any time before October 1st, 1917, but priority of receipt will count in competitors' favor, and we are open to receive pictures right away. No limit to number of prints each competitor can send.

FIRST PRIZE OF \$5.00

worth of our best grade of nursery stock, customer's selection, for Spring 1918 delivery, delivered free at your nearest station. Also two prizes of \$2.50 each in trees, etc.

Name and address of sender to be written LIGHTLY on back of prints, and particulars as to variety, date of planting, etc., to accompany.

Those who will be in the market for trees, etc., for Fall 1917 and Spring 1918 should write us NOW. This is very important. Our General and Rose Catalogues and Price List are at your service. Orders placed in the Summer get the best attention and the customer is sure to get just what he orders.

We can always find room for a good salesman to work in practically any part of the Province.

The

British Columbia Nurseries Company, Limited

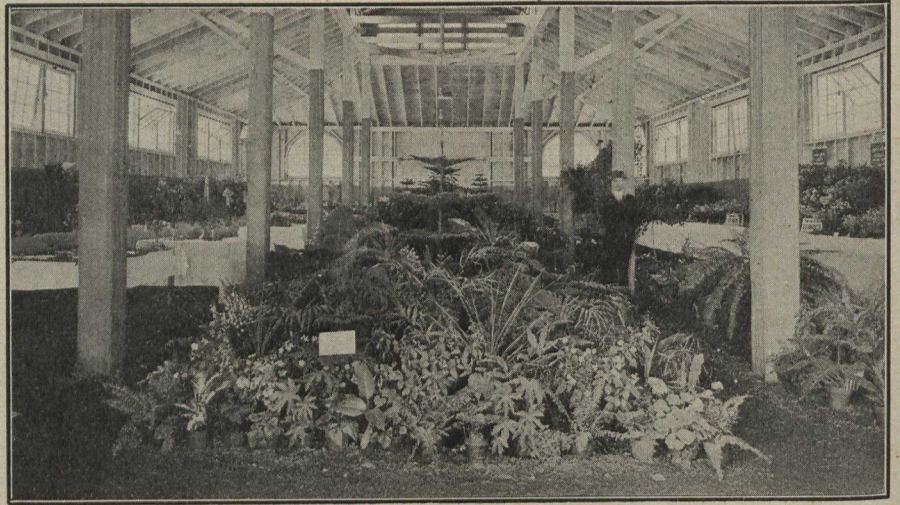
1493 Seventh Ave. W., Vancouver, B. C.

Vancouver Exhibition to be Held August 20th to 25th

Management Offering Larger Prizes to Encourage Larger Entries of Agricultural, Horticultural, and Floral Exhibits.

The injunction of Dr. J. O. Orr, general manager of the Canadian National Exhibition, Toronto, Canada, to fair managers everywhere to "keep the flags flying and the Fair gates wide open" is being accepted as very good philosophy by seasoned fair managers. "Exalt military service and patriotism. Do not neglect the recreative end. A fair and exhibition is even more necessary during war times than during peace times." There is no disposition on the part of any big fair secretary to "play the slacker's role," and hesitate about assuming the responsibility of service to the nation in its fight for more food to feed the Allied nations. The Fairs will do their fair share in this matter.

Since the announcement several weeks ago, which stated emphatically that there was no intention of calling off the Vancouver Exhibition this year, but that it would be operated as a Food Training Camp in the voluntary service of the gov-



Horticultural and Floral Exhibit, Vancouver Exhibition, 1916.



General View Interior Agricultural Buildings, Vancouver Exhibition, 1916.

ernment, the plan has been commended very highly by the public.

In an interview today, Mr. H. S. Rolston said: "I fail to see why anyone should believe that the war is apt to cause the Fair to be discontinued. It is needed more badly this year than ever, because of the assistance it can give in stimulating the production of more food and its conservation. Plans for the "Food Training Camp" are being formulated rapidly. Many educational features will cause the name of the Vancouver Fair to be of great assistance to the government."

The Fair is to be held August 20 to 25 this year. Arrangements are consummated, whereby the military authorities will use most of the interior of the grand stand for offices, officers' quarters, storage of supplies, etc., while the large pavilion will be used entirely, except the seating and arena, for other quarters. Most of the men will go under canvas for the week proceeding and the week of the Fair.

Pork Production

Pork plays such a big role in the feeding of the Allied armies, and so many hogs

must be raised in the future to prevent a pork shortage, that the Vancouver Exhibition, August 20 to 25, which has tendered its services as a "Food Training Camp," as well as its grounds as a mobilization camp for the province, to the government, is offering unusually large premiums for pure-bred hogs of the common breeds. Premiums aggregating \$775.00 are to be awarded.

Pork is a kind of meat which can be cured or canned very easily. This causes it to be of great value as a food for soldiers, since it is very difficult to make use of fresh meat in the feeding of an army. A pork shortage would handicap the British commissary greatly in keeping their forces furnished with meat.

Pork, too, can be produced more quickly and in larger quantities than any other kind of meat. A pig six months old should weigh from 175 to 200 pounds, four-fifths of which is edible meat. A sow should raise five or six pigs twice a year, and two litters of pigs should produce nearly a ton of pork. No other farm animal can do as well.

On a farm which is properly managed pork can be produced without the use of much grain or corn, which is needed so badly in other forms of food at present. Grain is not needed to any extent until a few weeks before the pigs are sent to market. Pigs will do well on pasture land or forage crops.

There is so much interest in hog production in this territory that it is believed many hundreds of animals exhibited at the coming Fair will be purchased at private sale by farmers who wish to raise better hogs. The Fair is encouraging this practice in every way possible.



Parade of Sheep Class, Vancouver Exhibition, 1916.

Placing the charges in blasting stumps

CLOSE attention to the apparently insignificant details insures economical and effective results in blasting.

Nearly always several light shots are better than one big shot under a stump. The lifting force is spread out and "hitched shorter to the load." The several shots get the roots free of the ground without having to dislocate nearly so much earth. They use less powder and leave smaller holes to be filled. The different charges working together help one another. Since the total force is less, and better distributed, the pieces are not thrown so far.

To make use of this method of blasting stumps an electric blasting machine is necessary. Such a machine to fire up to ten holes at once costs only about \$18.50, and its intelligent and proper use will save its cost on every 1000 pounds of powder.

The small charges are more easily placed than big charges, because you can punch a small hole with a bar or bore it quickly with an auger, while the big hole must be dug, which is a slower job. These small charges can be tamped tighter, because the original solid earth almost encloses the charge. Finally, with an electric blasting machine you can fire several stumps at once.

But it must not be supposed from this that the fuse and cap method is not entirely practicable and serviceable. Millions of pounds of powder are fired this way every year with great satisfaction.

Holes can be made quickly with a small auger and enlarged easily with a scraper. This is better than to dig them—try it. A 2-inch auger nearly always is big enough, although a 3-inch one may be better for very large stumps. Make the holes where the probing rod shows the roots to be. You want the charges under the centres of resistance. You aim to tear out the roots, or to cut them off below cultivation depth. If you use several small charges under a stump, place them around under the roots slightly farther out than the edge of the stump. If you use one charge, put it directly under the centre of resistance of the whole stump.

If the ground is clay or otherwise heavy, and full of water, you can place the charges right next to the wood, but if it is sandy or light you must place them deeper—say with ten to twenty inches of earth between the powder and the wood.

The charge should not be permitted to form a long bulk. It should be as near round as possible.

All the sticks of powder in one charge must be in firm contact, and the stick containing the cap or exploder must be on top and solidly against the rest of the powder. Do not let fuse touch any of the powder. If it does, it may cause the powder to burn instead of exploding. A frequent cause of weak explosions or of misfires is the lacing of fuse around or through the primed stick of powder. If this is done the fuse is likely to spit fire through the side where it is bent, and may not carry the spark to the cap.

Powder will not detonate right unless it is loaded right, which means tight, with properly arranged cap and fuse or electric exploder. The cap or exploder must have enough strength. For all Giant Powders use nothing less than a No. 6 cap. If the cap is weak or tamping loose, Powder will not give off its greatest force.

In lighting the fuse stick the freshly scratched match head right against the end. This will work in any wind. Don't leave until the fuse shows by continued spitting of fire that it is lighted.

For all stump blasting, except in light sandy soil, use Giant Stumping Powder, the standard explosive for

clearing land in Canada. In very light soil use Giant 40 per cent or 50 per cent.

The Giant Powder Co. of Canada, Limited, will gladly send a copy of its book on blasting to any reader of Fruit and Farm Magazine. This book contains diagrams showing the most effective ways of placing the charges.

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Everbearing Strawberries in B. C.

By A. C. FISHER, Hatzic, B. C.

Fresh strawberries from June till November was unbelievable a few years ago and until the advent of the origination of the everbearing variety, Pan-American, by Samuel Cooper of New York, strawberries were to be had only in the spring and early summer months. Even years after the introduction of the Pan-American the everbearing varieties were not produced on a commercial scale. Successful crossing of the Pan-American with popular standard varieties has given us such remarkable varieties as the Superb, Progressive, Americus, etc. Out of these we can without hesitation recommend as the peer of everbearers the Superb.

The Superb everbearer has abundant foliage and a long root system. It is not a prolific plant-producer, but is a vigorous bloomer. The plant will bloom from the time it is planted until the severe frosts of winter set in. In flavor it compares, somewhat, like the white grape combined with the indescribable taste of the wild strawberry. The seeds are a golden yellow and the flesh carmine. The berry is of roundish shape and makes an attractive pack.

In planting out everbearers it is essential that the plot prepared should be free of weeds and the soil rich and well worked. The rows should be 30 inches apart and

attractive, inasmuch as the trade you cater to are willing to pay the price to secure your commodity.

This variety will bloom and bear more vigorously and over a longer period in the late summer and fall than in the regular bearing time in June. Grown under glass it should be possible to produce strawberries for Christmas.

Green berries on the vines grown outdoors have frequently been noticed as late as the middle of December.

To those who have grown the standard kinds for years, the everbearers will, no doubt be associated with other hybridized freaks exploited in nursery stock catalogues as more of a novelty than to be seriously considered as a commercial venture. And possibility it will be better if certain skepticism is exercised and the variety tested out in a small way in each respective locality, until it has proven to be adapted to soil and climatic conditions and the grower has satisfied himself that the everbearer in quality and yield will warrant planting on a commercial scale.

The berries shown here in cut, were picked in the fall after planting some measuring over eight inches in circumference.

On this young patch, measuring 36x200 a little over one-seventh of an acre, 24 pint-crates of berries were sold at an average price of \$3.75 per crate net. Had these been shipped through correct channels, instead of to commission men on a consignment basis, the price could have been set at \$4.00 per crate and realized without difficulty.

In order to grow the everbearing varieties successfully, it is well to remember that they require a great deal more attention and care than the standard kinds, bearing in mind the fact that in order to preserve the vitality of the plant over its long bearing period and produce quality fruit, cultivation must not be neglected altogether. Cultivation supplies a certain amount of nitrogen to the roots and also makes available other properties necessary to the proper feeding and revitalizing of the plant. It may seem quite a chore to rake the mulching from the centre of the rows but the results obtained will repay the grower tenfold. The ordinary hand cultivator should be used. A light application of nitrate of soda or preferably blood meal, applied before cultivating has good results. On soil when clover has been turned under, previous to setting out of plants it should not be necessary to fertilize the first year.

At any rate try out a few hills of the Superb everbearers and along in September and October instead of the usual dessert of canned fruits or stewed prunes, go out into the garden where the blowing leaves have mulched your plants, and pick a bowl of fresh strawberries for a change. Pass an occasional box to your neighbors, who haven't any and take a box down to the editor of the your local newspaper. That should be worth a half column at the least, even with paper at its present high price. Most editors like strawberries—given to them at that time of year. Although it is not usually done at any time of the year. These are lean years for the newspapermen. Then go right home and string barb wire around the patch and be sure and turn the hog out at nights.

