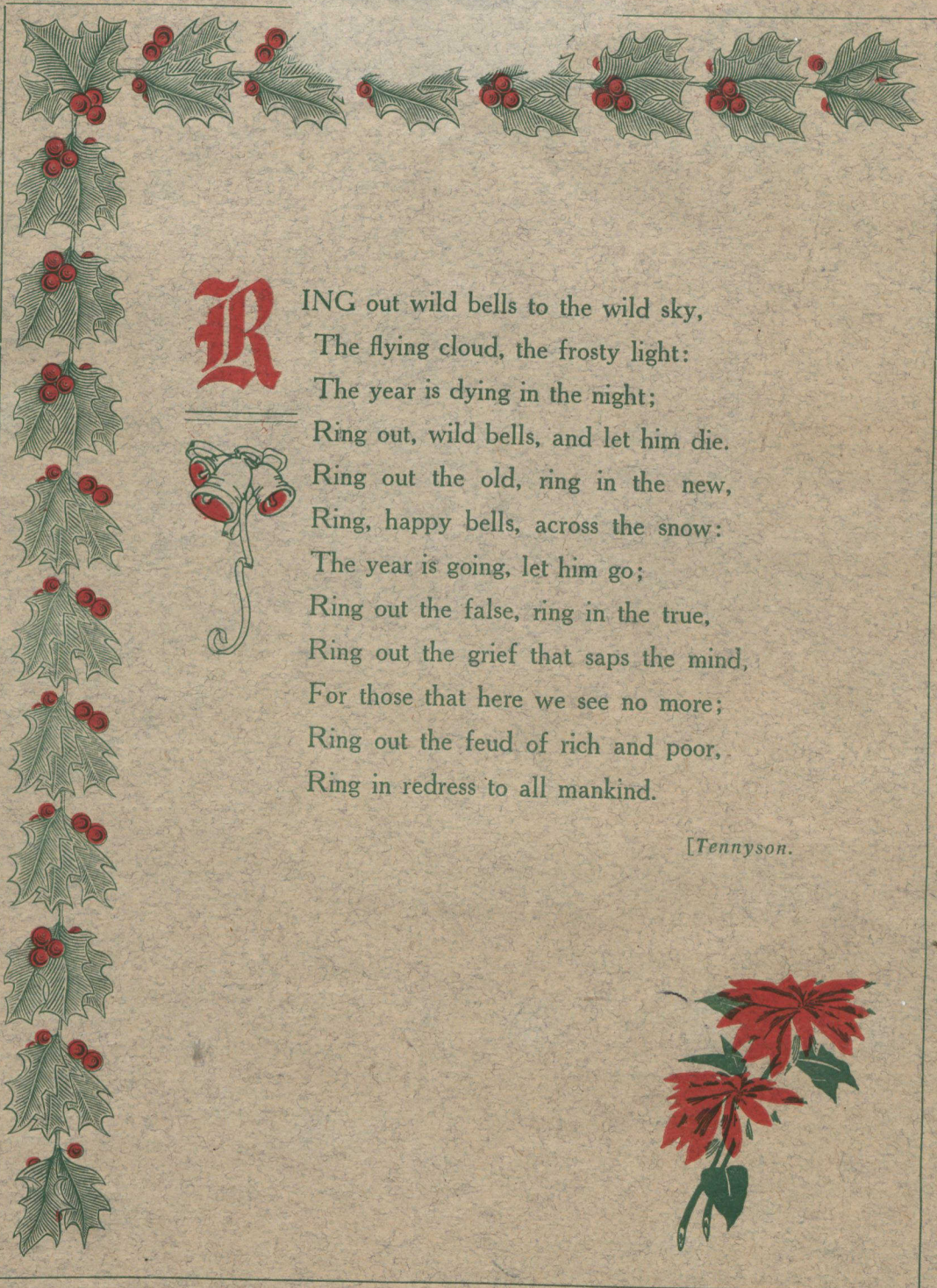


BRITISH COLUMBIA  
FRUIT AND FARM  
MAGAZINE

Vol. VII., No. 15

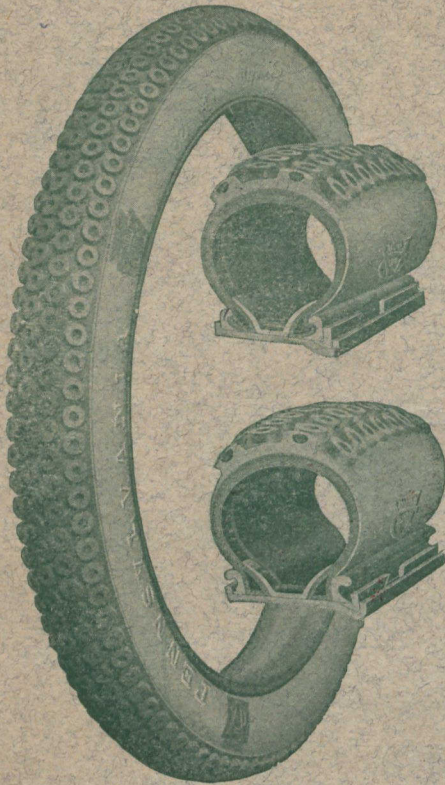
DECEMBER, 1915



**R**ING out wild bells to the wild sky,  
The flying cloud, the frosty light:  
The year is dying in the night;  
Ring out, wild bells, and let him die.  
Ring out the old, ring in the new,  
Ring, happy bells, across the snow:  
The year is going, let him go;  
Ring out the false, ring in the true,  
Ring out the grief that saps the mind,  
For those that here we see no more;  
Ring out the feud of rich and poor,  
Ring in redress to all mankind.

[Tennyson.]





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CAREY ROAD

VICTORIA, B. C.

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BRITISH COLUMBIA

# Fruit and Farm Magazine

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

Vol. VII.—No. 15

Vancouver, British Columbia

[\$1.00 per year  
in Advance

## B. C. Fruit and Farm Jottings

Among the improvements contemplated at the Sidney Experimental Farm will be the equipment of the place with first-class poultry quarters. The intention is to experiment with Jerseys and Guernseys, the Channel Islands' breeds being considered most suitable on the island. The fifth farm for the province is contemplated to serve the agricultural districts in Northern British Columbia, and will be located near the main line of the G. T. P. railway, west of Prince George.

seed rather larger than turnip seed. It grew to an average height of six feet, but was not of a coarse fibre and it is eaten with avidity by horses or cattle. Mr. Rannie is convinced that Sedan grass will prove to be the long-sought-for substitute for timothy or clover and thinks it will grow luxuriantly for years on the one planting.

Walhachin, situated on the Thompson River, between Kamloops and Ashcroft, 30 miles west of Kamloops, is paying con-

The oat crop on Mr. Sid. Herring's place at Pitt Meadows, averaged 90 bushels to the acre.

In connection with the Pitt Meadows reclamation scheme, over 500 small farmsteads will soon be ready for occupation. The work consisted primarily of 12½ miles of dyking with an average height of ten feet and there are nearly 7000 acres in the reclaimed tract.

### TO INTRODUCE SYSTEM IN B. C.

#### Co-operative Selling of Poultry Products Which Has Proven Satisfactory in East To Be Extended Here

While the activities of the live stock branch of the Dominion Department of Agriculture with regard to the organization of Co-operative Egg and Poultry Marketing Associations have been largely confined to date to the eastern provinces of the Dominion, the need and opportunity for work of this kind in the western provinces have not been overlooked.

From the fact that co-operative marketing of poultry products was something entirely new, it was thought advisable to thoroughly test out the practicability of the system before extending it to a wider area. Satisfactory results having been obtained in the east arrangements are now being made to extend the work to the western provinces.

### MISSION CITY SHOW.

The North Fraser Poultry Association are offering the largest prize list in the history of the association for the show to be held at Mission City this month, starting December 8. Mr. T. C. Aldershaw will be the judge. Entries must be received by December 1. In addition to the regular prize list there will be twenty-nine special prizes awarded including a silver cup.

### LIVE STOCK FARMING.

#### Grain Farming Alone Reduces Fertility of the Soil.

Grain farming reduces the fertility of the soil. Stock farming increases it. Grain farming reduces the humus in the soil. Stock raising increases it. Grain farming spoils the mechanical conditions of the soil. Stock farming improves it. Grain farming fosters weeds, plant diseases and insects, while stock raising decreases them. Stock raising develops thrift—pay as you go. Grain farming develops the credit system. Grain farming brings on the mortgage. Stock raising pays it off. The labor for grain farming is expensive, while that for stock farming is cheaper in that it is engaged by the year. Grain raising is dependent on the season. Stock farming is quite independent of the season. Taking



A QUIET PASTORAL.

(Courtesy Eastman Kodak Company.)

The breeds of swine to be raised at the Sidney Experimental Farm will be Yorkshires and Berkshires. It is improbable that sheep will be kept owing to the limited amount of land available.

Pitt Meadow farmers have been experimenting for years to produce a grass suitable for stock-feeding which will thrive in the slightly sour prairie land. Mr. William Rannie believes he has found it. Last year he planted some Australian Sedan grass seed. The seed grew to splendid maturity. The stock of it was exactly similar to blue point, the head blossoming much after the fashion of oats, with a heavy head, full of

siderable attention to fruit growing. Some 3000 acres are now planted in orchard. The first fruit was shipped from the district this year, when eight carloads went out. There are in the neighborhood of 40 miles of irrigation ditches. Out of an original population of about 200, including women and children, some forty-five men have enlisted for active service.

The importance of the work of the provincial fruit inspectors in keeping the province free of pests is realized when it is known that forty-one carloads of fruit have been condemned for infection in Yakima County, Washington state, during the season.



care of the stock is splendid training for the boys and girls. People with the instinct for stock raising are and have been the dominant people of the world. Grain farming is a soil robber; hence it is only possible on a new soil and then only for a short time.