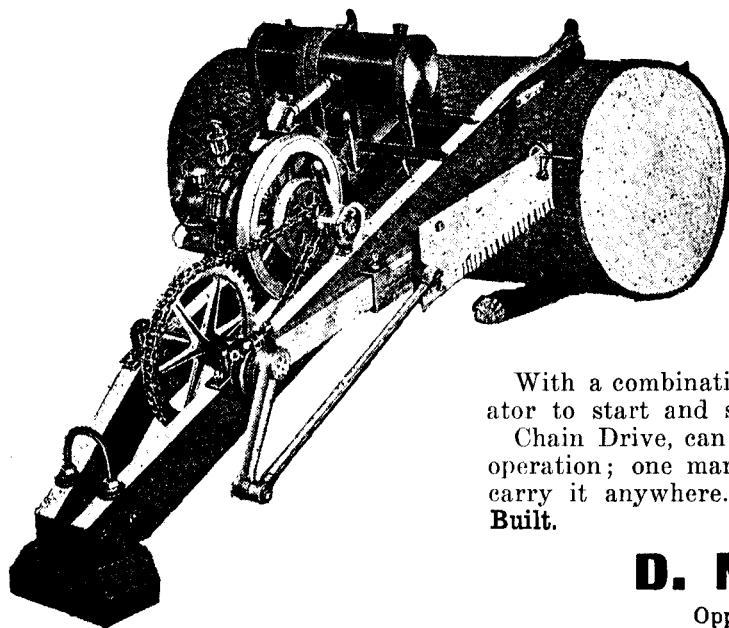


Of all fruits, the strawberry is recognized as the preferable table delicacy, and the lengthening of its bearing season will not, unless we have misunderstood human nature and the average palate, lessen the popularity of this luscious fruit a whit. Even to the far-off trenches in Flanders where fresh strawberries are an unknown quantity, the Tommies have not forgotten their taste, and when their allotment of jam arrives, and it happens that strawberry has not been included, then there is a terrible row. Strawberry jam has its time and place, but fresh strawberries and cream or strawberry shortcake a la whipped cream on your table menu whenever you desire so between the months of June and December, is now possible and can be realized by all who have a small piece of ground in which to plant out a few everbearing plants.

Our faith in the Superb berry is growing stronger every year that we produce this excellent variety. In size, flavor and shipping qualities it surpasses most of the standard kinds; besides being extremely hardy will stand more adverse conditions than any other varieties. Superb berries grown last fall by the writer were picked red and shipped to Manitoba markets and arrived in excellent condition. Even under unfavorable weather conditions at picking time, the fruit stood long-distance shipping and opened up in marketable shape. A case was shipped from the writer's farm in Hatzic to the Calgary Soils Products Exhibition, held in November of last year, and after being on exhibition for two days was disposed of in good condition.

the plants set 16 to 18 inches in the row. The hill system is the most satisfactory for growing the everbearers, as it allows better cultivation and also insures better quality fruit. Besides, as the everbearing varieties are not heavy plant producers, in comparison with the standard kinds, the labor in keeping the runners cut is not great. It is imperative that the bloom be kept off the plants during the spring of planting, and by doing so a good crop can be had that fall. The finest berries the writer has ever grown were produced in the fall of the year of planting. Regular applications of commercial fertilizers or well-rotted manures, should be applied between the rows in May and July. In May to help the growing plants and in July to increase the vigor of the plant for the long fall bearing period.

As a commercial berry the Superb has proven entirely successful. With proper attention it yields as well per acre as the standard kinds and realizes a higher return per acre. If properly packed and properly marketed the fall berry should average 100 per cent. more in net returns than the spring product. In order to realize the fancy prices, the grower should arrange beforehand by contract to supply his particular trade, and he can usually set his own price and get it. As we have stated before, the public never tires of fresh strawberries, and marketed at a time of year when soft fruits are off the market and at a season which makes them a novelty, the returns should prove



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POINT GREY ROSE SHOW

**Three Special Prizes for Exhibition
Opening July 14**

Kerrisdale, Point Grey, June 18. — A medal and two cups will be competed for at Point Grey Rose Show on July 14, one cup donated by Reeve Fletcher and one by Mr. Gerald G. McGeer, M.L.A., according to a statement made by Secretary A. P. Bogardus at a recent meeting of the new executive of the local Horticultural Society.

During the meeting President J. Fyfe Smith presented the society's medal for the champion rose at the fall show of 1916 to Mr. Bogardus, who, in replying, stated that Mr. McGeer had presented a cup for competition and had left the decision as to what class it shall be allocated to the executive, who, in order to stimulate an interest in the exhibition of roses by amateurs, decided to award the cup to class 3, which calls for six roses, distinct varieties, in trays.

The cup given by Reeve Fletcher will be for competition in class 5, which calls for eighteen roses, six varieties, in vases. The society will again award a medal to the winner of the special class for the champion rose of the show.

The schedules are now ready and comprise 45 classes, including 25 classes for roses, 11 for sweet peas, three for carnations, and six for herbaceous and annual plants. The management committee to make arrangements for the show include: Dr. Smith, Messrs. S. Sykes, Charles Bailey, G. Marriatte, George Barker and John Davidson, convener.

The society will also hold an exhibition of flowers, fruit and vegetables, representing the municipality of Point Grey at the Vancouver exhibition in August. Messrs. Bailey, G. Marriatte, A. Bogardus and J. Livingston comprise the committee, with power to add to their number, in charge of this branch of the society's activity.

It is expected that many members of the society will exhibit at the Greater Vancouver Rose Show on July 4. Schedules for the Point Grey show may be had from Mr. Bogardus at 3490 Cypress street, or A. U. Weberk of Kerrisdale.

U. F. B. C.

**Important Decisions at Executive
Meeting in Victoria**

The executive meeting of the U. F. B. C. in Victoria last week brought out some most important matters. It was resolved that the scheme of a co-operative farmers' agency should be developed by the president and secretary. Further details of this and the whole meeting will be given next month. The agency is to work on a commission basis, be a joint stock company, one man one vote, and generally to follow the lines of the Grain Growers' Grain Co., being separate from the union as to capital, but having shareholders who must be members of the U. F. B. C.

The central board unanimously decided that the district representative system is the only system which brings the department into continuous contact with the farmer and will recommend its adoption by the provincial government.

The president was empowered to discuss the question of a white B. C. with the trades and labor councils and to express the willingness of the U. F. B. C. to cooperate with them along lines to be agreed upon.

A resolution from Trout Creek, Summerland, local union favored the amalgamation of all agricultural institutions with the U. F. B. C. and urged the central executive to bring this to the notice of all locals and then to approach the government for advice and assistance. This will be done.

Every local is to be urged to enlist as many women as possible and to decentralize into small groups.

M. C. G. Palmer, C.I.E., president, Messrs. J. W. Berry, Langley; P. H. Moore, Saanich; W. Paterson, Duncan, and Ruscombe Poole, central secretary, attended the meeting.

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their mill in which they are manufacturing all kinds of palis, tubs, buckets and kits.

The Pacific Box Company are the only firm in the West manufacturing anything in this line, and will be very glad to receive enquiries, which will be dealt with in their usual prompt and efficient manner.

Ottawa, June 12, 1917.

To the Editor B. C. Fruit and Farm Magazine, Vancouver, B. C.:

Sir,—The experiments which we have been making in the health of animals branch of the department of agriculture, with the object of finding a means of controlling contagious abortion in cattle, have resulted hitherto successfully, and I am permitted by the Minister, the Hon. Martin Burrell, to make them public.

Experiment I—Four heifers, aged 1 year, were inoculated with our protective vaccine January 26th, 1915. The test of the blood of these heifers showed that one of them was already infected with the bacillus of contagious abortion, and all four were living in a herd in which the disease was known to exist.

The four heifers were bred on the following dates: April 21, April 23, April 23 and December 18, 1915. They all calved, the dates being respectively January 26, January 26th, January 12 and September 11, 1916.

Experiment II—Ten yearling heifers were inoculated March 20, 1915, four of which reacted to the test for contagious abortion. They were bred after an interval of about three months. (Accurate dates cannot be given in this case, as the herd records were destroyed by fire.) All became pregnant; eight carried their calves to full term and produced living offspring; two aborted.

Experiment III—Four heifers, yearlings, were employed to test a method of employing a serum as well as a vaccine. With the first two, the serum and vaccine were used simultaneously, with the second two, the serum was given ten days' prior to the vaccine. When tested, the first two had reacted to the test; the second two did not react. The first two were bred December 16, 1915, and August 25, 1915, and both aborted; July 12, 1916, and April 16, 1916. The second two were bred December 23, 1915, and November 9, 1915, and produced living calves September 20, 1916, and August 5, 1916. This experiment was unsatisfactory, and gave conflicting results, but shows that the simultaneous method of giving serum and vaccine did not prevent infected heifers from aborting.

Experiment IV—In this experiment an effort was made to find out how far the vaccine treatment would prevent abortion in cows which had previously aborted.

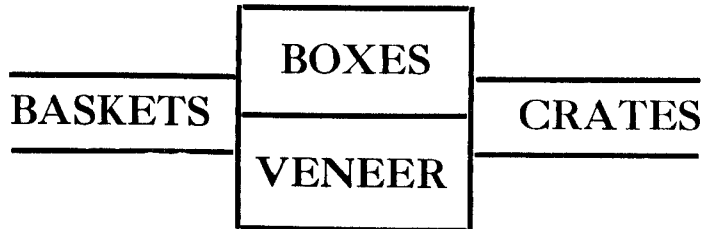
Eight cows were selected, ranging from two to seven years in age. All had previously aborted, one of them three times, the others once. All but one reacted to the test for contagious abortion. None were pregnant when inoculated nor bred afterwards until some weeks had elapsed. The result showed six cows produced living calves at full term; one cow proved to be barren and was slaughtered; and one cow reacted when the herd was tested with tuberculin and was slaughtered, having previously aborted.

The method used in this experiment was a double inoculation with a mild vaccine first, followed by a strong vaccine several days later.

Experiment V—Four cows, aged two to seven years, and four yearling heifers were used. The cows had all aborted previously, one of them twice, the others once. Three of them reacted to the test for contagious abortion. All were treated by the double method, and were bred after a suitable interval with the following result: One of the cows, the one that had aborted twice previously, aborted again. All the others produced living calves.

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(Opposite C. P. R. Depot) Vancouver, B. C.

These experiments have resulted in obtaining 27 living calves from 34 cows and heifers in badly infected herds. This encourages us to hope that we have a really useful method of producing immunity to the disease, and we are anxious to enlarge our experience by extending our work to other herds.

With this object, we now offer to treat, free of charge, a limited number of herds in which contagious abortion is present. Owners are requested to make application in writing to the Veterinary Director General, Ottawa, stating the number of breeding females in the herd.

Applications will be dealt with in the order of their receipt.

Yours sincerely,

F. TORRANCE,
Veterinary Director General.

Dear Sir:—I would like to warn the poultry keepers in your district, especially those with large flocks, to be on their guard against outbreaks of "blackhead" amongst their chicks. This disease has been taking considerable toll of the turkey flocks on the island this spring, and has in one or two cases been found amongst chicks of the ordinary fowls.

This is the worst of the diseases that accompany "chicken-sick" soil, and is almost impossible to eradicate once it gets into a flock of fowls. The cold, wet season we have experienced certainly tends to spread the disease.

Pigeons, however, especially if kept by those also keeping turkeys, will, if allowed liberty, carry the germs of this disease to

every ranch within flying distance. I would strongly urge poultry keepers to at once kill off any pigeons on the place, and not to allow strange pigeons near their flocks.

The organism of this disease thrives amain in filth, manure-covered brooder floors, yards and runs. It is particularly fatal to young chicks under eight or nine weeks, taking them off in hundreds if not checked.

I would advise the immediate liming of brooder yards and spading of same. As soon as vacated, the yards should be planted to rape, oats or rye. The litter of brooders should be burnt as soon as removed. The floors should be disinfected at least once weekly, and most important of all, as soon as chicks are old enough get them out on range virgin soil if at all possible. Flocks on range should not be too large; say, about seventy-five to each.

Those who intend building additional brooder rooms would do well to build them so that they can be moved about on skids. Danger of fowl-tainted soil will then be avoided to a great extent.

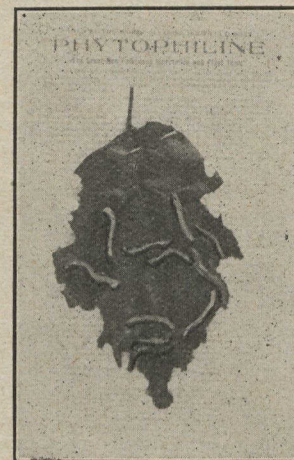
In conclusion, were I keeping fowls commercially, all persons coming on the ranch from any place whatsoever, where turkeys are kept, would have to disinfect their boots before entering the gate. A pan of disinfectant would be provided, and a notice put up concerning the matter. "Prevention is better than cure." In 1912 this disease almost ruined the Belgian peasants. Intensive methods, insufficient room, and a few infected turkeys were the main cause.

Two years ago I visited a ranch where nearly five hundred chicks died of this

disease in less than a week. Thorough disinfection, small colony houses and fresh soil checked the disease almost immediately. Yours, Etc.,

J. R. TERRY,
Chief Poultry Instructor.

Dept. of Agriculture, Victoria, June 12, 1917.



Apple Foliage, showing damage to leaf by tent caterpillar. The tree was cleared of the pests in five minutes by spraying with Phytophiline, all the caterpillars shown on the leaf being dead in that time. The newly-set fruit and the foliage were quite uninjured by this "deadly but safe" spray. June 11, 1917.



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Home Drying

Scarcity of Cans or Glass Jars Makes Drying Desirable—How to Dry Vegetables

Dry vegetables and fruit for winter use if tin cans and glass jars for canning are scarce or expensive.