The aim of every farmer should be to gradually work into some phase of live stock farming. This results in rotation of crops and a home market for the grain and hay. In this way, as much grain can be grown

on the farm as though it were all given to grain, as the yield will be larger, due to increased soil fertility, fewer weeds, less plant disease, better mechanical condition of the soil, etc.

The only permanent agriculture is that which is based on live stock farming and permanent agriculture means profitable agriculture.

C. W. HICKKANM,  
Idaho Experiment Station.

Continued on page 793

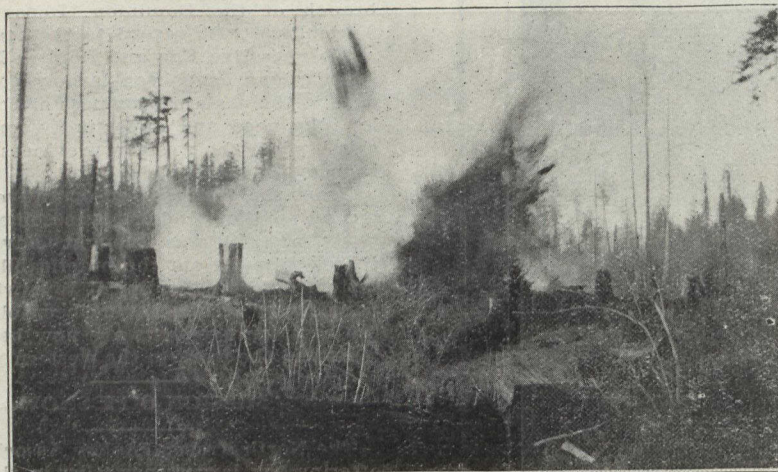
## Cap and Fuse

By Bertrand Vogel

Not so very long ago the use of powder was an operation left to those who had some experience with this powerful and precarious agent. Stumping powder was an invaluable aid to the settler clearing his land in the days before the machinery for that purpose was so handily procured or so cheap. Though for the matter of that, many still claim that powder is the quickest and the cheapest. Therefore the method of handling it is still a vital issue.

But in those days, when the settler, perhaps but newly arrived from the long-settled district or from a city, wished to use powder on his stumps he found as a rule only two or three men in the district who

occasion requires. The wonder is that there are not more accidents than one hears of. You will find them working away with cheerful disregard of even the most ordinary precautions. Not long ago I walked across a partly cleared field where the new owner was blowing out the remaining stumps. I was naturally interested. He took every precaution with the powder and I was agreeably surprised. He placed the charge carefully in what I thought a well-judged position under the stump he was working at—not too close up under the crown and about right for the centre of resistance. I became doubly interested. Here was a paragon, indeed, though he had



A BIG BLAST—PHOTO BY VOGEL.

would handle the dangerous stuff. Generally they were men who had had some experience of railroad work and had learned to use blasting powder in that way, but sometimes a man would be found who had learned to use it for himself, because no one was handy who would undertake it. Then he would do a little of such work for his neighbors. Such a man, if he had a natural aptitude for "placing" the charge, would often come to handle all the blasting operations in the land clearing of such new districts. He would be sent for from miles around. Sometimes a rancher, whose swelling under the hat band convinced him that he could do most anything without previous experience, became too familiar and in trying to throw out the powder in the kitchen oven learned a much needed lesson—though sometimes there was not enough left of him to profit by the lesson. But as a rule the job was left to the experienced man.

But now, when we are beginning to know more about it and see it used more often, every Tom, Dick or Harry will use it as

"new settler" written all over him. Then he cut his length of fuse and rammed the end of it down into the percussion cap with great gusto and much whole-hearted effort. I removed myself with more speed than dignity. He paused with surprise at my sudden move and asked the wherefore. From a safe distance I answered with a few facts about percussion caps. He said he did not know that those little things were dangerous. On being told how hard a knick lay in so small a compass he was properly impressed and handled them with more circumspection.

Often it is just such ignorance, not realizing where the danger may be, but very often it is mere carelessness. I once saw a road foreman of a logging railroad walk into the camp cook house, when the rest of the men were seated at the long table, take a box of percussion caps from his hip pocket and place it on the narrow edge of a 2x4 which was just above his head. This 2 inch by 4 inch piece of timber was used as a plate from wall to wall across the center of the building and was not braced ex-

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cept at each end. Then he sat down and ate his dinner. In such a flimsy "shack" a very light jolt against the wall would have jarred that box off the two-inch edge and after a seven-foot drop things would have happened. But no one seemed to mind at the time. When the boss came in and found it there he flew into a white-lipped passion. Almost as much happened as though the box had dropped. That foreman, at least, was more careful.

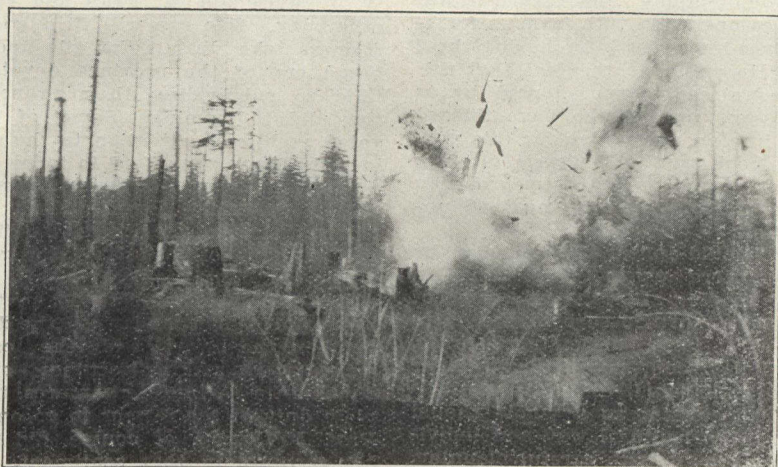
But the greatest carelessness is often shown in the methods of thawing out the powder. I have seen the sticks stood up in a row before an open fire and so close that the waxed paper around each stick of powder was scorched—quite a distinct brown—and the only thing that saved a flare was frequent turning of the sticks by the operator. Of course, they would not have exploded, but the sheet of flame if they caught fire would have been enough for the man bending over them. It never seemed to enter his head that it was dangerous.

Stumping powder can be handled much more roughly than dynamite. The "new

the centre of the stump. A still better way where it does not matter in which direction the tree falls, is not to fell the tree at all, but to put the charge under the standing tree. All the force of the explosion will then be exerted sideways on the roots, since it will not be able to go up through the center as it would with a stump. If the tree does not fall at once, a fire started in the shattered crown will generally bring it down in a couple of hours.

As a rule it will fall on the side where the most roots have been blown out and in so doing will tear out the remaining roots that were not broken by the explosion. The result will look very much like a windfall, except that the roots will be free from most of the dirt and the crown and roots will be well shattered, with perhaps the lower part of the trunk also. Then a fire started in the splintered part will remove most of it.

Good work can also be done on large logs by boring holes with a two-inch auger every ten or twelve feet and placing half a stick of powder in each hole. Ordinary 25 per cent stumping powder is much better than the black blasting powder used in the mines



A SUCCESSFUL BLAST—PHOTO BY B. VOGEL.

comer" will often watch with fearful fascination while some old timer "lamps" the earth in on top of the charge with a few good jolts with a piece timber. It looks very much like pounding it good and hard. But the same man will take what the new comer thinks unnecessary precautions when inserting the cap in the end of the stick of powder. Generally the half of a stick is set aside which has a good end—one which has the waxed paper firm and compactly folded. After the other sticks have been placed in the hole, this half-stick is "loaded," that is, the percussion cap or detonator, on the end of a suitable length of fuse is inserted in a hole made in the end of the stick with the point of a pen-knife. Then the waxed paper is folded back as it was, thus holding the cap securely in place. If the cap (which is about three-quarters of an inch long) is pushed too far into the powder, the spitting of fire from the burning fuse will ignite the powder instead of exploding it and it will burn with a great flare. The same thing will happen if the "loaded" stick is pushed too far into the charge already placed in the bottom of the hole. If the charge is not placed deep enough, the explosion will only shatter the top of the stump, leaving the roots almost as firm as ever. In some places a length of wire cable is wound around the top of the stump so that more of the force of the explosion will be exerted out around the ends of the roots instead of up through

and which is sometimes bought for this work. The stumping powder is so much quicker and shatters the log where the other will split it in perhaps two equal pieces. If the hole is bored from the side and slightly below the centre the lower half of the log will be shattered and as it burns, the top will keep settling down on it until the whole thing is burned up. But if the hole is bored from the top, the two sides will generally be well separated and as they burn will fall apart and the fire go out. Then they will have to be cut and piled—much unnecessary work.

After the powder has been tamped into the hole great care must be taken in placing the cap where the subsequent tamping will not push it too far into the powder. When that happens the charge will "blow out" with a sheet of flame. The fire from the fuse ignites it before the "kick" from the percussion cap explodes the whole thing. "Blow outs" occur much more often in this work than when working on stumps. Dry sand makes a good filler which needs very little tamping. Damp earth of any kind, because it is easier to get, is more generally used, but it needs more careful tamping. It is not the strength of the plug which is important, but the fact that there are no spaces in it. If the dry sand is free from chips or chunks of other matter there will naturally be no empty spaces.

Concluded on page 803

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Vol. VII. DECEMBER No. 15.

## OUR GREETING

In wishing our readers a Merry Christmas and a happy new year we do so in full realization that the festive season of 1915 will mean something different this year to thousands of homes in British Columbia to what it ever has in the past.