This is the advice of specialists who recently have studied the possibilities of conserving food to meet war needs in spite of any difficulties that may be experienced in obtaining canning containers. Drying was a well-recognized and successful way of preserving certain foods before canning came into general use, the specialists point out, and modern methods make it still more practicable than formerly, either in the home or by community groups.

Methods of Drying

Three methods of drying have been found by the department specialists to give satisfactory results. These are sun drying, drying by artificial heat, and drying with air blasts, as before an electric fan. Trays for drying by any one of these methods, as well as tray frames for use over stoves or before fans, can be made satisfactorily at home. Frames and trays for use with artificial heat may be purchased complete if desired.

Home-made trays may be made of side and end boards three-fourths of an inch thick and 2 inches wide and bottom boards of lathing spaced one-fourth of an inch. If desired, quarter-inch galvanized wire mesh may be tacked to the side and end boards to form the bottoms of the trays. Frames for use before fans may be made of wood of convenient size. Frames for use with artificial heat should be made of nonflammable material to as great an extent

as possible. As many as six trays may be placed one above the other when artificial heat is used. In drying before a fan the number of trays that may be placed one above the other will depend, to a large extent, upon the diameter of the fan. In drying in the sun, trays as described may be used or the products to be dried may be spread on sheets of paper or muslin held in place by weights.

Preparing Products for Drying.

Vegetables and fruits will dry better if sliced. They should be cut into slices one-eighth to one-fourth of an inch thick; if thicker, they may not dry thoroughly. While drying, the products should be turned or stirred from time to time. Dried products should be packed temporarily for 3 or 4 days and poured each day from one box to another to bring about thorough mixing and so that the whole mass will have a uniform degree of moisture. If during this "conditioning" any pieces of the products are found to be too moist, they should be returned to the trays and dried further. When in condition the products may be packed permanently in tight paper bags, insect-proof paper boxes or cartons or glass or tin containers.

Recipes.

Spinach and Parsley—Spinach that is in prime condition for greens should be prepared by careful washing and removing the leaves from the roots. Spread the leaves on trays to dry thoroughly. They will dry much more promptly if sliced or chopped.

BEETS—Select young, quickly grown tender beets, which should be washed, peeled, sliced about an eighth of an inch thick, and dried.

Turnips should be treated in the same way as beets.

Carrots should be well grown, but varieties having a large woody core should be avoided. Wash, peel and slice crosswise into pieces about an eighth of an inch thick.

Parsnips should be treated in the same way as carrots.

Onions—Remove the outside papery covering, cut off tops and roots; slice into one-eighth inch pieces and dry.

Cabbage—Select well-developed heads of cabbage and remove all loose outside leaves. Split the cabbage, remove the hard, woody core and slice the remainder of the head with a kraut cutter or other hand slicing machine.

Beet Tops—Tops of young beets in suitable condition for greens should be selected and washed carefully. Both the leaf stalk and blade should be cut into sections about one-fourth inch long and spread on screens and dried.

Swiss Chard and Celery should be prepared in the same way as beet tops.

Rhubarb—Choose young and succulent growth. Prepare as for stewing by skinning the stalks and cutting into pieces about one-fourth inch to one-half inch in length and dry on trays.

All these products should be "conditioned" as described.

Raspberries—Sort out imperfect berries, spread select berries on trays, and dry. Do not dry so long that they become hard enough to rattle. The drying should be stopped as soon as the berries fail to stain the hand when pressed. Pack and "condition."

The Allies Food Mobilization Camp

August 20th to 25th

THE VANCOUVER EXHIBITION is using every effort to stimulate greater production. It is offering more money in prizes than ever before. Those of us who cannot go to the trenches can assist materially in encouraging others and ourselves to better production. Show what you are doing and learn what others have done. Make your entries early.

Transportation rates are low on stock and produce—also passengers.

Federal Government Exhibits in Agriculture. — Big Educational Displays.

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H. S. ROLSTON, Manager.

FARM AUTOMOBILE IS NOT A PLAYTHING

It Speeds Up the Work and It Cuts Down Time and Distance in Emergency When Help Is Distant

Used rightly the automobile is a fine thing on the farm. It cannot be used for the same purpose as a Clydesdale horse, a milch cow or a fat pig, and it will not bring in a revenue in just the same way, but it has, however, a place to fill, and if used with the same judgment that one would expect to exercise with the other farm equipment in order to secure a reasonable income it will fill that place just as well as any one of the others.

No doubt many people have the idea that the auto on the farm serves no purpose other than a plaything. This is not the correct view of the modern car. It bears about the same relation to the general farm management and operation that the telephone bears to the home, and who for a moment would think of doing away with that great convenience? Certainly not the one who has been in touch with it and who knows and can appreciate its many phases of usefulness. So is it with the car. It is the quick-message work or the speed-up job where the auto comes in to do its part in the farm economy.

There are always more or less light jobs to do which, in order to accomplish successfully or to work out at a profit must be done quickly. For instance, a five-mile trip must suddenly be undertaken. The teams are away or at work and would be too slow anyway. What can be done? No way to go. But wait. What about the auto? And almost before you could think about hitching up a horse the car is half way toward the end of the journey. The auto has saved the situation.

Again, the binder breaks down on a busy day—no repairers less than ten miles away; no more work for half a day. But, hold on, the auto! The auto! The horses are tied to the fence; a speed-up trip is made to the agent, and the binder is again running at full speed within an hour. Ah, wonderful! Who says the car is only a plaything? These are not overdrawn illustrations, but pictures true to life which are liable to appear almost at any day year in and year out.

The car may have its daily application, too, as well as its accident. Not long since a certain agricultural journal carried for weeks, perhaps months or years, on its illustrated cover the photograph of a young man just starting out with his car to deliver the regular supply of cream for the city trade to the railroad depot, which was accomplished in so short a time that he was scarcely missed from the farm.

It is surprising what a lot of uses a car can be put to on the farm. By having a cushioned platform to lay over the back seat and two legs to carry it out level to the rear of the front seat, and with a canvas to cover over all, many articles of various kinds can be carried, both abroad and below this, without damage to the car, but which will help on with the farm work in many directions.

There are many uses to which the car can be put that will save time on the farm and at the same time be a source of pleasure to someone of the family. For instance,

mother needs to go to town on business. Ella can drive the car just as well as Bert, and so away they go with heads up, bright eyes and rosy cheeks, back in time to have dinner waiting for the men. No teams stopped from work and no delicate women around this automobile home.

JUST WHAT THE FARMER AND FRUITGROWER NEEDS

An object of great convenience and profit to the farmer and fruitgrower is the "Republic" Truck, which can be had in five different sizes, ranging from 3-4 to 3 1-2 ton.

The fruitgrower who has to ship his crates to the market or railway stations will find that where an ordinary automobile will carry a dozen or two crates of fruit, he can with a Republic Truck carry a couple of hundred, and by arranging with his less-fortunate neighbors who have not got an automobile, he can add handsomely to his income by making arrangements with them to handle their fruit as well as his own, and thus save both time and money. The model No. 10, 1-ton with bow top and stake or express body, will allow him to do this.

The Begg Motor Company, Limited, of 1062 Georgia Street, Vancouver, who also have agencies in Victoria and New Westminster, have shipped in a number of these Republic Trucks, and those farmers interested can see a demonstration of same either in Vancouver, New Westminster or Victoria, by appointment.

TO THE

FRUIT GROWER

AND

FRUIT PACKER

WHY NOT HAVE A

Specially Designed

Highly Colored Label

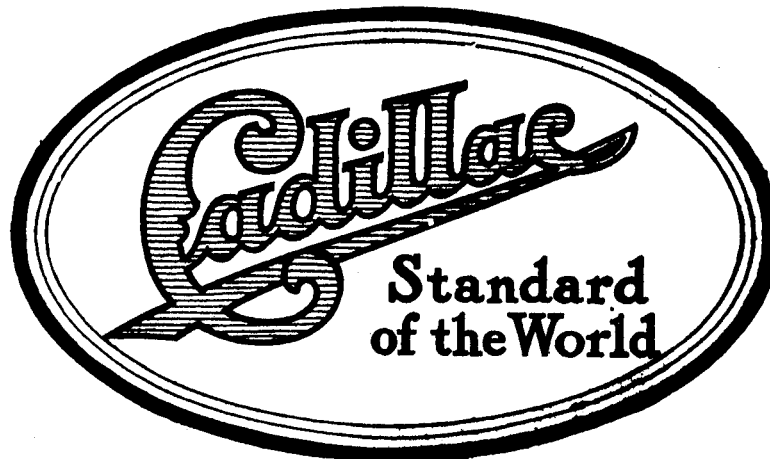
and familiarize your own brand of goods?

The cost is little compared to the advantage such an outlay gives. If on box, your brand is advertising itself from the time your goods leave your packing house until reaching the consumer, if on can it enables the wholesaler and retailer to make such a display of your goods as to command attention.

We make these kinds of labels.

B.C. PRINTING & LITHO.
LIMITED

Smythe and Homer Streets
VANCOUVER, B. C.



British Columbia Distributors

CADILLAC
HUDSON
CHALMERS
DODGE Bros.
CHEVROLET

REPUBLICAN TRUCKS
3-4 ton
1 ton
1 1-2 ton
2 ton
3 1-2 ton

Descriptive catalogues, prices and further information on application.

Begg Motor Company Limited

Vancouver

Victoria

New Westminster

Growing and Marketing Cherries

By JAMES JOHNSTONE, Nelson, B.C.
(Canadian Horticulturist)

The first essential to the successful growing of cherries is a suitable location. Such a location may be situated only half a mile from a bad location. I have seen cherries growing with more or less success all over this continent, and I have grown them successfully as far south as West Virginia, but so far as my experience goes they can be grown to the greatest perfection in certain inland valleys, west of the summit of the Rocky Mountains.

My present orchard, situated on the rocky steep slope of Kootenay Lake, opposite Nelson, seems to be a peculiarly favorable situation. It commenced bearing sixteen years ago, and I have never had a bad season or any crop which could not be called a bumper one.

In the British Columbia valleys, in order to secure such uniform results, it is essential that the orchard be situated on a slope of not less than one foot fall in ten feet (the steeper the slope the better), sloping towards a river or lake which either does not freeze over or which never has ice on it three weeks after spring weather begins. The reason for the necessity of such a location is to avoid all injury from late spring frosts.

The cherry being one of the earliest fruit trees to bloom it is naturally subject to frost injury if not situated where it has perfect air drainage. Such air drainage is best secured on a mountain side sloping directly into a deep lake, where the temperature of the water during spring frosts is many degrees above freezing. In this place one will find a downward current of air, perhaps many degrees below freezing near the ground, while an up-hill current of warm air from the lake is moving through the branches of the trees to take the place of the descending cold air.

When I purchased my present orchard it was in an abandoned condition. At first I was ever on the outlook for some cause for such abandonment and neglect. One morning I thought I had discovered it when I found that the water pipes on the surface of the orchard had burst, and that the ground was frozen so hard that a pick driven down only made a white mark about the size of a quarter. At this time my late cherries were still in bloom and the early ones were the size of garden peas. I certainly thought that after three years research I had discovered the cause of my having purchased a cheap ranch. To my astonishment, however, the trees were not injured in the slightest, and my crop was larger than ever, having the usual annual increase.

The following spring I discovered from a string of thermometers, that while the ground level registered a killing frost, a point four and a half or five feet up was just at the freezing point and above that the temperature was above freezing. I then

tested the air currents by lighting a fire when it blazed up the smoke went up hill, but when I nudged it down with damp leaves the smoke went down to the lake and lay on the surface of the water.

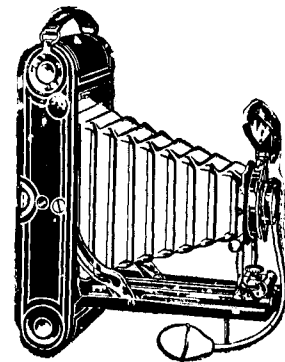
Having fixed upon a good location containing a rich sandy clay loam, the next thing is preparing the soil. If the ground has been covered with native timber the first year should be devoted to a root crop, such as potatoes, or it may be sown down in Mammoth red clover after being well fertilized with barnyard manure and about two tons of crushed lime rock spread to the acre. The clover should be well ploughed under during the late summer or early fall.

The next year it should be planted to potatoes, which can be harvested early and the trees planted say, thirty or thirty-five feet apart and well cultivated and manured. For four or five years any kind of a root crop or small fruits may be grown between the rows. After the fifth year the cultivation should give place to clover and orchard grasses sown down in permanent pasture and cropped by a flock of sheep. If not cropped by sheep a top dressing of stable manure must be applied every winter or early spring, for one must put back nourishment into the soil in proportion to what is taken out.

Cherry trees as a rule should be planted in the fall unless one is situated close to a good nursery. They bud out early in the season and often receive great injury in transportation from nursery to orchard. In the end, no time is lost in cultivating the wild land for at least two years before planting.

The only sure way to have the varieties in your orchard that you want is to purchase seedlings and graft from scions from know trees of fine quality and heavy bearing. Plant the seedlings in well manured and cultivated nursery rows the first year, graft the next spring and transplant fresh from nursery rows to orchard next fall or early the following spring. You will be sure of having the varieties you desire, and will not have the aggravation of cultivating trees for six or seven years and then discovering they are of an objectionable variety.

Pruning the cherry tree should be confined entirely to removing crossed or unnecessary branches, which would cause the foliage to grow too thick. Pruning back as in the case of apple and pear trees will cause gummosis, which often proves fatal. Little or no pruning should be done in the spring or winter months. Pinching back with the forefinger and thumb may be done any time during the growing season, but the best time to do any heavy pruning necessary is during the ripe fruit season or within a month afterwards. This proper season was discovered by an old stout



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People living out-of-town can have their wants supplied with dispatch and intelligent care.

We carry a complete stock of all the KODAK GOODS.

KODAKS,
FILMS,
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Also a full line of Artists' Supplies.

WRITE US.

"THE KODAK HOUSE"

BISHOP & CHRISTIE

421 GRANVILLE STREET

Vancouver, B. C.

friend of mine, who, while reaching for a bunch of fine cherries near the top of one of his high trees, slipped and pruned all the branches off one side of his tree. At any other season such pruning would have likely caused the death of the tree from gummosis, but the tree and my friend healed up about the same time. The tree was lop-sided for many years, but my friend was ahead of the game, as he discovered when it was safe to prune his cherry trees.

When one considers the comparative conditions between the cherry and, say, the apple, this conclusion as to time of pruning is only according to reason. The cherry being the first to flower and fruit, it has a strong flow of sap immediately spring sets in. If branches have been removed by winter or spring pruning this surplus sap must find an outlet, and it does so in the form of gum or gummosis. At the end of the fruit season the sap flow is over and no harm is caused by pruning.

While the tree is young all lower branches should be kept pinched off short, but all leaves on the trunk should be left on to

Manufacturers of
Pails, Kits, Tubs
and Buckets.

PACIFIC BOX

COMPANY LIMITED

Phones S. 8890-8891. North End Cambie St. Bridge

VANCOUVER, B. C.

Berry Baskets
and Crates.
All Kinds of Fruit
Boxes.

attract the sap and thicken the trunk of the tree. Such pruning must be done with the object of having the lower side branches start not less than four feet from the ground, so as to prevent the loss of wool by the sheep rubbing. Pigs are objectionable in a cherry orchard after they have consumed the waste cherries and cherry stones, because they often grub up the roots, which in the cherry tree causes the formation of suckers.

The successful marketing of the cherry crop is assured only by care and an honest pack, giving the best possible value to the consumer. Many growers handle cherries as if they were potatoes. Such people are always in hard luck—they only get what they deserve. Cherries must be handled more like eggs. They will not show bruises for the first few days, but they are there all the same, if roughly handled, and will show up about the time they reach the retailer.

Cherries should be clipped by a picker of the nature of one known as "The Successful Cherry Picker." The bottoms of all picking cups, picking pails and orchard boxes should be padded with soft paper or cotton batting to minimize the chance of bruising. The chief business of the owner of an orchard employing new hands at the picking season should be to "watch, wait and listen"; in his case to listen to hear the slightest sound of cherries rolling on wood or hitting the sides and bottoms of pails. When a picker has to be warned more than three times to be more careful he or she had better be told to retire from the business until the potato season begins.

In my experience cherries for retail use travel best in a well ventilated car. If taken from an iced car and placed in a retailer's window or store they sweat and soon rot. If they could be kept cool and under ice, such as in our largest hotels, until sold, then iced cars might prove more successful than in the past.

The carton pack is the best as a rule, but with the present price of paper and labor I do not consider it pays expenses. If for short distance shipments, say one or two hundred miles, the 16-pound crate containing four four-pound baskets each, will work satisfactorily. For shipment to points 500 to 1000 miles distant and over, the containers should contain not over one pound, or four-fifths of a quart—twenty-four to the crate.

In order to secure best final results all growers in cherry districts must co-operate and send out a standard pack by which the district shall become noted for its pack and quality. No real success can ever be achieved by everyone for himself and bankruptcy take the hindermost.

MR. FRUIT SHIPPER:

Do you know that SWARTZ BROTHERS, 155 Water Street, Vancouver, B.C., sell more fruit for the British Columbia 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 thirty-six hours after goods are sold.

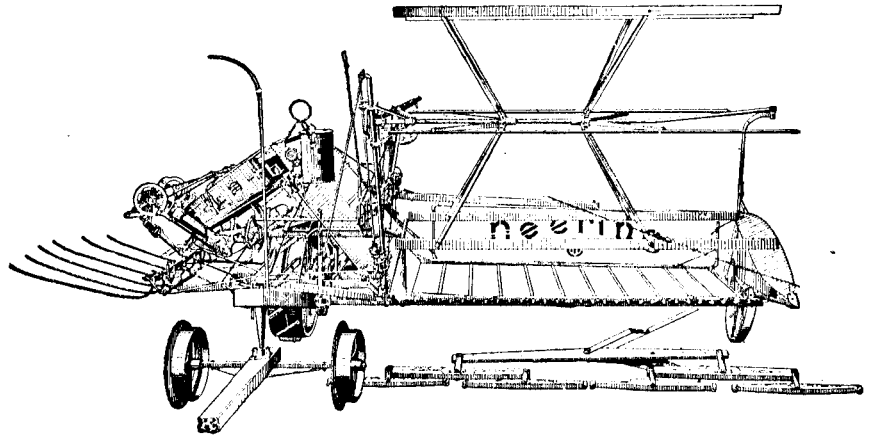
Give us a trial with your next shipment of fruit and be convinced.

15 Per Cent Charged on All Goods.

Write for particulars.

SWARTZ BROS.

McCORMICK and DEERING BINDERS WILL GIVE YOU SATISFACTION



Will be pleased to have your order for Binders and Twine.

MARK DUMOND

1048 Main Street, Vancouver, B. C.

Also at Ashcroft, B. C.

The Vernon Fruit Co., Ltd.

1908.

1917.

The old reliable company that has always
made good.

Remember

We are a British Columbia
Company

The only company in the west
handling only British Columbia
Fruits and Products

Head Distributing Office:

CALGARY, ALBERTA

Professional Sheep Breeder

with 14 years practical experience in South America, desires communications re. engagement of services or knowledge. Apply

J. W. EDMOND,

1150 Commercial Drive, Vancouver.

For Sale—3 pedigreed Holstein bulls

All from heavy milk-producing stock. Ages, 3 years, 15 months and 4 months, respectively. Address.

D. W. STRACHAN,
Tranquille, Kamloops, B. C.

The teacher was telling her class about the seasons.

"Now, one of you boys tell me which is the proper time to gather fruit."

Johnnie replied instantly, "When the dog's chained up, teacher." Youth's Companion.

**BRITISH COLUMBIA
FRUIT and FARM
MAGAZINE**

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

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

Copy for advertisements must be in hand by
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All letters and communications should be
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FRUIT AND FARM CO., LTD.
615 Yorkshire Bldg. Vancouver, B. C.
Seymour 2018

Vol. X. JULY No. 7

EDITORIAL

**Mr. R. M. Winslow, Chief Provincial
Inspector of Fruits, Resigns to Ac-
cept Management of the Mutual
Brokers, Limited, of Van-
couver.**

Mr. R. M. Winslow, Provincial Horticulturist since 1909, has resigned to accept the management of the Mutual Brokers Limited of Vancouver, the leading fruit-buying concern in this province, and will assume his new duties on July 7.

The Fruit Growers of the province, while congratulating Mr. Winslow and feeling that he has won his promotion in a competitive field by his zealous and efficient work under the Department of Agriculture and his secretaryship of the B. C. Fruit Growers' Association, will regret to see so able an official leave the department.

A graduate of Guelph College of Agriculture, he has played an important part in the development of the fruit industry of the province. Since 1910 he has been secretary of the British Columbia Fruit Growers' Association and for the past year chief inspector of fruits in British Columbia.

Fruit & Farm congratulates Mr. Winslow and wishes him every success in his new appointment.

B. C. Apples Will Be in Demand This Year.

Notwithstanding the British embargo on apples, and the fears of our apple growers of its detrimental effect on the marketing of their crops this season, indications now point to a ready demand for our fruit since the American competition on the Prairies will not be nearly so keen as was anticipated.

Recent reports show a marked decrease in the estimated American apple crop, which government experts now place at half of last year's yield. This is particularly noticeable in Washington State, where the crop is said to fall short of that of last year by a million boxes. Then there is the very large falling-off of the anticipated apple crop in Ontario.

Vancouver dealers will probably give preference to Okanagan as well as fruit from other British Columbia points.

High prices will probably prevail during the fall for field crops.

**SPECIAL SUMMER SALE
ON PURE SILK GREPE DE CHINE**

- White
- Apricot
- Pink
- Mauve
- Gold
- Nile
- Cerise
- Copenhagen
- Emerald
- Old Rose
- Champagne
- Saxe
- Reseda
- Coral
- Grey
- Burgundy
- Navy
- Purple
- Russian Green
- Brown
- Mauve
- Black.

PURE CREPE DE CHINE in any color you want at 25c a yard less than you would pay over the counter for it.

This silk is beautifully soft, makes up well into dresses and blouses and we guarantee it to wash.

We sell hundreds of yards of this silk through the store at \$1.50 per yard.

For one month from the date of issue we will send it anywhere by post at, per yard \$1.25

SAMPLES SENT FREE.

PHOENIX SILK HOSE, \$1.15
The finest, longest wearing silk hose made. Come in any shade you desire.
They cost at least \$1.25 everywhere. Our price... \$1.15

SABA BROS, LTD.

Silk Specialists, 652 Granville Street. Vancouver, B. C.

Vancouver 1917 Exhibition.

After much consideration the directors of the Vancouver Exhibition decided that the exhibition be held this year, 20th to 25th August.

An agricultural exhibition is worthy of the support of every fruit grower and farmer, since it affords them a place and time at which they may gather together from all parts of the province to compete with each other in the production of prize stock and crops.

This year the patriotic call from our government is for greater production, but let it be also production of the very best, thereby gaining for the province the reputation of quality of production as well as quantity.

Nothing conduces to good agriculture more than for farmers and fruit growers to vie with each other in agricultural shows. It is educational, for one there sees wherein he has failed, and can learn how he can remedy some small fault in his methods, and thereby place himself on a more equitable basis with his competitor.

The manager of the exhibition has informed us that he is using every effort to make the Agricultural Section bigger and better than ever this year, and with this in view is offering more money in prizes than ever before.

The Agricultural Show affords the farmer a good opportunity of advertising, for he comes in contact with large buyers, who always like to buy prize stock and produce.

We can surely afford to support one large exhibition this year.

Stump Pullers for Farmers.

Much satisfaction will be expressed by the farmers of the province at the decision of Hon. John Oliver, Minister of Agriculture, to authorize the purchase of a limited number of stump pullers to be supplied to Farmers' Institutes on a deferred payment system.

Many farms in British Columbia, though in the main part cleared, have what could be made good land still inhabited by stumps; but now that stump pullers can be had through the Farmers' Institutes on such easy terms, we look to many more acres being placed under cultivation.

The man making a start on the land will, with the advent of cheap powder and pullers, have his clearing expenses minimized.

Heretofore in British Columbia the farmer was up against an expensive proposition in clearing his land; now not alone can he clear what he already has, but will be induced to take more acreage into his holding.

**Government Expects to Negotiate
Loan in Next Two Weeks—Two
Millions for Agricultural
Credits in B. C.**

Announcement has been made by the government that within the next two weeks

REAL PANAMA HATS

FOR MEN AND WOMEN

YOU will make no mistake in buying your Panama here as we carry nothing but the genuine native made South American hat.

The market is well supplied with Panamas from various sources, but there is no satisfactory substitute for these hand-woven hats. We import them direct in the raw and block and trim them in Vancouver.

We are showing some of the most fashionable shapes in Ladies' from \$8.50 to \$20.00. In Men's shapes the prices run from \$5.00 to \$100.00 each.

Mail orders solicited.

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

it is expected to put through the flotation of its proposed two million loan for Agricultural Credits under the new farm settlements board.

Premier Brewster states that if a flotation is made as expected, it will be by way of a short loan or treasury notes.

In the event of a loan being floated the money would probably be ready for the use of the farm settlements board by midsummer or early fall.

NATION-WIDE ADVERTISING FOR "NATIONAL SERVICE"

A Practical 'Win-the-War' Campaign of Publicity with a Message for Every Canadian

OTTAWA, June 25.—Never has the power of national publicity been so convincingly demonstrated as in the great British advertising campaigns; first for recruits, then for supplementary supplies and equipment, and later for thrift and the purchase of War Savings Certificates.