Canada has taken her place by the side of the Mother Country and is engaged in a desperate struggle for liberty. The sons of British Columbia have answered the call and no province in the Dominion has given more readily of the best she has in men and money for the sacred cause. In hundreds of farm homes in British Columbia there will be a vacant chair at the annual gathering around the Christmas table. Many a mother will go about her household duties with a smiling face but an aching heart as she thinks of husband or son that sleeps the last sleep of the brave in Flanders. Dear ones will be missing who are lying in German prison camps, or wounded in foreign hospitals stretched along the borders of "no man's land" will be several thousands of British Columbians guarding the line for Canada, home and liberty.

To those whose fathers, sons, brothers and sweethearts have made the supreme sacrifice for us it seems almost sacrilegious to extend Christmas greetings and a Happy New Year. But why not? True we are not all spurtans, but we are all Canadians, and there is that within us that sends the thrill through our hearts as we read how our boys have fought the good fight. We each one of us stare at the despatches telling of his death and we know that things will never be the same again; but how we glory in the splendid courage of "our boy," "our father," or "my sweetheart." The heart may be stabbed; but how the head is held higher, and how the blood courses through the veins or we hear told and re-told, as it will be through all time, of that unflinching thin line of Canadians at Ypres and other battle destined historic for all time that would not yield and that vindicated how a Canadian can fight and die for a principle. Only the heart knoweth its own bitterness, but the nation holds it a privilege to die in defending its color. All Canada mourns with those who have contributed to the great cause in flesh and blood, but stands at the salute in honor of those who have fallen.

When we say "A Merry Christmas and a Happy New Year," let it mean, not the mere light-hearted seasonable salutation but rather we join with you who have suffered in glorious appreciation of what yours have done in the name of Liberty and Justice for King and Country.

## IN ENGLAND AFTER THE WAR.

English writers are beginning to discuss the war in relation to agriculture, realizing that among the great problems the country will have to face after the war is over none will be of greater or more far-reaching importance than those which affect the land and its yield.

English agricultural writers—at least some of them—believe, that the present war will be followed by a more or less serious financial crisis as they claim has been the case after previous wars. The wealth of the soil is looked upon by them as the greatest asset to carry the nation through this period.

One writer, Mr. G. C. Phillips, in a book entitled "The Land After the War" approaches the question in a highly original way. He predicts a serious scarcity of farm labor following the declaration of peace, but finds a remedy for the handicap in a more general adoption of motor implements. These are expensive—too much for the ordinary farmer to purchase—but Mr. Phillips would apply that agricultural panacea of co-operation with farmers forming themselves into groups for buying these machines. He points to the fact that this doctrine has already been adopted by at least six Essex farmers who have formed themselves into an association for this purpose. The book further suggests growing more wheat, giving an instructive rotation for those contemplating bringing land under cultivation.

All of this would appear to emphasize the opportunity there exists with Canadian farmers for reaping after the war some of the advantages that are sure to accrue to countries with large agricultural areas. Markets will be good; no particular labor shortage is anticipated, and we have the acreage. The country as a whole should prosper in an agricultural way and individual farmers should, with careful planning, derive their share.

## CO-OPERATION IN OPERATION

One hears a great deal about co-operation among farmers. All writers, lecturers, government officials and theorists preach the gospel of co-operation, and the word has become so familiar that one is almost inclined to believe that it has lost its force to some extent—a case of familiarity breeding contempt. It is when one runs across a striking concrete example of what can be accomplished by co-operation that the real significance of the word is emphasized. Such a case is that of the Chilliwack Creamery Association, Limited.

Started in 1902 with the object of collecting cream from the farmers and marketing as butter, the creamery soon had the biggest output of any creamery west of Ontario. The advent of the B. C. E. R. tram line to Chilliwack resulted in the dropping of butter-making in favor of milk and cream, although at present between 400 and 500 lbs. of butter are churned daily. A great volume of business was done and judged by this standard the association was a success, but unfortunately no profits were accumulating.

Three years ago a co-operative plan was adopted and today the enterprise is on an absolutely sound footing with the 1915 sales expected to total \$200,000. The scheme adopted was to deduct one cent, per pound of the butter fat from each patron and the

fund to be used in wiping out past debts. Already \$4000 in debts have been paid off, and a new refrigerating equipment installed at a cost of \$6000, which has added greatly to the efficiency of the establishment. With 1915 sales totalling \$200,000, after operating expenses are deducted and the nine per cent. dividend is declared, the farmers and shareholders will receive their pro rata profit as well.

In the operation of this creamery the man with one cow is accorded the same treatment as is the man with a large herd.

## SAWING WOOD

"The farmers of British Columbia are down to real work now and are engaged in the business of farming. A few years ago a good many of them looked upon farming as an adjunct to their business and getting buyers for their places at fancy figures as the chief thing to be considered."

This is the substance of remarks made by Provincial Live Stock Commissioner Prof. W. T. McDonald to "Fruit and Farm" the other day. The cap will fit a good many farmers who during the gilt and gingerbread era of the province devoted more time to subdividing their property than they did to farming. Some of them devoted such good attention to the sub-divisions that they can afford to forget all about a farm for the rest of their natural lives as far as pecuniary considerations go. Of course, there are the others who did not sell in time, did not get a buyer or got caught when the depression came. It was very wrong of the farmers to do anything else but farm. When the lawyer, the doctor, the butcher, the baker and the candlestick maker were making fortunes over night dabbling in real estate ventures, it was the plain duty of the farmer to go on farming. Prof. McDonald, of course, did not mean his remarks in that sentiment, realizing that the farmer got bitten by the same bug as everyone else during the hey-day of the real estate excitement. Now that the province, as every country does at some time in her history and often more than once, has passed through the era of sudden riches, grumbling and disappointments, the farmer, like everyone else, is adjusting himself to the changed conditions. The farmers are still there, the land is as fertile as ever and the markets unchanged. The problem that confronts the farmer is the common problem of all—changed values. Particularly is this more the case with the small holders, many of whom bought at greatly inflated prices and not a few of whom had little practical experience in scientific agriculture. There is no question about it but that many farm land prices, like the figures of inside city property, need some serious fixing before they fit in with the return of normal conditions. This is proving a matter of considerable heart burning and disappointment right now, and the farmer is not the only man who is suffering. It is general in British Columbia. British Columbians, however, are imbued with the real pioneer spirit and are setting themselves manfully to the task. The period of readjustment is now in progress. The process will occupy some time and strand some ambitions along the pathway—let us hope but temporarily—but the sooner everyone gets down to "sawing wood" again as they used to say in old Ontario, or in other words "down to farming again," the sooner will the depressing experience be over.



### THE REAL TROUBLE

Every once in a while there arises some one to say that the farmer is at the mercy of the traders in the wheat pit and that the result of his labors is juggled unfairly by speculators. Or else the question of farm credits is given unusual publicity. These are today and will continue to be, probably, stock questions on which to start an argument, but the real difficulty, the true cause of the dissatisfaction, is overlooked.

The assertion that the producer is not receiving a sufficient return for his labor is a comparative one. It is meant to bring out the fact that the farmer's costs are in too great proportion to his receipts. By far the greatest cost which has to be figured by the one who hopes to make a living from the soil is the initial cost of the land. This is subjected to greater speculative forces than any other of the farmer's expenses.

Every detailed statement which comes out of the Fraser Valley or adjacent sections of this province today, which deals with the returns which any particular grower will receive for his labors, has indelibly stamped into the very heart of it the fact that the initial expense of the land was out of proportion to the return which might conservatively be expected. In every report the fact that the land cost the producer so much money to start with is of greater consequence in determining the reasons for the final adverse balance than any other or all others put together.

You say it is socialism or worse possibly to tamper with land values, and that you are immovably opposed to any such actions. Yet you yourself who are opposed to such theories must admit of the unfavorable burden beneath which the producers of nearby sections of Vancouver are laboring.

On every hand is heard the cry "back to the land." And the minute that the men of the country show a disposition to follow such advice land values soar to new heights and speculators who never must sweat beneath the added cost reap the benefit.

Because any solution savors of something to which you are inherently opposed you hunt for senseless, meaningless technicalities and point to them as being the cause of the present unsatisfactory condition of things. There is no doubt of the real cause of the trouble. It is apparent to anyone who studies the problem—the initial cost to the producer is too great.

This, the underlying cause of the difficulty, will never be solved by plans to assist the producer in other ways. Any plan tending toward easier conditions for the producer will be merely bullish tendencies in the farm lands market and their value will be discounted at once just as an expected stock dividend is anticipated and discounted on the exchange long before it is received. Some day there will arise leaders in the land who will realize and try to solve the real cause of unsatisfactory producers' returns and who will grapple with it as business men, with no other hope than a desire to see better general conditions result.

W. J. H.

### VEGETABLE SEED SITUATION.

The following extract of an article from a newspaper of Gothenburg, Sweden, will be of interest to growers of vegetable seeds. The article refers to the Board of Directors of the Agricultural College of Allnarp, Sweden, asking for a government grant for the encouragement of vegetable seed growing:

"The board points out that the war has most clearly emphasized the importance, for the country, of home production of vegetable seed. Owing to the most important vegetable seed producing countries having prohibited the export of such seed, the prices of a great number of important vegetable seeds have risen enormously. And, still worse, some seeds can hardly be obtained at any price. It is reported, from a well informed source, that vegetable seed growing in the countries engaged in the war has been largely neglected during the past summer and that for this reason further advances in prices can be expected. Reports from Germany state that the supply of seed of spinach, carrots, most kinds of cabbage, onions, cucumbers and peas is utterly small. Furthermore, Germany has prohibited the export of vegetable seeds to the end of the war. There is therefore every reason to fear that we have to face the possibility of a very serious shortage of certain vegetable seeds."