Along the latter lines, and the allied one of production, the National Service Board of Canada announce the beginning of a series of advertisements which should have the earnest consideration of every loyal citizen of the Dominion. To produce more—to waste less, particularly of food—to eliminate extravagance of every kind—to save intelligently and systematically, and to lend the savings to the nation through the purchase of War Savings Certificates—these are the keynotes of these calls to service. There is nothing academic about them, nothing overdrawn or melodramatic. They are plain, straightforward, intensely practical, and in deadly earnest, explaining why, and particularly how, everyone should help instead of perhaps unconsciously hindering.

The need for such a rousing campaign is only too evident, particularly to men who have recently been overseas and had an opportunity to compare the willing service and sacrifice so general in Great Britain and France with the detached, almost apathetic attitude of so many Canadians. Though the war has been going on almost three years, and though our gallant Overseas contingents have won undying fame for Canada, most of us here at home have hardly yet waked up to the real nature of the struggle in which we are engaged, and the necessity that we too "do our bit" in whatever way lies open to us.

It is just this detached attitude which has prevented Canada's whole weight being felt behind our divisions in France. From it the National Service Board hopes to arouse the nation, using straight-from-the-shoulder advertising as a potent means to the desired end.

NOTES

A million eggs a day is the amount usually consumed by Great Britain in normal times, although the consumption at the present time has been greatly diminished as many of the sources of supply have been cut off on account of the war.

At the present time Canada needs every egg that it is possible for the hens to lay and it is important that these eggs should be of the best and that they should be infertile, so that they will keep well during the hot weather.

The breeding season for poultry is over and it is important that all poultry keepers should dispose of or isolate the breeding males. Some people think that the hens will not lay so well if there is no male bird present, but this is not the case as in most cases the presence of male fowls

tends to decrease, not increase, the egg yield.

It was estimated that last year over \$8,000,000 were lost in Canada through fertile eggs being marketed. A temperature of a little over 70 degrees will start incubation and this temperature is often considerably exceeded in the grocery store windows. In nine cases out of ten when fertile eggs are exposed to this heat, incubation will start.

This loss can be eliminated by removing the male bird. Infertile eggs may become strong and musty when exposed to unpleasant odors, but they can never get into the condition in which fertile eggs are often found to be when broken by the consumer.

Another reason why the male birds should be dispensed with at the breeding season is the expense of keeping them. If marketed at the present time they will probably bring in a few cents a pound more than they will in the fall, and in addition the fifty or sixty cents worth of food necessary to keep them in good condition until that time will be saved.

During the hot weather the eggs should be collected at least twice daily and should be stored in a sweet, cool place. Clean, good-sized eggs should be marketed as often as possible, and the containers should be in first-class condition. Small and dirty eggs should be used by the poultry breeders themselves and should not be placed on the market.



Back Up The Boys Who Are Fighting For You!

Work and save as earnestly and wholeheartedly as they are fighting in France!

Work at something that helps directly toward winning the war! Save, and lend your savings to the nation, to finance the struggle and furnish everything needed to the men in the firing line.

For every \$21.50 you lend the nation now, you will get back \$25 at the end of three years—an interest return of over 5%. Certificates are issued in denominations of \$25, \$50 and \$100 and may be purchased at \$21.50, \$43 and \$86 respectively, at any Bank or Money Order Post Office.

"Save for the men who are saving Canada."

The National Service Board of Canada.

R. B. BENNETT,
Director General.

C. W. PETERSON,
Secretary.

Beekeeping in British Columbia

By Williams Hugh

VANCOUVER EXHIBITION

Beekeepers' Day, Friday, August 24th.

All Beekeepers, whether members of the Beekeepers' Association of B. C. or not are invited to co-operate with the directors in making the forthcoming exhibit of the products of the apiary at the Vancouver Exhibition, August 20 to 25, better and bigger than last years display.

A special effort is to be made to boost B. C. honey. Honey will be sold at the stand from Monday morning, August 20, until Saturday night, August 25. W. H. Turnbull, vice-president, will be in charge.

Beekeepers are asked to write for particulars. A small commission will be charged for selling. This will be handed over to the credit of the association, and used for the purpose of spreading information in bee culture.

The directors of the Vancouver Exhibition Association and Manager Rolston have been very generous to the beekeeper. They have laid out an experimental apiary at Hastings Park, and our association has stocked it with all kinds of bee appliances. There are a variety of nectar producing plants in the vicinity that will enable the apiarist to show what can be done and how to do it.

During Exhibition week there will be something doing every day at the apiary, and on Friday, August 24, at 2 p. m., we are to have a meeting of all interested in agriculture. Difficulties of beekeeping in B. C. will be discussed, and questions answered. It is to be a regular round table conference. Beekeepers, this is your meeting, and if you are a member of our association, present your card of membership at the main entrance, Friday, August 24, and Manager Rolston states you will be admitted free. John Brooks and Williams Hugh have charge of this meeting. The department of agriculture of the Provincial government have made a grant of \$250 to the Beekeepers' Association of B. C. This will be expended by our directors in the interests of the whole beekeeping community of B. C. It is proposed to purchase hydrometers for testing the sugar content of honey, for the use of judges at fairs.

A portable demonstration tent is to be built, both of the foregoing can be had by agricultural societies free, by paying freight charges.

A library of books dealing with Apiculture is to be started, for the use of members.

A full equipment of appliances is to be placed in the experimental apiary at Hastings Park.

Surrey Agricultural Society will be given a demonstration Wednesday, October 3, and special prizes are offered for honey exhibits.

The directors are anxious to make the best use of the grant, and urge every beekeeper, whether they have one colony or fifty, to do something, however small or large, towards making the honey exhibit a success.

Prize lists and entry forms can be obtained from Manager Rolston, 214 Loo Building, Hastings Street West, Vancouver.

Statistical Reform

On March 26, 1914, an informal conference between representatives of the Dominion and Provincial governments at Ottawa resolved unanimously in favor of annual

statistics of crops and live stock. Forms were recently sent out, but the authorities evidently did not think bees were of sufficient importance to be placed on the list. The attention of the statistical office at Ottawa was drawn to the omission, and the Dominion statistician writes me:

"Dear Sir,—I am in receipt of your letter of June 2, and note your suggestion as to the collection of returns of hives of bees. When we are preparing the forms for next year, in collaboration with the provinces, we will be glad to take up this matter. Signed. R. H. COATS."

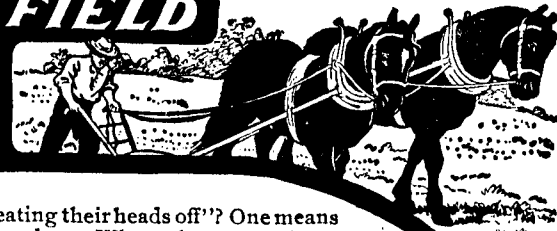
Outside of the information obtained when the census is taken, every ten years, there is very little data in regard to the number and value of hives of bees throughout Can-

ada. The same applies to customs entry of bees, honey and wax, into the several provinces from foreign countries.

CORRESPONDENCE

E. J. B., Penticton, B. C.—"Can you give me any information on marketing honey? What kind of containers are best and size? Have you had any experience with paper containers, such as I understand are on the market this year? Have you any idea what the market price is likely to be?" Consideration has been given by the directors to all the foregoing questions. It is proposed, where members cannot sell their produce locally to have one of our members sell it, either to the retailer direct or the consumer, in one of the coast cities. A special effort is to be made at the Vancouver Exhibition to place before the purchasing public, pure B. C. honey, and advertise the fact in Vancouver papers several weeks before the Fair, asking for the public support. Full particulars will be sent you.

**IN THE FIELD
MAKING
MONEY—**



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

KENDALL'S SPAVIN CURE

Mr. David Yerex, Sonya, Ont., writes—"I have used your Spavin Cure for fifteen years, and know it to be a good cure". Be ready for emergencies, keep a bottle of Kendall's in the barn. Then, if a horse goes lame, you have the remedy on hand to cure the trouble quickly. \$1. a bottle—6 for \$5. at druggists. Ask your dealer for free copy of book—"Treatise On The Horse"—or write us direct.

Dr. B. J. KENDALL CO., . . . ENOSBURG FALLS, VERMONT, U.S.A. 110

BEEKEEPERS'

SEND FOR
Our Price List of
BEEKEEPERS' SUPPLIES

Wm. RENNIE CO., LIMITED

872 GRANVILLE STREET

Vancouver

Also at Winnipeg, Toronto and Montreal.

SUPPLIES

Twelve-ounce glass containers is a popular size, and for family use the five-pound tin container, sold by the American Can Company of Vancouver, is a saleable quantity. I am afraid there will be some difficulty in procuring the glass container. I understand two of our directors—Brooks and Smith—are doing their best to supply this want. If successful, full particulars will be sent to all members. We have written to Ottawa in regard to paper containers. These appear to be used for granulated honey.

There will be considerable advance in the price of honey this year. Morley Pettit of Ontario states: "The great shortage of foods and scarcity of honey at the present time leads us to believe that the 1917 crop will command a good price. Buyers are already out contracting for the season's crop at advanced prices. Never before has the market outlook been brighter." The same view is taken in the States by the leading dealers, even the low-grade honey from South America, usually sold at four cents per pound, was recently sold at twelve cents per pound in New York.

W. H. Abbotsford—1. What would be the best kind of honey shrubs or trees to plant for bees. 2. Are there any ornamental trees that bees could get lots of honey from? 3. Is there any plant with more honey in than white clover?

I will send you a list of nectar-producing shrubs. There are several trees you could plant, such as maple and basswood, the former growing in abundance in your neighborhood. They are splendid for nectar, and especially for pollen. Basswood or Linden flowers after maple, usually after clover honey flow. There are several kinds of clover—sweet, white, alsike, crimson, bush and Alfileria. It is difficult to answer your question as locality and climate have so much influence upon all nectar-producing plants. You might try a small quantity of white or alsike, and watch the effect on your bees when the clover is in bloom, usually the second year.

Manitoba Beekeepers' Score Card.

Manitoba Beekeepers' Association has issued a neat and concise booklet covering its work. There are several field meets to be held during the summer. The annual honey fair will take place at the Manitoba Agricultural College during farmers' week. Brandon Exhibition will give \$150 in prizes for honey, and the association will give a cup. Beekeepers are asked to boost Manitoba honey, and in connection with the work there is a library of bee literature for members' use. The constitution is similar to our own, and for the guidance of judges at Pairs there is a very good score card.

Score Card for Judging Extracted Honey.

Flavor	50	Points
Body	20	Points
Color	20	Points
Package or glass	10	Points

Total 100 Points

Score Card—Comb Honey

Completeness of filling sections.	30	Points
Flavor and Color	25	Points
Freedom from travel stains or propolis	15	Points
Straightness of comb	10	Points
Uniformity	10	Points
Neatness of section (wood) and of case	10	Points

Total 100 Points

There are over 90 members in the association and the secretary-treasurer, R. M. Muckle, of the department of agriculture,

Winnipeg, Man., will be glad to enroll Manitoba Beekeepers as members. The subscription is \$1 per annum.

Bees in Northern B. C.

Colonies of bees have been sent into the Bulkley Valley district, evidently as an experiment. There need be no fear as to the success of the venture. Bees do well in a climate and district similar to northern B. C. New Ontario is a good country for bees. Large crops of honey are gathered every season, even when districts hundreds of miles south have little or no returns. Wintering is the main problem. Some bee men winter their colonies outdoors, and do well, while others prefer to winter in the cellar, or a root house. Settlers along the line of the G. T. P. should invest in a colony. They will find they will have a better chance of an immediate return than many who are located on the Lower Mainland.

Experimental Apiary.

The apiary established at Hastings Park, Vancouver, opened the summer session. Saturday, the 9th inst., at 2 p.m., Mr. W. H. Lewis gave a demonstration which was appreciated by the 46 persons who attended. It was certainly a revelation to those who had been used to seeing bees handled with gloves; but, after all, weather conditions have a great deal to do with the docility of bees, and unless the weather is ideal, it does not pay to handle bees without a veil. After the demonstration a talk was given on the "Life History of the Worker." A full equipment of supplies is on hand for the purposes of instruction, and every person interested is welcome to the meetings. Messrs. Rennie & Co., Brand & Co. and Ritchie & Co. have donated hives. At present the Exhibition Grounds are in the hands of the military authorities, but the apiary south of the main entrance is accessible to the general public. Weather permitting, meetings will be held every Saturday at 2 p. m., and should there be sufficient willing to attend Wednesdays, the directors will arrange for one of their number to be present. The Hon. John Oliver, being unable to attend the opening, wished the experiment every success.

BEE-KEEPING.

Preparing for 1918.

(Experimental Farms Note.)

While a maximum production of honey is of pressing importance in this war-food year, yet increasing the bees for next season must not be neglected.