Seed Branch, Ottawa.

### GROWERS SHOULD ORGANIZE FOR ORCHARD PROTECTION.

#### The Need of More Co-operation Among the Fruit Growers of Kelowna in the Controlling and Eradication of Orchard Pests and Diseases.

It is my intention in this article to place before the fruit growers of the Kelowna district, the need of more co-operation among themselves, for the better control of orchard diseases and pests and also the need of more and better spraying in the future.

There are two reasons for this need of co-operation, the first is, that as the orchards become older, the controlling of insect pests and fungus diseases becomes more difficult and it is necessary to have uniform work done along the lines of control by all the growers, or the value of the work done by individuals is greatly decreased if not lost altogether. For as the air currents and insects (being the heaviest carried of disease in the orchard) respect neither fence line nor boundary, it is easily seen that one neglected orchard in a community will act as a source of infection for all the surrounding orchards. If the grower will look back for a minute and think of the diseases and pests that have caused us a direct financial loss during the past two years and see if not all of them are a community problem as well as an individual one. Do not think for a minute that individual spraying is not of value for it is of great value, but owing to the fact that there is such a difference in the materials used and the time of using them by the different growers, that much of the value of the work thus done is lost. This loss is often caused by the grower's nearest neighbor, who with the best of intention puts off his spraying until it is too late and thus not only loses the value of the work that he has done for his own place, but unknowingly has contaminated his neighbor's place.

It is to avoid such mistakes as this, that I think if the growers would take up the idea of organizing into some kind of a fruit protective league, so that they could have a meeting when necessary, and call in an expert on the subject to be discussed, so some uniform methods of prevention or cure may be decided on and followed by all the growers in that community. Also the combined experience of all the growers, as to the results obtained with the methods used, would soon prove which was the best method to use in that locality, and in



## Synopsis of Coal Mining Regulations

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

Applications for a lease must be made by the applicant in person to the agent or sub-agent of the district in which the rights applied for are situated.

In surveyed territory the land must be described by sections or legal subdivisions of sections, and in unsurveyed territory the tract applied for shall be staked out by the applicant himself.

Each application must be accompanied by a fee of \$5, which will be refunded if the rights applied for are not available, but not otherwise. A royalty shall be paid on the merchantable output of the mine at the rate of five cents per ton.

The person operating the mine shall furnish the agent with sworn returns accounting for the full quantity of merchantable coal mined and pay the royalty thereon. If the coal mining rights are not being operated, such returns should be furnished at least once a year.

The lease will include the coal mining rights only, but the lessee may be permitted to purchase whatever available surface rights may be considered necessary for the working of the mine at the rate of \$10 an acre.

For full information application should be made to the Secretary of the Department of the Interior, Ottawa, or to any agent or sub-agent of Dominion lands.

W. W. CORY,

Deputy Minister of the Interior.

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

that way, would tend to set some standard to the different spray mixtures that the growers are compelled to use, if they are to be successful fruit-growers. Never spray, never pay, is very true of fruit growing.

Another valuable feature of some form of an organization would be in case of an outbreak of some new pest or disease where quick action was needed from all the growers, or in case of an epidemic of some of the diseases that we have already. A good illustration of this point might be



in the case of a sudden outbreak of fire-blight in the very active form that it sometimes takes, especially when the weather conditions are favorable; or in the case of another season like the one just past, when Black Apple Scab caused such a heavy loss to some parts of the valley.

In the state of Washington, it is due to the existence of the fruit protective leagues among the growers that they have been able to control and in some cases almost eradicate the fire-blight from their orchards. All fruit growers will realize the value of having every grower in his community cut out all the blight in his orchard, the same time as his neighbor does, thus doing away with the orchard to orchard infection that is so deadly at blossoming time.

I would suggest that the growers think over some form of organization whereby we will get better results from the work that we put on our orchards and thus cheapen the cost of producing our fruit.

JAMES M. BRYDON,  
Dist. Inspt. Fruit Pests.

#### HOGS AND DAIRYING.

The hog fits in especially well upon dairy farms where skim-milk, or whey has to be fed upon the farm. Perhaps no animal will give as high returns for dairy by-products consumed as the hog, and no feed gives a finer quality of bacon than daily by-products. It is also worthy of note that the man who has skim-milk is in a better position to raise pigs than the man who has none, for the reason that it is difficult to find a satisfactory substitute for skim-milk for young pigs just after weaning.

#### IN PRAISE OF THE AYRSHIRE.

Good progress is indicated for the Ayrshire breed of cattle by the annual report of the Canadian Association which is a bulky volume of 173 pages. Complete lists of cows and bulls that have qualified in the Record of performance have been compiled by the secretary, Mr. W. F. Stephen, of Huntingdon, Que. Along with the report is a brief circular outlining the merits of the Ayrshire as a producer of milk and butter. The Ayrshire, it is claimed, produces the largest quantity for the food consumed and yields the largest net profit. This has been proved in competitive public tests. The Ayrshire produces the most desirable milk for the milkman of any of the dairy breeds because of the uniform high quality in total solids, placing it above the standards required by municipal laws. The Ayrshire milk is the most satisfactory to peddle because it will bear transportation without churning to butter, and will hold its uniform quality to the last quart in the can.

The Ayrshire has proved by official tests that she is a big producer as the following summary of records will show the results of five years' record of performance work in Canada.

One hundred and sixty-eight cows gave a yearly average of 10,234.44 pounds of milk, 411.43 pounds of butter fat.

Fifty-three four-year-olds gave 9,276.20 pounds of milk and 376.79 pounds of butter fat.

One hundred and two three-year-olds gave 8,276.38 pounds of milk, 343.46 pounds of butter fat.

Two hundred and forty-four 2-year-olds gave 7,489.03 pounds of milk and 306.42 pounds of butter fat.

Mr. Pratt of Bradner, last month exhibited a parsnip weighing two and a half

pounds, a seven-pound white field turnip and a potato tipping the scales a little over four pounds.

A very notable improvement in the apple packing methods of Spence's Bridge and Lytton this year has created a good demand for the large shipments from these districts and have netted the growers a fair return.

The district about Ashcroft is going in extensively for sheep.

#### THE FOOD VALUE OF MILK.

The fact that milk is one of the cheapest and at the same time one of the most palatable and digestible foods is not generally known. This is shown by the decrease in the consumption of milk in times of money stringencies. When a family is forced to economize on its allowance for food, the milk bill is about the first to suffer. The amount purchased is reduced from a quart to a pint or discontinued altogether. A knowledge of this dairy product as compared with various other articles of food would cause some people to find some other source of cheapening the cost of living.

#### B. C. DAIRYMEN MEET IN JANUARY. Provincial Convention to be Held at New Westminster.

Preliminary arrangements have been completed for the holding of the annual convention of the B. C. Dairymen's Association at New Westminster during the last week in January, 1916. Mr. H. N. Rive, head of the dairy division of the Provincial Department of Agriculture, and Mr. T. A. F. Wiancko, inspector of the dairy department, have just returned from New Westminster, where some of the preliminary work in connection with the convention was arranged. It has been decided to hold a competition for the members for three different classes of milk during the convention. The classes which will be judged are approved milk, market milk and market cream. There will in all probability also be a competition on butter exhibits.

It has also been tentatively decided to hold provincial seed fairs at the same time, at Armstrong in the Okanagan and at New Westminster. This is a new departure in the work of the provincial department, and will be held under the auspices of the soil and crop division of the Department of Agriculture. This seed fair will comprise a competition for all members of farmers' institutes throughout the province who have engaged in the field crop competitions. Scores will be made and the awards based on this method of judging. Boys and girls who have engaged in the crop competition will also be encouraged to send seed from their plots.

The officers of the B. C. Dairymen's Association are Mr. William Duncan of Sandwick in Comox district on Vancouver Island, who is president, and Mr. H. N. Rive, secretary-treasurer. The convention of the association was held in Vancouver last year, two years ago at Chilliwack, and three years ago at New Westminster.

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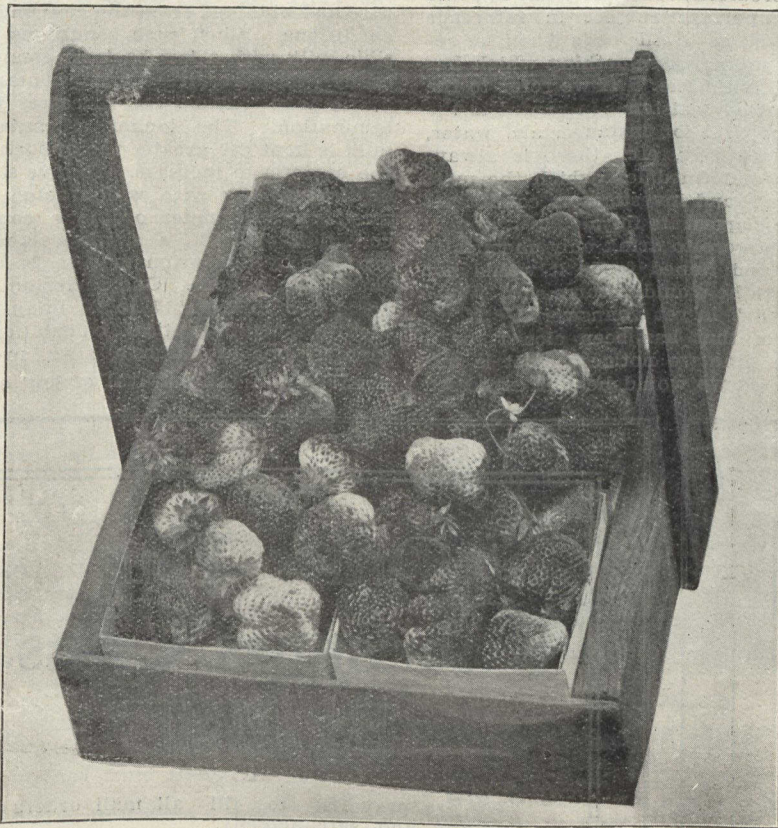


## The Ever-Bearing Strawberry in B. C.

In the past the ever-bearing varieties of strawberries have been regarded by growers as a novelty, not to be considered as being profitable for a commercial undertaking. This view-point was quite warranted in regards to the varieties of ever-bearers that were introduced at first and which did not prove to be profitable to the commercial grower inasmuch as the quality and bearing result of the berry failed to produce a crop of fruit in marketable quantities.