Roughly speaking, the bees that are in the hives at the commencement of the honey-flow gather the crop, while the brood builds up the colony for next year, unless there is to be another important honey flow. This brood is very valuable for forming nuclei, because these, started early with a laying queen, or ripe queen-cell, will build up into strong colonies before winter. Increasing in this way with brood from strong colonies during the honey flow is the basic principle upon which an apiary can be quickly built up, while at the same time an almost full honey-crop is secured.

In newly-formed nuclei containing brood in all stages there is always more or less desertion of bees and consequent death of the young brood, and sometimes chilling and death of the older brood, even when the nuclei are skillfully made by an experienced apiarist. Further, queens may not be immediately obtainable, or they may be lost in introduction. Robbing of the newly-



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 Langstroths on the Honey Bee, for \$1.50
 American Bee Journal \$1.10 and Gleanings in Bee Culture, per year \$1.30

BEVAN HUGH

Cloverdale, B. C.

Member of Bee-Keepers' Association of B. C.

formed nuclei has also to be guarded against, but during the height of the honey-flow only carelessness will cause this; towards its end, however, the danger of robbing grows so great that it is difficult to maintain newly formed nuclei even when strong. Desertion may be checked by stop-

ping the entrance with grass. The bees will make their way out when the grass dries and shrinks in about two days, but care must be taken to avoid overcrowding the confined bees, which would lead to stifling, especially in hot weather. A good way to overcome the loss of young brood is to place the brood over a queen excluder a week before its removal from the parent hive. This may be done in the ordinary course of relieving congestion in the brood chamber as a means to discourage swarming, a frame or two of empty comb or of foundation being placed in the brood chamber when the brood is raised.

All of these risks may be greatly minimized as follows: Have all the queens' wings clipped (this is not essential), and when a colony of a strain that it is desired to propagate swarms, move the parent hive to a new stand and place the swarm in an empty hive on the old stand, the queen having been picked off the ground and placed in the empty hive. The swarm will return to the new hive at the old stand. The field bees will now join the swarm, and the super should be transferred from the parent hive to the swarm which will produce the crop of honey. The colony, now depleted of bees, but rich in brood, is divided a week later into three to six nuclei, each nucleus consisting of two or three frames containing brood and honey carrying two or three queen cells containing bees soon to emerge with the adhering bees.

This method has the great advantage that it not only controls and satisfies the troublesome swarming instinct, but it helps to secure the desired ends by natural means. The honey gatherers are segregated into a strong force, and the brood, being mostly capped, is not likely to get chilled. The bees desert neither it nor the queen-cells readily, and all trouble in raising and introducing queens is avoided. The bees in the newly-formed nuclei are in the post-swarming stage, when their instinct is to spread themselves over and incubate as much brood as possible, and especially the queen cells.

The beginner should be warned not to divide the parent colony into too many weak nuclei, but this fault may be rectified in the autumn by uniting. The ideal conditions for building up nuclei are a slow honey-flow throughout August and early September. Fortunately these are supplied in most Canadian localities by goldenrods, asters and buckwheat.

Mis-mated queens should be replaced any time up to the first or second week in October, preferably not during the robbing season.

THE ANATOMY OF THE HONEY BEE

By Dr. A. E. Cameron, M. A., Field Officer, Dominion Dept. of Agriculture.

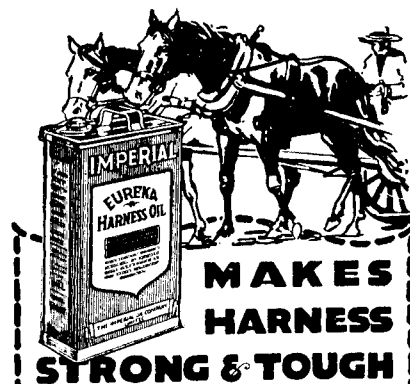
Every apiarist who undertakes the care of bees should make it his aim to know how he may prosecute the industry with profit. Understand his cattle in order to realize large profits, so the apiarist must understand his bee if he is to get an ample return for his labors. Quite apart from this mercenary side of the question, I think that you will agree with me when I say that the honey bee is "rare and wonderfully made." In demonstration of this fact, it will be my pleasure to outline to you briefly the nature and function of the various organs that constitute the bee organism. From the fact of the domestication of the species, together with its great age and the greatest development in regard to the

appliances requisite to bee welfare, has been attained by those who have paid intelligent and careful attention to the behavior and physiology of the insect. Both of those aspects are strictly associated with the structure of the bee, so that it devolves upon the beekeeper to acquire a knowledge of the various essential, structural modifications of his charges. Just as the mechanic must know how to use his tools in order to do the best work, just as a stockman must differentiation into three distinct castes, queens, drones and workers, we may not be very surprised to find a degree of specialization that far surpasses that of any other member of the bee family. The origin of the distinct races is difficult to trace, but it is probably true that they have all arisen from the ancestral form indigenous to the eastern shores of the Mediterranean Sea. These races must have been long established, otherwise one could not account for their continuing to breed true in countries other than those of their origin. How long they remain pure, however, is a moot point. In time the strain must become gradually mixed by their becoming mutually fertile with the races of honey bees native to the countries of their adoption. However, it cannot be doubted that the distinctive characters of these races are very stable indeed.

In a review of the external features of the bee, the first things that arrest our attention are the curious adaptations of the mouth parts and the legs, not to mention the feathered hairs covering the body, so constructed as to form eminently efficient adhering agents for the rough-coated and sticky pollen-grains which the bee incidentally gathers in its visits to flowers in search of nectar.

The tongue is a comparatively long and protrusible organ, so designed that the nectar passes along a groove on its lower side to the mouth, impelled by combined capillary attraction and muscular contraction. This groove is well guarded against the ingress of foreign bodies by special hairs which overlap it on each side. Near its base is the external opening of the salivary duct. The saliva, secreted from the salivary glands in the head and the thorax, is passed to the exterior, where it mixes with the food before entering the mouth.

The three pairs of legs, as in all insects, are composed of five joints, of which the last is subdivided into five small ones terminated by a pair of claws. The first section of the fifth joint of the first pair of legs is notched near its base, the notch being closed by a spine. This contrivance is specially adapted for removing adherent particles from the delicate feelers, the insect in the process drawing them through the tightly fitting aperture. The fourth joint



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of each leg of the third pair is slightly enlarged and bears long hairs on its lateral borders. It is also slightly excavated on one side to form a receptacle for the pollen gathered by the worker bee from the flowers. In this pollen basket it is carried back to the hive. In addition, the first sub-joint of the fifth segment of this same pair of legs, is greatly flattened, bearing on one side several parallel rows of stiff hairs specially used by the animal to comb out the pollen grains adhering to the feathery hairs of the body—thence they are transferred to the pollen baskets.

The sting of the bee is a complex structure composed of two pairs of piercing parts—or rather one pair of lancets and one pair of sheaths—together with a pair of sensitive appendages which select and seek out a suitable surface for the insertion of the sting. Attached to the basal portion of the sting and lying within the body, is a large poison sack and poison glands which generate and pass the poison to the wound via the canal formed by the close application of the lancets and sheaths. The muscles which drive the sting into the wound also serve to compress the poison sack, thus causing its evacuation with the consequent outflow of poison.

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The glands concerned in the manufacture of the wax are situated in the pockets which lie between the last four segments of the body. The wax, liquid on being first secreted, hardens on contact with the air. It is removed from the wax pockets by the "wax shears," formed by the cutting edges at the junction of its fourth and fifth joints of each of the last pair of legs. Hence it is passed by the legs forward to the jaws, there to be manipulated and moulded.

In the food canal, the part which interests us most is the honey stomach, which is really a modification of the end of the gullet. Its walls are capable of immense distension, so that the worker is enabled to carry a large load of the precious honey back to the hive. Its opening into the true stomach is provided with a special valve known as the "honey-stopper," which is only opened when the bee wishes to pass some honey for the purpose of nourishing itself. The honey, as we know it, is regurgitated from the honey stomach, where it has been transformed from nectar by some chemical change.

In a discussion of the food canal, we must not neglect the consideration of the associated glands. We have already dealt with the role played by the secretion of the salivary glands. In the head there are also others known as the pharyngeal glands, the secretion of which appears to play an important part in the production of the "royal jelly" or brood food. It seems that the small percentage of tartaric acid present in the latter is secreted from these glands. It is interesting to note that they are best developed in the workers of those bees that have the most advanced social organization, being largest in the workers of the honey bee.

At the junction of the mid and hind intestine are several long, filamentous, glandular tubes, lying free in the body cavity. Their especial function is the excretion of waste matter, in this respect being homologous to the kidneys of the higher vertebrate animals. They are present in all insects.

The respiratory system of the bee resembles that of other insects which possess delicate, spiral tubes ramifying throughout all the body and supplying extremely fine branches to all the tissues. Thus oxygen is carried to all the organs from the outside air which is in direct communication with that in the tubes, by means of small apertures called spiracles arranged along each side of the body. There are normally one pair to each body segment, but often some are absent. In the bee there are seven pairs. The most characteristic and unique feature of the breathing system of the honey bee is the peculiar modification of the tubes into large, disensible air sacs which serve as storehouses for surplus oxygen, to be drawn upon at need.

The nervous system consists of a double chain of nerve centres situated on the ventral wall of the body. In the honey bee there are eight pairs of these centres besides the brain. Branching nerves are sent out from them to enervate the whole body. In addition, branches are supplied to the organs of special sense, such as the eyes. Whilst it is very probable that the delicate fibres which end in the skin of certain parts, such as the feelers and mouth parts, are associated with the senses of smell, touch and taste. The nervous system holds the controlling power over all the other organs of the body. It regulates them in the performance of their duties and co-ordinates their actions so that they all work together.

It makes a unified organism out of what would otherwise be simply a complex mass of variously specialized cells.

The heart of the bee is a tubular organ situated on the dorsal side along the middle line of the body. There are no arteries or veins, and the colorless blood circulates freely in ill-defined spaces of the body cavity, bathing all the tissues. Its function as a carrier of oxygen is practically annulled in insects by reason of the great development of the respiratory tubes which substitute the blood in carrying this gas directly to all the organs.

In conclusion, mention must be made of the fact that the workers, although of the female sex, do not produce eggs. Their reproductive organs are atrophied, and their special duty is to act as nurses to the developing brood, to collect pollen and honey, to make the comb and to attend generally to the duties of the hive. The queen is the egg-producer, and it is computed that a normal queen lays 1,500,000 eggs during her lifetime. She mates but once with a drone, and in so doing the latter sacrifices its life.

NOTES

As soon as the "June drop" is over in the orchard, it is time to start thinning the tree fruits. Usually the varieties of fruit which are the most advanced are thinned first. Generally apples, pears and peaches are thinned when they are about the size of a hickory nut and the thinning should be completed before they are double that size.

Thinning is necessary because a tree often sets more fruit than it can possibly bring to perfection, as the fruit grower and consumer understand perfection. It is necessary that each tree carries all the fruit it can possibly bring to perfection, but no more. The removal of some fruit at an early stage of its growth helps materially towards securing the maximum duty of the trees in many ways.

It is impossible to go into the method of thinning tree fruits fully here and the reasons why it should be done are also too numerous to mention. A limited supply of Horticultural Circular No. 22, "Thinning Tree Fruits," is on hand at the Department of Agriculture, Victoria; get a copy of this or the many other publications in stock as long as the supply lasts.



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VANCOUVER, B. C.

Gardening for the Home

By H. M. EDDIE, F.R.H.S., Manager Growing Department, B. C. Nurseries.

There are few details of horticultural practice which are less understood by the amateur than the use of the hose or watering can. Some appear to think that whenever surface soil turns light in color, a day or two after heavy rain, it is time to turn on the tap again, when in fact what is needed most is the hoe to stir up the surface and prevent the loss of moisture by evaporation. Others, again, appear to think that when the soil is really dry and in need of artificial watering, that as soon as they have changed the color of the surface soil from a light grey to a dark brown that that is sufficient, and will go to bed with an easy conscience, thinking that they have done their duty by their garden.

To the inexperienced it is astonishing how much water is required to thoroughly soak a cubic foot of really dry soil, and until experience is gained it is a good plan to scratch up the soil occasionally as you play the hose on a circumscribed area to find out just how far the water has soaked in.

It is fun for your boy to be allowed to play the hose on the garden, for a short time at least, but your neighbor's boy and other unoffending objects are likely to get more attention than your garden plants; the moral is, therefore, do the watering yourself.

If your garden is level or nearly so, it is a good plan to draw a shallow trench between the rows of vegetables or flowers, lay the hose down at one end and allow the water to run gently into it until some time after it has filled from end to end; do likewise over the whole garden, and a good, thorough soaking will be the result and you will not be tired out manipulating the hose, but will have had plenty of time to read the evening paper or attend to something else between the times of shifting the hose from one trench to another.

If the garden is on much of a slope the irrigation trenches must be drawn out across the slope, if this is possible, so that the water will not run off before it soaks in.

The various kinds of sprinklers on the market are very useful for watering, especially on gardens on a steep slope, as the way in which the water is delivered gives it time to soak in.

Whichever way the watering is done, however, one thing is essential in each case, and that is the stirring of the surface soon afterwards; if the watering is done in the evening the surface ought to be cultivated next morning to help conserve the water applied.

Allow no weeds whatever to grow, as they rob your plants of much food, including water and light.

Vegetable crops are making rapid growth now and the roots will be searching every cubic inch of soil for food, and unless ample reserves were supplied at digging time, much benefit will be derived from the application of liquid manure. Liquid manure is best applied the day or evening

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after pure water has been given, grave injury may be caused to the roots if they are obliged to take up too large quantities of water in which is dissolved acid or salty manures.

During this, the growing season, the element of plant food in most demand is nitrogen, which may be supplied in various forms, viz.: nitrate of soda, sulphate of ammonia or in some of the natural manners such as chicken or horse droppings. The two former are difficult, maybe impossible to obtain at this time, but the two latter are always obtainable, and the best way to handle them is to place a quantity in a porous sack, tie the mouth and place it in a barrel of water to soak. If the barrel used is a 45 or 50-gallon one a hundred pound grain sack will be all right—larger or smaller barrels in proportion. Allow the material to soak for about a week, stirring and squeezing the sack several times in the interval, when it will be ready for use. Undiluted, the liquid will likely be too strong, and as a guide to the strength the liquid applied to the plants ought to have the color of weak tea. With liquid manure little and often is the slogan; say, once a week, the next night after watering with pure water.

There is a quickly available supply of nitrogen in coal soot, and it is a good plan to put about a shovel full of this article to the hundred-pound sack of manure.

When applying liquid manure of any kind it is well to direct it to the soil and not to the plants, as injury may result to the young tender foliage.

On land just vacated by the early potato crop a few seeds of kidney beans may still be sown to supply a late crop of green pods, and a row of an early variety of peas may still be sown, but these two must be sown as early in the month as possible.

Lettuce, radishes, carrots and parsley for winter may be sown on any vacant land, and a sensible patch should be prepared by manuring and digging for the main winter crop of leeks. The plants if sown in early spring will be quite big enough now to transplant. When the patch is ready, mark off rows eighteen inches apart and set the plants six inches apart in the rows. To make holes for the plants a dibble with a stem about twelve inches long is required, and the plants are prepared by having their roots trimmed off to about a half inch from their base, and two or three inches cut off the tips of the leaves, making them from eight to ten inches long over all. The holes are bored to the full depth of the dibble and

a plant dropped in each; hit the edge of the hole a light tap with the joint of the dibble and this will cause enough soil to trickle down to just cover the root; leave the rest of the hole open. To those unacquainted with the culture of the leek, this will seem extraordinary treatment, but this is how they are grown for ordinary use. For exhibition they are treated more elaborately. The reason for the deep hole and the seeming burial of the plant is to give a long blanched stem, which is the part most prized by the housewife. Those of you who did not sow onions or enough of them in the spring, or whose onion crop has been ravaged by the maggot, I would strongly advise to put in as large a plantation of leeks as possible. They are an excellent substitute and are preferred by many to their more pungent cousin, the onion.

It is too late to sow seeds now, and if you didn't grow any yourself, hunt up a neighbor from Scotland, England, Ireland or Wales, and he will likely be able to accommodate you from his surplus.

The earliest celery will be ready for its first hilling up by now, but before applying the soil, go over each plant carefully and remove all side shoots and short leaves; also any tall-growing weeds, and give a good soaking of water if necessary.

If plenty of manure was given at planting time nothing further may be needed, for early celery, but if thought desirable a dusting of equal quantities of bone meal and woodashes may be given at this time. If water has been given, give the plants time to get thoroughly dry; then commence by loosening up the soil on the ridges and pulverize it with the spade so that it will not be lumpy and will pack tightly round the plants. Grasp the first plant with the left hand and with the right draw the soil from the ridge on that side and work it close up to and around the plant, taking care that no soil gets between the leaf stalks; change hands and do the same on the other side, and so on until the whole is completed. Three inches of soil is enough for the first and second hilling of early celery and the crop will usually be consumed before any more is required. Main crop celery is treated the same way, but requires a third hilling when the plants are covered up to the tips of their leaves.

I have occupied my allotted space entirely with the vegetable garden, but during a time when good production is of such vital importance no excuses are necessary.

H. M. E.

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MISTAKES OF THE BEGINNER

It is well for the beginner to accept the advice of men who are veterans in the service, in order that they may avoid many of the stumbling blocks.

Too many novices start on too large a scale. They are not content to begin at the bottom round of the ladder and gradually climb to the top. That is too slow for them. If blessed with sufficient capital, they are pretty sure to start on a large scale. Without experience, is it any wonder that they do not succeed?

But this is not the only cause of failure with the beginner. The others might briefly be stated as having too much land; buildings too scattered, entailing too much unnecessary labor; the breed or breeds selected not being suitable for the purpose intended; houses not built upon the sanitary plan; too much changing of the bill of fare, unmindful of small details, harboring too much unprofitable stock; carelessness in caring for ailing birds; relying too much on hired help, and learning too fast.

It is a waste of many to buy too much land. From five to ten acres is sufficient for the largest kind of plant.



Prize Leghorn, Vancouver Exhibition, 1917.

A general mistake is the continual changing of the bill of fare. There should be one system in feeding, and that regularly followed. The bill of fare should contain the greatest variety possible, but the system should not be changed. New articles of food should not be given to the exclusion of others until the fowls have had a chance to become acquainted with them. All additions or changes should be gradually made. If the fowls are doing well on what they are getting, no change should be made at all.

Probably the most common error is "learning too fast." It is a noteworthy fact that, as a rule, by the close of the first year the beginner forms the opinion that he knows it all. Thirty years spent in the poultry yard has taught the writer that he has much yet to learn. There is always something new turning up.

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The wise man reads, studies, practises and investigates, thus daily adding to his store of knowledge.

Beginners must go into win. They must not become faint-hearted. They must put their shoulder to the wheel. In all occupations the successful ones are those who stick to their work.

There will be dark clouds—it is so in all businesses. There will be days of discouragement, but the wide-awake man battles right along, never tiring, never getting the "blues." He knows that "every cloud has a silver lining," and that the sun will surely shine some day.

The poultry business wants men with pluck.

Beware of the hidden nest. It is not uncommon for farmers to take the eggs from a hidden nest and put them in the fresh egg basket. As one has no way of knowing the age or condition of such eggs, there is a great risk in such a procedure.

The nest egg theory is out of date. There used to be an old-time belief that it was necessary to have nest eggs in order to induce the hens to lay. There can be but one virtue in the nest eggs, and that is to teach the hens to lay in particular nests, but the nest egg has no influence whatever on production.

Assorting market eggs according to size and color is a good business move. It attracts the eyes and the appetite of the buyer, and the sale is readily made. It always pays to cater to the whims of the buying public, notwithstanding what our own personal ideas may be.

It pays to cater to the whims of the market. Personally we do not believe there is any difference in the quality of a brown-shelled egg and one with a white shell, but at the same time we would no sooner think of sending a consignment of brown eggs to a white egg market than



Mother Says

those horrid lamps seem to smell worse than ever. I clean six of them twice a week which makes 1248 every year - two weeks awful work to keep them going out of each year!

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we would roasting fowls to a man who asks for broilers.

I. K. Felch says utility must not be forgotten. No breed that fails in practical points can long stand well in popularity. And the practical points are: Great productiveness in eggs, even-colored, even-shaped, generous sized eggs, and the greatest possible increase in weight for food consumed.

There is only one way to build up a heavy-laying strain, and that is to select hens that are good layers, and, if possible, that come from a line of good layers, and to them a male bird that is known to be

the "son" of a good layer. This work is possible only by the use of trap nests.

Here is a scientific calculation which is interesting, even if it is scientific: The amount of nutritive material which a given amount of eggs will furnish at any stated price per dozen, may be readily calculated. When eggs are 10 cents per dozen, 10 cents expended in this food will furnish one pound total food material, containing 0.13 lb. protein and 0.09 lb. fat, the whole having a food value of 635 calories; at 25 cents per dozen, 10 cents worth of eggs will furnish 0.60 lb. total food material, supplying 0.08 lb. of protein, 0.05 lb. of fat, and furnish 275 calories. Ten cents expended for beef at eight cents per pound will furnish 1.25 lbs. total food material, containing 0.24 lb. protein, 0.16 lb. fat, and 1120 calories. Expended for beef sirloin at 20 cents per pound, it will furnish 0.5 lb. total food matter, containing 0.08 lb. protein, 0.09 lb. fat, 1.06 lbs. carbohydrates, and 2430 calories.

Here are a few hints to those who are in the business of raising market poultry: Market the roosters separately. Aim to attract the eye of the buyer. Have regular market days. Try to build up a reputation for prime stock. Grow bone and muscle first and then fatten. Big combed broilers are apt to be wrongly classified in market. Always notify your commission merchant before shipping. Young fowls shipped with old stock will command old-stock prices. Poultry should be killed the day before marking when going direct to the consumer. Do not mix white-skinned chickens in the same shipment with yellow-skinned ones. Have a tag fastened on each fowl you send to market. It is the best way to advertise your stock.

Produce commission men state that of late years there has sprung up a great demand for late fall-hatched chicks to be marketed in early spring before broilers are "ripe." While certain breeds are more inclined to yellow skin than others, the fact remains that even naturally yellow-

skinned fowls can have the color of flesh changed by feeding accordingly. Corn and cornmeal is the proper food for producing yellow carcasses while fattening.

Much of the mortality among little chicks is due to their being fed too soon. One writer recommends that they be not fed under 72 hours from the time they are hatched. While we know it is a mistake to place food before newly-hatched chicks, at the same time we are not ready to make them wait 72 hours for their first meal. Forty-eight hours is plenty long enough time, and a chick at that age will be in a better condition to partake of food than it would be at 72 hours, when the want of food has begun to weaken the little ones. The food in the chick when hatched will be fully assimilated, digested, and allowed to pass from the bowels when 48 hours old.

The varied diet prevents the clogging of the digestive apparatus and helps keep the appetite keen. Fowls quickly tire of a single diet, and will soon become sick if it is persisted in, no matter what it is.

Old-fashioned people, of course, used old-fashioned methods, and the feeding of twenty years ago was mostly to sustain life; in other words, hens, like other animals, had to be fed in order to exist. This idea is still held among many farmers. What they feed they suppose is all that is necessary both to maintain life and to produce eggs. The experienced breeder fully understands this.

The Oklahoma Agricultural Experiment Station some years ago made feed trials that are worth calling attention to. They found that poultry digested Kaffir corn and corn more completely when the grain was fed whole than when the meal was fed. The Kaffir corn and the Kaffir meal fed yielded but two per cent less total digestible matter than the corresponding corn products. Kaffir corn was a more suitable ration, considering only the relative amount of growth-making and fat-producing materials than Kaffir corn, corn or cornmeal.

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WOMEN'S SECTION

British Columbia Women's Institutes

Motto—"FOR HOME AND COUNTRY"

WOMEN'S INSTITUTE

Another Delectable Lawn Meeting at the Cliffs School—Home Canning

Some eighty people gathered at the Cowichan Women's Institute meeting Tuesday afternoon, June 12, the venue being the lovely grounds of The Cliffs school, Duncan. In addition to the routine business an interesting programme was provided.

Mrs. Rudd, Victoria, gave an interesting demonstration of how to can with cold water. It calls for thoroughly clean and fresh jars, with good sound rubber rings. Pack the fruit or vegetables in the bottles and set the bottles in a bucket. Then pour water on the fruit from a tap or hose and continue until all the air bubbles are excluded. The water must go on with a force in order to pack the fruit tight and exclude the air. Put the cap on under water, seal and invert the bottle to test if it is tightly sealed.

This method holds good for all firm fruits and vegetables. Economy jars are not suitable as they require heat to seal them. Any other brand which has a tight sealing rubber ring will do.

Mrs. Blackwood - Wileman, president, read a paper on "Citizenship." The Cliffs

school presented a play called "Moonbeam Fairies," with Miss Winnifred Calvert as queen, assisted by a dozen other girls. This was very greatly enjoyed, and thanks were extended to the children and Miss Wilson for so excellent and beautiful a presentation.

Membership in the institute has passed all records, being now 151. The total membership last year was 147. The scheduled programme, in which the Girl Guides were to have given a demonstration, was postponed until July on account of the school examinations.

The library committee reported excellent progress, and the Red Cross committee had received \$25 since May 8, and \$7.60 for their adopted Prisoners of War, Pte. John Page, Canadians.

SURREY WOMEN'S INSTITUTE

The regular monthly meeting of the Surrey Women's Institute was held in the agricultural class room, the president, Mrs. Whiteley, in the chair. Mr. E. L. Small, B.S.A., agricultural instructor for Surrey and Langley schools, spoke on the work he had taken up during the past year, and a number of his pupils gave short talks, with demonstrations, on several of the subjects. The next meeting

will be held July 3 at the Mound Farm, to which all the members of the Women's Institutes of Surrey have been invited.