The early varieties of ever-bearers have lately been crossed with the standard varieties of strawberry plants and the result has given us a commercial berry, not only profitable but a pleasure to grow. The writer of this article has had fresh strawberries from the middle of the month of

with a view of determining the kinds of plants that would be better adapted to this moist climate. The survival of the fittest was to be the test under conditions of wet above and wet beneath. All the varieties thrived well the first year after planting. The ever-bearers commenced to bloom shortly after being set in and the blossoms were nipped off. This required constant attention and the remarkable vitality of the plants was surprising. The writer has since abandoned all efforts in persisting to pinch the bloom off this ever-bearing variety. This pinching off process was done merely to give this variety the same chance as the other kinds in the plot and to conserve the vitality of the mother plant for throwing out sturdy runners.



B. C. STRAWBERRIES.

May up till the latter part of October, at the time of writing, and the plants are still bearing and blossoming.

The following article deals only with the "Superb" variety of ever-bearers which the writer has been growing the past three years on his farm at Hatzic, B. C., in the Fraser Valley district. This variety was selected at random from a nursery catalogue and it is quite possible some of the other kinds may do as well or better. The writer intends to plant a patch of Progressives this coming spring and believes that this variety, which is a cross with the Senator Dunlap, will succeed well in the Lower Fraser Valley.

The plants which were received in May, were planted in the usual way with several other varieties of standard kinds in an experimental bed. The soil in this plot was similar throughout and being on low ground was inclined to be quite moist the greater part of the year. This bed was selected

the results of this test at bearing time the following June may seem incredible but nevertheless true. The Superb and Dunlap varieties thrived and cropped fairly well. The others of six different kinds threw a huge crop of berries and at ripening time took blight and gradually pined away. In fairness to the vanquished varieties an explanation is offered. The land where this plot was situated had been under-drained in the winter preceding the setting out of the plants. The following winter it was necessary to further drain this land on account of weather conditions at the time. However, experience afterwards with all these varieties in both the hill and matted row systems proved invariably the case that with exact conditions they did not become adaptable to soil and climate.

The Superb berry in form is roundish with bright red flesh and has yellow seeds. The flavor is decidedly passe. All who have tried this berry have remarked favorably

upon its distinct flavor. Of course, it may not appeal to all as tastes differ extremely, but the fact of having strawberries on the table for four months in the year should tempt the most skeptical into planting a few of the improved ever-bearers, if it is only for home consumption.

The Superb has been called a fall-bearing variety, the reason being that it produces continuously in the fall while in the spring it bears for about a month only and then rests up for three to four weeks. From a fruit-growers' view-point in the Fraser Valley it might reasonably be termed a summer berry.

This is explained by existing conditions which might be enumerated as follows:

The uncertainty of weather conditions at the usual strawberry harvesting time in the spring, when growing the commodity with success is a long betting shot with odds in favor of old Jupe Pluvius' sprinkling cart.

Meeting competition from points where weather and marketing conditions are better. The heavy producing strawberry months of June and early July usually have a glutting demonstration in the distributing centres of the east and west in which the car-lot shipments participate, with the L. C. L. shippers in the also rans.

Thus it can be readily seen that strawberries grown in the month of August have little or no competition. The demand is good, consistent with the quality of the fruit, of course, and weather conditions are nearly always favorable for growing and marketing berries in good condition.

The Superb is a remarkable hot weather shipper, standing up better in long-distance shipping than any of the other standard varieties that cropped this fall. This fact was ascertained by a test that the writer made in the hottest weather of the season. This variety actually defies Old Sol, but on the other hand it is no wet weather berry. The contrast between the Superb and the Senator Dunlap is quite apparent.

To illustrate the producing qualities of the ever-bearing variety, the appended description of a plot planted last fall will give an idea of what may be expected. The conditions for success in growing summer and fall strawberries could not have been better than this year and it would be misrepresenting facts if this report was to be accepted on an average basis. However, as this was the writer's first experience of this variety from a commercial standpoint and with a crop of fruit from plants set out the same year, the results cannot be summed up as particularly spectacular from a financial point of view, but the outlook for the ever-bearer under proper conditions should easily pay good interest on the investment.

In preparing the land for this patch, a crop of sandy vetches was ploughed under and the soil was worked up as fine as it could be done. It might be as well to mention that the ploughing was done in the fall and was then harrowed. Afterwards, in the spring, the soil was worked up fine and a leveller, composed of three planks spiked together, was run over the ground, which packed the soil sufficiently to allow the plants to be set in immediately. The plants were placed 18 inches in the row and the rows were 3 feet apart. The area of this patch was 12 ft. x 140 ft., or four rows of 140 ft. in length. The plants were kept in the hill system and were hoed and cultivated frequently to keep clear of weeds. In June the bed was fertilized with a commercial fertilizer.

It was intended to allow the bloom to remain without the usual pinching off pro-

Concluded on page 808



## Everyday Questions About Milk

By R. H. MEEK.

Some interesting information on bacteria and other matters related to milk are answered by Mr. R. H. Meek, Food Inspector for the City of Vancouver.

Increasing attention is being paid to the milk supply of large cities, it having been painfully demonstrated in the past that carelessness and inattention by the authorities have been responsible for the spread of disease and have been the fruitful source of much sickness. Among the British Columbia cities Vancouver has been one of the foremost to establish a careful system of supervision of its milk supply. Capable officials have charge of this branch of the health department of the city, and the results have been most satisfactory. Mr. R. H. Meek, Food Inspector for Vancouver, has taken a very keen interest in the work and has proven a most useful official. In the following paper he answers several questions that have been asked him:

### What is meant by and what is the bacteria test for milk in Vancouver?

For the present the bacteria count of milk is used solely to find out whether the milk arrives at the consumer's door in a fairly clean state. The presence of large numbers of bacteria indicate a lack of clean handling at some point. If samples are taken out of the cans at the station and upon examination show a large count it is concluded that either the milk is old or that there is lack of care in production. Owing to the required time in looking for pathogenic germs it is found impracticable to

search for them. They may be present in a milk with a low count; hence the reason of pasteurization to endeavor to make it safe. Germs exist everywhere and no matter what care is taken some germs will find their way into food stuffs which may themselves be objectionable or harmless. At present there is no scientific methods of quickly finding pathogenic germs. But all civilized races through their boards of investigation are trying to solve the problem.

We have at present the testing of cows to find if they are tubercular so as to eliminate as far as possible that disease, but it must still be remembered that there are other germs and diseases of cattle which should claim as much attention; and it would seem that until the people are given some insight into the question of "What is life?" that many problems affecting our daily existence must remain unsolved. Dr. J. Roddick Byers in his paper on "Milk," read at the fourteenth annual meeting of the Canadian Association for the Prevention of Tuberculosis, refers to what appears the most important subject in reference to milk as well as to all foods when he refers to that unknown something which has been termed "vitanime." If we refer to the whole field of our existence in regard to the necessities of life, for instance, air, water, light, food, clothing, etc., there is always a something undefined left which the most expert analysts and investigators cannot yet find or even suggest its form.

If a person were to drink only chemically pure water and tinned foods it would not be long before he would become sick. Why? And this "why" is yet unanswered. If we enter a room that has been closed for a considerable time we notice that it is unpleasant, or, as we would hear it expressed

"There is no fresh air in the room." If analysis were made of the air, the analyst could not tell us what is missing; but we all know that the first thing most people would do is to open the window. Now it is this something called vitanime which is necessary in milk. The question then is: How can milk be made quite safe by ridding it of pathogenic organism and yet have present the essential life-giving properties contained in the food? By experiments it has been found that the germ of tuberculosis is killed if kept at a temperature of 145 degrees fahrenheit for 20 minutes and then cooled to 45 degrees fahrenheit. When this is carried out it is called pasteurization. This method of endeavoring to safeguard a milk supply is so far the most favored. The advantages claimed for it are sometimes outweighed by the disadvantages. For instance: it may be a cause of carelessness at the point of production, or handling at the dairy. The safest milk is milk from disease-free cows, that is, not more than a few hours' old and handled with commonsense care and obtained from the cow under clean conditions. When such conditions are possible milk with a low bacteria count is generally the result—every contamination counter to cleanliness increases the contamination. The longer a contaminated milk is kept the greater the opportunity for the bacteria to increase. To give some idea of the rapidity with which some bacteria may increase under ordinary commercial condition of milk, a single bacterium increasing by dimension may in 24 hours be counted in billions. One bacterium will become two in from 15 to 20 minutes. The rest is a mathematical calculation. Fortunately one of nature's laws prevents a possibility of the survival of any one form

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of life, and this brings one to another question.

**For how long after milk turns sour is it fit for use?**

Here we deal again with a question of bacteria, for milk is rendered sour through the action of certain germs known as bacteria lactis, which turn the milk sugar into lactic acid. Milk which has turned sour is in a way nature's method of telling us that the milk is not as it should be. When lactic acid is present in milk it breaks up the casein and we have what is called curdled milk. From this stage the decomposition of the milk is usually rapid. Gas-forming bacteria now occupy the field and render the milk putrid. During the stages of change from the normal condition of the milk there are certain periods when, if the milk is consumed, there is danger of contracting sickness. It would appear from the investigation of the highest authorities on the subject that the most dangerous time to use milk that is sour is that period in its change when it is on the turn from one stage to another. For instance: If sour milk is left for a sufficient time it balances between a sour milk and a putrid article. Unfortunately that period cannot be detected by the taste or smell; yet it is stated to be of a poisonous nature at that time. When there is no doubt that putrescence has set in then it is unlikely to be consumed, but the toxic nature of the article as it increases in putrescence gradually decreases in its poisonous properties though very unsafe to think of using for consumption. Therefore it will be seen that no answer can rightly be given to the question. Sour milk is simply a form of decay, and in any question seeking to know at what stage decaying matter is fit for use as food must of itself rest with the individual, for what is food to one person is poison to another. It is perhaps not difficult to recall to one's mind the various likes and dislikes of persons in regard to food, and here it may be of use to mention the tastes of some people of different nations. Certain people in very cold regions have a great fondness for tallow candles, that is, for eating. Some people of the Occident have a preference for fish that to us would be putrid; others for eggs. The older the greater the delicacy (to them), so that we find the question must be left to the individual since we ourselves all vary in our tastes. Some of the variations in taste have acquired a liking for the product obtained from Bulgarian culture.

**What is Bulgarian Culture?**

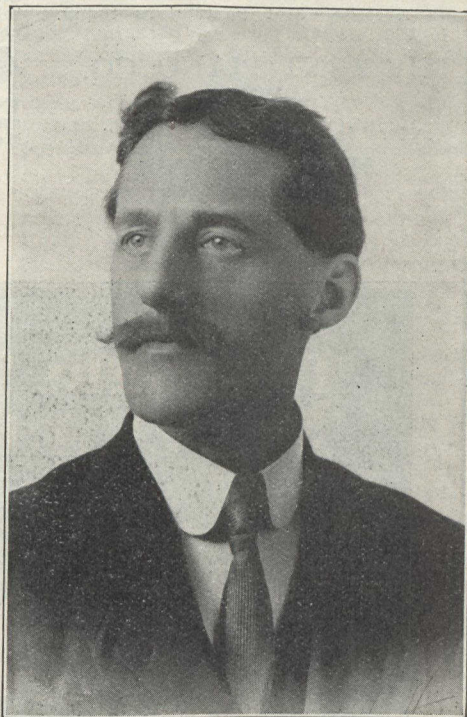
On this question I cannot say much. In appearance it is like the part of a head of cauliflower. It increases under the same favorable conditions as many of the other bacterial forms, and gives to milk a rather pleasant taste, somewhat similar to Devonshire cheese. It is claimed that Bulgarian culture has the property of so altering milk as to make it highly beneficial and if constantly consumed to prolong life by the action of ridding the system of certain objectionable micro-organisms. But at this point it is well to remember that the Bulgarians have been using this form of food for many years, so that the result of its continued use may be the cause of the age to which Bulgarians live. To have the impression that by using it every now and again, or for periods of time is going to show results will be disappointing.

**What is the fat test?**

The testing of milk for butter fat is carried out so as to ascertain if there is present the legal food standard. The minimum

standard for Vancouver is 3.25 and for non-fat solids 8.50. The fat is a valuable food constituent, for there are very few people who do not like cream. The non-fat solids consist of salts which nature has provided for the building up of the body of the young of cows. Cow's milk is closely allied to the milk of the human mother, the one chief difference being between the milk sugar, which is more abundant in the human milk. Summary of difference between cow's milk and woman's milk:

	Woman's Milk Per cent	Cow's Milk Per cent
Fat .....	4.00	3 to 4.00
Protein .....	1.50	4.50
Sugar .....	7.0	4.50
Salts .....	.20	.75
Water .....	87.30	87.25
	100.00	100.00
Calones, per kilo .....	710.50	700.00



**R. H. MEEK**  
Food Inspector for the City of Vancouver.

**Why could cream not be sold in paper cartons as in some cities?**

The reason is chiefly one of economy. If the people desire such they bring about the change by requesting a dealer to provide it that way and then dealing only with him. Then competition will soon bring about the desired change, but before deciding on the paper bottles it is well to remember that they have their disadvantages. The material of which the cartons is made is important. The method of manufacture whether under conditions of hygiene and sanitation, the condition of manufacture of the wax, and the methods of putting the wax on the cartons all should have consideration. Both methods—the glass bottle and the carton—have advantages and disadvantages.

**With Regard to Evaporated Milk.**

The process on general outlines is that the water content of the milk is evaporated so as to bring the milk down to the consistency of cream. Sugar is then added in some cases. It is then put up into cans which are subjected to heat for the purpose

of rendering the contents sterile. There are various processes but the general procedure is to carry out the requirements as stated.

I would before concluding like to suggest several good books on Hygiene: Practical, Alice Ravenhill; Household Hygiene, S. Marie Elliott; the Cornell Reading Course, Monthly Publication, Miss Martha Reneselaes, Ithaca, New York, U. S. A.

**B.C. Fruit and Farm Jottings.**

Continued from page 786

Summerland's first agricultural fair during November was such a success as to ensure the continuance of such exhibition in that place. The fair was a concrete evidence of the transformation that has been brought about in the last two years in the methods of farming in that district. The show of live stock was the most encouraging feature of the fair.

George J. Bury of the C. P. R., who last month toured through the province says:

"In respect to conditions in southern British Columbia, I noticed on all sides numerous indications of returning prosperity. I was very glad to see such progress in mixed farming. This is the keynote to true progress and prosperity for the whole country. Produce more and import less. A couple of years ago we used to have New Zealand butter, Australian mutton, and vegetables from Oregon and Washington consumed in large quantities all over the West. Today Canada is exporting butter to Australia, and vegetables to Australia and New Zealand, which shows that we are making progress towards the point of actually becoming an exporting country instead of an importing one. During my trip through the Boundary and Okanagan districts we noticed many signs of new settlement in the valley, where the farmers are all going in for mixed production. I am confident that the future of British Columbia depends very largely upon the degree in which you produce from the soil.

Mr. Fred Bridge who lives four miles from Abbotsford claims to have had corn four weeks earlier this year than California corn. The corn was particularly sweet and toothsome.

The statement made by Dr. C. C. James of the Federal Department of Agriculture educational branch on his return to Ottawa from his western tour\* includes the following: "In British Columbia Deputy Minister W. E. Scott states that the most productive work in his department is that carried on through the federal grant, the principal lines being demonstration work on farms, instruction in fruit and vegetable growing, improvement in dairying, and women's institute work. One illustration was given: At a moderate cost arrangements were made with Mr. J. L. Hilborn, well known as a former Ontario horticulturist, to make his farm at Summerland a demonstration station. As a result there has been developed in that section within one year a big export of high-class vegetables grown under glass and in the open. In addition, \$15,000 has been expended through the Department of Education for introducing agriculture and nature study into the public schools."



Mr. W. E. Scott, deputy minister of agriculture, was in receipt a few days ago of choice British Columbia grown grapes forwarded to him by Major Feldtmann, an English farmer, who is operating very successfully on a large ranch in the neighborhood of Penticton. The fruit was splendidly developed and in color and flavor compares favorably with the imported variety. As indicating the success which Major Feldtmann has attained with his grape culture this year, it may be mentioned that one bunch on a single branch weighed no less than five pounds. The result of this experiment in grape culture indicates very clearly that Penticton and other points in the interior may reasonably aspire to some day becoming a grape producing country on a commercial scale.

### Western Canada Livestock Union Meets

One of the important matters dealt with at the convention of the Western Canada Livestock Union, which met in Victoria on Oct. 27 and 28, was that pertaining to inspection of cattle about to be shipped to British Columbia. A resolution was passed calling upon the Minister of Agriculture of the Dominion to introduce legislation requiring the inspection of cattle, about to be shipped, in the province of their origin. This was carried without dissension, attention being called to the fact that cattle shipped from the East to British Columbia and tested for tuberculosis on their entrance to the province were thrown back on Alberta. The Alberta delegates took exception to this and their attitude received sympathetic consideration.

Some discussion took place on the question of the prevalence of tuberculosis on the ranges. Dr. S. F. Tolmie brought up the subject when he stated that it had been found among the cattle of the interior portions of British Columbia, and called for an expression of opinion. Dr. Rutherford, the president, gave a technical explanation of some of the probable sources of contagion. Its spread might be accounted for by use of unhealthy imported bulls and through the faeces. He said that while there undoubtedly was some tuberculosis on the prairie ranges, it was not common among the real range cattle. Where it did occur the severe winters might be depended upon to cull the affected animals. This was not so in British Columbia and California, where the climate was milder, so that it was to be expected that the stock raisers in these sections would find it somewhat of a problem. He stated that the healthiness of the Canadian cattle was proved by the fact that only between .11 and .13 per cent of those exported to the Old Country were found to be infected, as against 13 per cent of the home stock. He attributed the low figures of the Dominion's exports to the condition of the range steer.

#### Big War Orders.

It was announced by Dr. C. C. James, special representative of the Dominion Agricultural Department, that an order has been obtained from the British War Office, as a result of the activities of the Markets Branch of the Federal administration, for 6,125,000 pounds of canned beef. The Canadian packers, he stated, had undertaken to supply it, and, if it was satisfactorily filled, other contracts of a similar nature might be expected. Dr. James gave particulars of other steps being taken for the

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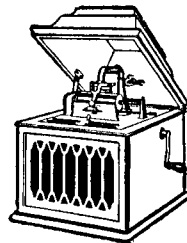
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encouragement of the livestock industry in the Dominion, and his remarks were followed with the closest attention by the delegates, who represented influential organizations of the four provinces lying between the Great Lakes and the Pacific Coast.