HAZELMERE NEWS

Hazelmere Women's Institute held their 5th anniversary on Saturday evening, June 2, in the Union church, Hazelmere. The meeting opened by singing the "Maple Leaf," after which the president, Mrs. Tucker, gave an address of welcome and a synopsis of former anniversaries.

Mr. J. Clarke sang a solo, "The Soldiers of the King," the audience joining heartily in the chorus.

The president then introduced the speaker of the evening, Sergt. Doc Wells, a returned soldier, who lost an arm in the enemy's prison camp.

Sergt. Wells is a magnetic speaker and in a very realistic manner for nearly two hours made all realize what our soldiers do and dare for us at home, and he paid a high tribute to the bravery and unselfishness of his comrades in arms. He then made the drawing for the quilt donated by the members of the institute. The lucky winner was Mr. Seely, who held No. 384. Sergt. Wells afterwards presented the prize to the two Hall's Prairie pupils for the best junk collection.

The sum of one hundred dollars was realized from the sale of the 400 tickets for the quilt which was made from scraps of hospital shirts made by the institute members.

The collection and sale of candles amounted to upwards of \$15.

The H. P. S. Club sang "Never Let the Old Flag Fall," and the meeting closed with singing the National Anthem.

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BRANCHES IN ALL CITIES

SHAWNIGAN LAKE

The monthly meeting of Women's Institute members resident at Shawnigan Lake was held Thursday, June 14, and satisfactory reports of work were presented. Over \$130 had been sent to the Red Cross Society as a result of the entertainments held in May and of the regular monthly contributions—this in addition to shirts and socks. Thanks to special contributions the monthly donation to the Belgian Relief fund amounted to \$5.35, and that to the work of the Y. M. C. A. to \$8. The usual \$5 for Prisoners of War Fund was also sent on.

The expansion committee reported a gift of playground apparatus to the Maillard school (swings, see-saws, sand pile and horizontal bar), from one of the members; and announcements of a full programme of Institute and Red Cross functions were made. The meeting unanimously endorsed resolutions received from the Garden City Institute referring to school girls and home work, and was much interested in an address given by Miss Alice Ravenhill on "How to Prepare a Household Budget." The details given were followed with close attention and a practical discussion resulted.

TYNEHEAD NEWS

The monthly meeting of the Women's Institute was held at the home of Mr. Alex Bothwell. There were eleven members present, with one new member. The meeting was opened in the usual manner, by all standing and repeating the Lord's Prayer. The minutes of the previous meeting were read and adopted. After roll call several interesting letters were read and talked over. The flower show and annual picnic was then brought up. The date was set for August 22, and the prizes will be as follows: Sweet peas, 10 blooms, 4 varieties; dahlias, 6 blooms, any color; roses, 6 blooms, any variety; pansies, 2 blooms; annuals, 12 blooms—first and second prizes for all varieties, as far as possible. Ferns and geraniums, in pots, any variety; also bouquets of sweet peas and wild flowers. In vegetables, to encourage school children, prizes will be given for the best two heads of cabbage, two heads of cauliflower, 12 potatoes, 12 beans in pods, 12 butter beans, 12 onions, 6 carrots, 6 beets.

Prizes will also be given for bread, cakes, pies, etc., and additional prizes will be given if there are enough funds.

The Women's Institute extend a cordial invitation to all to bring all they can to help out the show. The picnic is always looked forward to by old and young with the greatest pleasure. Donations of fruit and vegetables, canned fruit and farm produce, etc., will be gratefully accepted and sold for patriotic purposes.

Eggless Cakes

One and a half tablespoon butter, 1 teaspoon cinnamon, 1 cup milk, 1 teaspoon soda in 2 tablespoons hot water, 1-2 cup raisins, 1-2 cup flour, 1 cup sugar, 2 tablespoons cocoa or chocolate, 1 1-2 cups flour, 1-2 cup nuts. Bake in loaf pan.

Nut Bread

Four cups flour, 6 teaspoons baking powder, 1 teaspoon salt, 1 cup sugar, 1 cup nuts, 1 cup milk, 2 eggs. Mix dry ingredients and nuts. Beat eggs well, add milk, and add to dry ingredients. Put in buttered pans and let stand 20 minutes. Bake in moderate oven 30 to 45 minutes.

Cheese Straws

Four tablespoons flour, 4 tablespoons grated cheese, 1 1-2 tablespoons butter, 1-4 teaspoon salt, dash of paprika, milk or water to moisten. Roll thin, cut in strips, and bake to a light brown.

Chicken Fat Valuable

Do you throw away the body fat of poultry—big layers of clean, sweet, yellow fat around the gizzard and found elsewhere around the intestines of the chicken? If you do, say specialists of the United States department of agriculture, you are throwing away fat which French housewives consider the finest of fats for making cakes and especially puff paste. In certain seasons in New York and other big cities, this fat is so highly esteemed that it brings as much as \$1.10 per pound. So great is the demand for this fat that many people make a business of collecting it from butchers and others who dress poultry before delivering it to customers. Housewives would do well to insist on having it delivered if they buy their poultry dressed. By using chicken fat in cooking they can cut down the amount of fat they must buy for that purpose. To prepare it, try it out in a double boiler, or other vessel set in hot water, until the fat just melts away from the tissues and can be poured off. This fat becomes rancid easily and should be kept cool and covered like butter and used in a very few days. Chicken fat, like goose fat, may be used for shortening in cakes such as spice cake, where the seasoning used will mask any flavor which the fat might have. It can also be used for frying the chicken itself or other meats and for warming vegetables.

Egg and Cabbage Salad

Cut the whites of three hard boiled eggs in small pieces, crumple the yolks with a fork or by pressing through a sieve. Have ready one and one-half cups cabbage finely chopped, sprinkle with salt, pepper, and one teaspoon celery seed or salt. Mix the cabbage lightly with the eggs, add the dressing, tossing until well mixed. Arrange on beds of lettuce or serve in small cup-shaped cabbage leaves.

Fruit Cake

Take two cups of sugar, two cups sour milk, two cups of raisins, one cup currants, four cups flour, eight tablespoons of shortening, cinnamon, clove, nutmeg, two teaspoons of soda. Bake one hour.

To Rid a Room of Flies

Put a few pieces of charcoal on a shovel and light it; let it burn till red, then pour over it a few drops of carbolic acid. Wave this around the room a few times and see the flies disappear instantly.

Grease Spot in Marble

A paste of crude potash and whiting brushed over a grease spot on marble will remove the stain.

For Smoking Lamps

If new lamp wicks are soaked for an hour or two in vinegar, then dried before being put in the burner, not only will a far better light be obtained, but there will also be no cause for smoking.

To Brighten Carpets and Rugs

There is nothing that mars the appearance of a living room more than a soiled, faded rug or carpet on the floor, and yet the housewife does not always feel able financially to replace the old rug or carpet with a new one.

I find a solution made of soap, water and salts of tartar, which may be secured at any drug store, makes an excellent cleaning agent for soiled carpets or rugs. Shave one-half pound of soap in one quart of wa-

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ter and boil until dissolved. Then add to this mixture one gallon of hot water and one ounce of salts of tartar, and mix thoroughly. Apply the mixture to the carpet or rug with a stiff brush, scrubbing briskly one breadth at a time. When the carpet is scrubbed sufficiently with the solution, wipe it with a cloth wrung out of cold water. If there is much green in the carpet, add one cup of vinegar to the solution and it will preserve the color. This quantity will clean a large carpet.

Rugs and carpets may be freshened by wiping them with a cloth wrung out of warm water, ammonia, and kerosene. Use one teaspoonful of ammonia and one tablespoon of kerosene to one gallon of warm water. Also the colors in rugs and carpets alum water. Apply the solution to the carpet or rug with a cloth, and wipe thoroughly. If the colors are faded they may be brightened by using a solution of be improved by touching up all faded designs with commercial dye, or a mixture of oil paint and gasoline. Use a small brush when applying the color.

SAVE AND SERVE Every Dollar Is a Contribution To- wards Victory

The public demand for a national form of war service open to all has been met by the government's thrift and saving campaign. Some can fight. Others can work on munitions. Others again can do farm work. Still others can none of these things, but all—every man and woman in Canada—can join in the great patriotic effort to serve by saving. It touches the whole life of the Dominion—industrial, commercial, financial, professional and domestic. Factories can save by the prevention of waste and the utilization of waste product. Business men can scrutinize every expenditure. Nothing should be bought that is not essential. Domestic economy should be rigidly observed in every household. Every dollar invested in war savings certificates is a dollar toward the cost of maintaining the Canadian divisions in the field. Every dollar so invested is a direct contribution to victory. Save your money and serve your country by giving it to the nation for war purposes.

COTTAGE CHEESE

Some Ways to Use Cottage Cheese in Making Tasteful and Nutritious Dishes

Cottage cheese is richer in protein than most meats and is very much cheaper. Every pound contains more than 3 ounces of protein, the main material for body building. It is also a valuable source of energy, though not so high as foods with more fat. It follows that its value in this respect can be greatly increased by serving it with cream, as is so commonly done.

Cottage cheese alone is an appetizing and nutritious dish. It may also be served with sweet or sour cream, and some people add a little sugar, or chives, or chopped onion, or caraway seed.

The following recipes illustrate a number of ways in which cottage cheese may be served:

Cottage Cheese With Preserves and Jellies.

Pour over cottage cheese any fruit preserves, such as strawberries, figs or cherries. Serve with bread or crackers. If preferred, cottage cheese balls may be served separately and eaten with the preserves. A very dainty dish may be made by dropping a bit of jelly into a nest of the cottage cheese.

Cottage-Cheese Salad.

Mix thoroughly 1 pound of cheese, 1½ tablespoonfuls of cream, 1 tablespoonful of chopped parsley, and salt to taste. First fill a rectangular tin mold with cold water to chill and wet the surface; line the bottom with waxed paper, then pack in three layers, putting two or three parallel strips of pimento between layers. Cover with waxed paper and set in a cool place until ready to serve; then run a knife around the sides and invert the mold. Cut in slices and serve on lettuce leaves with French dressing and wafers. Minced olives may be used instead of the parsley, and chopped nuts also may be added.

Cottage-Cheese Rolls.

A large variety of rolls to be used like meat rolls, suitable for serving as the main dish at dinner, may be made by combining legumes (beans of various kinds, cowpeas, lentils or peas), with cottage cheese and adding bread crumbs to make the mixture thick enough to form into a roll. Beans are usually mashed, but peas or small Lima

beans may be combined whole with bread crumbs and cottage cheese, and enough of the liquor in which the vegetables have been cooked may be added to get the right consistency; or, instead of beans or peas, chopped spinach, beet tops or head lettuce may be added.

Boston Roast.

1-lb. can of kidney beans or equivalent quantity of cooked beans. ½-lb. cottage cheese; Bread crumbs; Salt.

Mash the beans or put them through a meat grinder, add the cheese and enough bread crumbs to make the mixture sufficiently stiff to be formed into a roll. Bake in a moderate oven, basting occasionally with butter or other fat, and water. Serve with tomato sauce. This dish may be flavored with chopped onions, cooked in butter or other fat, and a very little water until tender.

Pimento and Cottage-Cheese Roast.

2 cupfuls cooked Lima beans; ½-lb. cottage cheese. 5 canned pimentos, chopped; Bread crumbs; Salt.

Put the first three ingredients through a meat chopper. Mix thoroughly and add bread crumbs until it is stiff enough to form into a roll. Brown in the oven, basting occasionally with butter or other fat, and water.

Cottage-Cheese and Nut Roast.

1 cupful cottage cheese; 1 tablespoonful butter; 1 cupful chopped English walnuts; Juice of half a lemon; 1 cupful bread crumbs; Salt and pepper. 2 tablespoonfuls chopped onion.

Cook the onion in the butter or other fat and a little water until tender. Mix the other ingredients and moisten with the water, in which the onion has been cooked. Pour into a shallow baking dish and brown in the oven.

Cheese Sauce.

1 cupful milk; 2 tablespoonfuls flour; 1 tablespoon cottage cheese. Salt and pepper to taste.

Thicken the milk with the flour and just before serving add the cheese, stirring until it is melted.

This sauce may be used in preparing creamed eggs or for ordinary milk toast. The quantity of cheese in the recipe may be increased, making a sauce suitable for using with macaroni or rice.

Sheep are excellent weed destroyers, as they keep the weeds nibbled so closely that no seeds are formed and the roots are ex-

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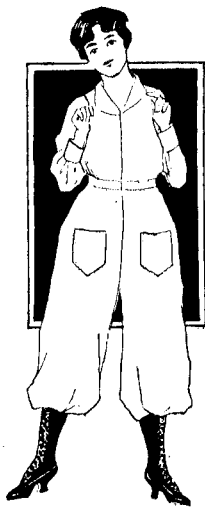
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