In a short address by the Hon. Mr. Motherwell, in the course of which he outlined the progress made by his province in the adoption of co-operative methods of handling grain elevators and the dairy industry, the speaker intimated that it was the intention to take some action with a view to improve the marketing conditions of the livestock products of the section. A commission was to be named, he stated, which would make the fullest investigation and, if it was able to submit a solution after mature consideration of the problem, it would be put into practice as soon as the financial condition improved.

**Agriculture the Base of Success.**

Among those in attendance at the convention was the Hon. W. R. Motherwell, Minister of Agriculture of Saskatchewan. Mr. Motherwell stated that as a result of his trip west he had a newer and broader vision of the possibilities of Western Canada in respect to production from the soil. He had been particularly interested in what he had seen of British Columbia, which had so many varied industries; but in his judgment agricultural production would be found to be the basic foundation for the success of all of them.

The journey west had impressed him most in his revelation of the enormous extent of the potentially productive area, with almost illimitable possibilities for development. Saskatchewan had a direct interest in the progress and development of British Columbia, for it looked upon this section of the Dominion as a natural and growing market. He mentioned in this connection that Saskatchewan this week was shipping to British Columbia twenty-four carloads of creamery butter. But the wonderful productivity of the soil of British Columbia would no doubt ultimately make the province self supporting in respect to its food supplies. Agriculture he termed the basis of all true prosperity, but people should disabuse their minds of the idea that anyone could get rich quickly on the farm. It was a case of slow but sure progress. He very heartily thanked the mayor for his words of welcome to the delegates, who felt quite at home in Victoria.

**The President's Address.**

Dr. Rutherford, the president, said that no country in the world could prosper if it contented itself with but one form of production, and if agricultural production in Canada was to be maintained at a high level, it was vital that the livestock industry should be developed. A spirit of co-operation should be encouraged in every possible way, and this could best be done by the Union, which was now but merely in the formative stage. Some measure of success had already been achieved, as they were gradually getting into the membership every producer of livestock in the West. They were confining membership to livestock men, because it was realized that without intelligent unity amongst one class of producers, the livestock industry could not flourish.

Dr. Rutherford said that the producer must get a fair and profitable market. This was not always obtainable, for the packers of Canada when the market was slow made the mistake of attempting to squeeze the producer, who, in turn, grew discouraged. The packer should be willing to bear his share of the hard times; but no, he had not

learned the lesson, and often found that as a result of decreased production which had been brought about through the squeezing process he was compelled to operate his plant at only one-fifth of its capacity. The farmer was a fair-minded man, but when he believed that somebody was getting an unjust profit, he grew disgusted and unhappy. The day was rapidly coming when the Union would prove the most powerful factor in respect to production in Western Canada. Few people seemed to realize that without agriculture there would be no cities or financial institutions. He would term agriculture the keystone of Canada's industry, and livestock the keynote of agricultural production.

Mr. Andrew Graham referred to the work of the convention in combatting the energies of the commission men and packers on the prairies. At Winnipeg, the commission men had made an attempt to get legislation enacted which would help their position and hinder the producer, but, happily, this had been thwarted by the Union, and it was now contemplated to place restrictive legislation on the commission men. It was necessary for the producers to protect their interests, and this was one of the most important tasks to which it could set its hands.

**Regarding Legislation.**

Mr. Motherwell submitted a resolution setting out that, in the opinion of the Union, no legislation should be passed by the Dominion or any of our Western provinces, without consultation with the executive of the Western Livestock Union. It was carried unanimously.

Some discussion ensued as to the advisability of having livestock salesmen and exchange men under bond. The matter was introduced by Mr. George H. Gray of Winnipeg, who asked for an expression of opinion as to the wisdom of taking some action, and he thought that the ground might be covered by giving the executive power to investigate and report. It was concluded that as there were other matters of kindred nature affecting the interests of the producers, a blanket resolution should be prepared covering them all in order that the hands of the various provincial organizations might be strengthened in the event of any emergency during the twelvemonth. Messrs. Motherwell, Gray, Graham and Walters were appointed a committee to draft the resolution.

The use of screenings, of which large quantities are shipped out of the prairie provinces annually, and which come back in the form of stock food for which the farmers pay as high as \$40 a ton, was the subject of a lengthy debate. Reference was made to a bulletin prepared by the Federal Government on the value of this by-product of the crop. It was represented that this waste constituted a loss of thousands of dollars to the livestock men of the prairies, and that in years when the stock food is not plentiful, such as was 1914, it was a very serious matter. Various opinions were expressed as to the wisdom of putting the Union on record as favoring the use of these screenings, which are made up of broken wheat, wild oats, and the seeds of weeds of a various character. It was the fact that there is a large percentage of the latter in it that made it a difficult thing for the delegates to arrive at a conclusion. Some thought that it would be best if all farmers thoroughly cleaned their crops before they left the farm. Others, holding this to be impossible, thought that it should be screened at the elevators, and others inclined to the view that it should be ground at the lake front to such a consistency as to re-



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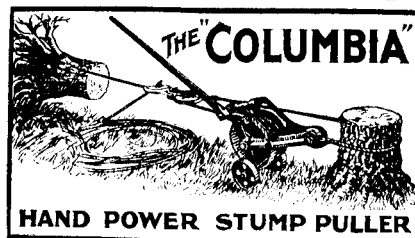
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move all vitality from the weed seeds, when it might be re-shipped to the farmers in the event of their needing it. But there was a general doubt as to the wisdom of assuming the latter attitude, especially when Mr. Marshall stated that any food containing weeds would be burnt on the border of Alberta, and Mr. Motherwell agreed that he could not approve of relaxing in the slightest degree the restrictions incorporated in legislation to prevent the spread of weeds through the country. Still it was agreed that there was much of value in the screenings which was lost to the farmers, and it was concluded to ask the Provincial Departments of Agriculture to investigate the matter in conjunction with the Federal administration and to report to the Union. This was put in the form of a motion and carried.

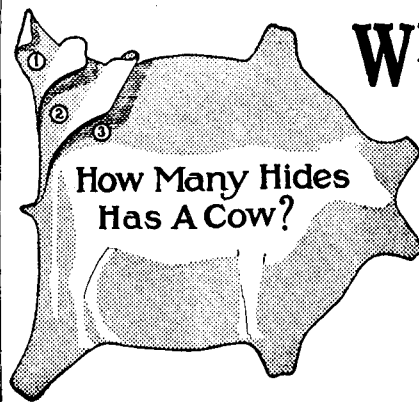
#### Single Crop System Condemned.

Dr. James, Dominion Agriculturist, in addressing the convention stated that no country could continue to prosper on a single crop system. In order to bring home this point he had obtained some figures with respect to the wheat crops, showing what the acre had paid the farmer on the average per year.

1910—14.89 bushels per acre at 75 cents—average earnings per acre \$11.67.  
 1911—20.80 bushels per acre at 64 cents—average earnings per acre \$13.31.  
 1912—20.38 bushels per acre at 62 cents—average earnings per acre \$12.64.  
 1913—21.04 bushels per acre at 67 cents—average earnings per acre \$14.10.  
 1914—15.37 bushels per acre at \$1.43—average earnings per acre \$21.98.  
 1915—(According to latest figures) 25.89 bushels per acre at 80 cents—average earnings per acre \$20.71.

The speaker asserted that a close scrutiny of these statistics would prove the statement that Canada could not hope to place her dependence on the wheat crop of the Middle West alone. Of course, the last two years showed big profits, but they had to be counted out in giving the question serious consideration because the conditions arising out of the war were responsible for the remarkable prices obtained. With regard to the figures given for the present year he said that they were only approximate, although he believed that the farmers' profits per acre would be about as great as in 1914.

Looking at it from a national standpoint, however, there was no doubt that wheat growing had to be supplemented by something, and that something was mixed farming, which meant stock raising. As soon as the latter was mentioned the necessity of obtaining markets was realized, as it was impossible to persuade the people to forego one form of activity for another unless the way was clear for the sale of that which they were asked to produce. Because of this the Federal officials had decided last summer on the establishment of a markets division of the Agricultural Department. Its primary function was to help stimulate market conditions. There was no intention of interfering with the Livestock Union, nor was it the intention of taking the place of the packers, but what was proposed was to establish an organization for the obtaining of all information concerning markets which might be of value to the producers. It was proposed to keep informed of what supplies of livestock were available in the various provinces. By being in touch with market conditions on one side and the producers on the other, the later would be kept posted on conditions of deep personal interest to them.



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#### The High Cost of Living.

As to the selling, Dr. James stated that, as a member of the commission which investigated the increased cost of living, it had been found that the most potent factor in the high prices was the multiplication of agencies between the producer and the consumer. In its progress from one to the other the cost of an article frequently was quadrupled. If some method could be devised to cut down the cost of distribution much would be accomplished. The problem was to some extent to break down the bridge connecting the producer and consumer. In arriving at a solution the keynote was "co-operation." In facing this work the department had in mind the application to the livestock industry of some of the principles which had been applied to other phases of production with success. When egg circles had been introduced in Prince Edward Island their efficiency had been doubted, but it had been proved by the increased market development in the large cities of the Eastern States. The grading of wool had brought better returns to the farmers than the old method of selling it in bulk. Why should not such a principle be carried through the livestock industry? That was a question being taken up by the new Federal branch.

Another problem was the creating of greater public interest in livestock. Canada, he thought he could safely say, at last was waking to the fact that agriculture was its greatest resource and that livestock

was its basis. People were beginning to realize that the Dominion had to look after herself, that the time had passed when she could run to the Mother Country whenever in need and borrow \$25,000,000 or \$50,000,000. She had to develop her own resources along economical lines. He thought that a start had been made, which was a great thing.

Dr. J. G. Rutherford, the president, was delegated to attend the convention of the Livestock Society of the United States, which is to be held in Texas. Dr. S. F. Tolmie was named an associate delegate.

Calgary, Alta, was named as the scene of the 1916 convention of the Union.

Officers were elected as follows: Hon. president, Hon. M. Burrell, Minister of Agriculture; president, Dr. J. G. Rutherford; vice-presidents, Mr. Andrew Graham, of Manitoba; Hon. W. C. Sutherland, of Saskatchewan; Mr. J. L. Walters, of Alberta; Dr. S. F. Tolmie, of British Columbia; secretary-treasurer, Mr. E. L. Richardson, Calgary, Alta.

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## Kootenay Bee-Keeping.

By WM. HUGH.

Kootenay beekeepers recently held their first annual meeting at the City Hall, Nelson. Hon. Secretary-Treasurer W. J. Sheppard in his report for the year ending September, states: The Association organized in September, 1914, is the first beekeepers' association to be formed in British Columbia. Seventy-eight members have been enrolled. Unfortunately the past season has not been a good one for honey production in this section of the province. Exceptionally fine and warm weather prevailed during March and April when the bees went ahead and promised well, but the following three months, May, June and July, were excessively wet and cold, consequently the clover on which we mainly depend for our surplus honey crop, yielded but very little nectar. The honey taken is much darker in color than usual. In many instances colonies were actually starving in June, and would have succumbed had they not been fed with sugar syrup. The honey label, adopted by the association for the use of members, to prompt uniformity in putting up honey for sale, has met with general approval, and 3,825 have been sold. The following resolution was passed at the annual meeting: "Resolved that the minimum price of wintered over colonies and swarms, on combs, sold by members of the association, be \$12.50 and \$1.00 respectively, at the point of delivery."

Mr. W. J. Sheppard, the hon. secretary, invites all interested in beekeeping to join the society, the annual fee is one dollar. Among the many advantages gained by becoming a member the following may be mentioned. The society has made arrangements with a firm of bee appliance manufacture in Nelson, to sell hives, etc., "at reasonable prices." Honey labels, glass jars and cans for honey, brood foundation are supplied at almost wholesale prices. Bee journals can also be obtained at a reduced rate. Then, there is the added advantage members gain through association, wherever two or three beekeepers get together, there is mutual helpfulness. The association has issued a neat label inviting all to EAT B. C. HONEY. May I suggest to the members to go a step further and encourage B. C. magazines by sending their reports and items of general information interesting to beekeepers in B. C. These columns are open to the Kootenay Association.

Ontario beekeepers met in convention at Toronto, November 23, 34 and 25. A very attractive programme was before the members for consideration. Addresses were delivered by several well known specialists, among whom were Dr. E. F. Phillips, in charge of Bee Culture Investigation, U. S. Dept. Agr., Washington, D. C.; Morley Pettit, F. W. L. Sladden, Ottawa; Prof. S. Caesar, B. S. A., Provincial Entomologist, Ont., and J. L. Byer.

British Columbia beekeepers residing in the district of New Westminster and Vancouver Island are asked to send their names to the Editor if they are willing to assist in forming a beekeepers' association. It is proposed to call a meeting of all interested during January in the city of Vancouver.

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### Wintering in the Cellar.

In wintering bees in the cellar the aim should be to give them as much fresh air as possible without letting the temperature of the cellar drop below 40°F. nor rise much above 45°F. Where fresh air is deficient the temperature should be kept down to about 40°F., but bees do better with an abundance of air in a temperature of about 45°F.—a combination hard to get in most cellars. The cellar must be dark and the air sweet, and neither very dry nor saturated with moisture; draughts should be avoided. Dead bees, if numerous, should be swept out in January, and again early in March. The bee-cellar should be partitioned off from the portion of the cellar containing roots; mice should be excluded, and the bees should be left undisturbed. If the bee-cellar is in the basement of a dwelling house the bees soon get accustomed to the tramping on the floor above.

Bring the bees into the cellar on a cool day in November as soon as reasonable expectation of another good cleaning flight has ceased and before zero weather sets in. To bring in the bees the entrance may be closed with soft paper, which should be removed as soon as the bees are settled in the cellar; the covers should be removed from the hives, and their places taken by bran sacks, two or three being folded double on each hive. To prevent dead bees accumulating and blocking the entrance, a space of one and a half inches to two inches should be left under the combs, with the

entrance the width of the hive, and one or two inches deep, and the hives may be tilted behind.

### Wintering Outside.

In many places where the winter is moderately cold bees are now being wintered outside in wintering cases constructed to hold four hives each, each pair of hives being placed back to back. There is a space of two or three inches between the sides of the case and the hives, and in the colder regions underneath also, and ten inches above the hives; all these spaces being filled with planer shavings or other insulating material. The bees are allowed to fly through small entrances made in the sides, and ventilation is provided under the roof, which consists of light boards covered with waterproof sheeting. The bees will come to no harm if the entrances get buried under soft snow. For wintering outside, it is important that the apiary be well sheltered from wind by, for instance evergreens or a high board fence.

### Supplies.

The winter is the best time for the purchase and preparation of bee supplies. Frames should be made up and wired ready to receive the foundation. The beginner will make no mistake if he adopts the ten-frame Langstroth hive as standard, and prepares a good supply of extracting supers to take Langstroth frames. A telescoping hive-cover packed with excelsior or shavings and covered with waterproof sheeting is better than a plain cover made of a single thickness of board, as it helps to conserve the heat in spring and to protect the bees from hot sunshine in summer.

### Empty Combs.

Next to the bees, the most valuable asset of the extracted-honey producer is a plentiful supply of good, clean, empty combs. Empty combs should be stored for the winter in the supers, which should be stirred up with newspapers between each, and a cover on top to exclude mice. To prevent the wax moth from working in the combs they should be kept in a cold place.



# Gardening for the Home

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

(Our readers are invited to submit any troubles or difficulties which they may encounter, to Mr. Eddie, who will be glad to give them his advise, the outcome of technical training and practical experience. Address letters to the Editor.—B.C. Fruit and Farm Magazine.)

I doubt if there is another operation in practical gardening which is surrounded by more superstition and ignorance than that of pruning. The superstitious are those who imagine there is something approaching the occult in the operation which is only given to a few to understand, and are less to be feared than the latter who will sometimes "rush in," etc., and carve out of the unhappy trees monuments to their incompetency. The principal object of pruning is to produce a well shaped tree and to induce early and increased fruitfulness.

A well shaped tree is one that has the head well balanced with the leading branches the proper distance apart; early and increased fruitfulness is assisted by causing buds which would otherwise remain dormant to develop into fruit buds and later into fruit spurs.

No hard and fast rule can be laid down for pruning; much depends upon the tree; and intelligence is the beginner's chief asset.

Generally speaking young trees two or three years old require hard pruning. Hard pruning produces abundance of young growths and it is much easier to lay a good foundation for the head when there are plenty to pick and choose from than when wood is scarce. Two-year-old trees should have at least three branches from the trunk, and if by chance there should only be two one of them ought to be cut off entirely and the other cut back to within four or five buds of the previous year's wood; this in fact reduces the tree to the same standing as a yearling and gives it a fresh start at forming a head. This appears to be rather a drastic method of dealing with croached trees, but they may possibly make just as much growth as their more fortunate neighbors, especially if well attended to in summer and only the desired number of branches allowed to grow, but in any case it is better than to have the tree split in twain under a load of fruit perhaps ten or twelve years later.

While the principles of pruning are the same for all kinds of fruit trees the operation differs with the various kinds so that in detail we will have to consider each sort separately.

Giving pride of place to the apple we will suppose a yearling tree has been planted, headed back to the desired height, and has completed its second year's growth producing, say six branches. Now the number of the branches to be retained will depend upon the habit of the tree and the position of the branches, some trees are erect compact growers of which the Ontario is an example, others again like the Jonathan, and in lesser measure the Gravenstein, are straggly, almost horizontal growers.

In the case of the compact grower three

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branches will be plenty to retain and they ought to be the strongest and most equally divided, all the others must be cut off close to the trunk and those retained shortened back to about two thirds their original length. In shortening back the leaders attention ought to be given to where the cut is made. If the three branches are evenly divided, cut back to outside buds, that is buds jointing directly away from the centre of the tree, but if they are not perfectly equi-distant from one another this may be corrected in next year's growth by cutting to buds on the sides of the branches jointing in the direction necessary to balance the tree. In the case of the open headed variety it may be possible to retain five of the branches but this number should not be exceeded; select the most suitable branches, treat as formerly and cut the other off. To illustrate the method of dealing with the horizontal growers we will suppose that the tree has three branches favorably placed but growing horizontally; in this case it may be necessary to cut them back to one half, possibly one third their length, cutting to a bud on the upper side of each branch.

The pruning of the apple in after years is along the same lines as above, and by studying the results experience and skill will be obtained; the proper amount to cut off the leaders is just that which will cause the young part to develop every bud, two or three at the tip to develop wood for extension, the others into fruit buds.

Along the main branches of the tree where the fruit spurs develop there is always a certain amount of young growths produced called breastwood; in winter this is "spurred" back, that is cut back, to two buds, the best way to deal with this surplus growth is to pinch out the growing tips of the shoots in summer when they have made about six or eight inches of growth, then cut hard back in winter; this of course does not apply to the leading branches.

The two chief points to remember in

pruning is to always cut to buds pointing in the direction the prospective branches are intended to take, and to keep the centre of the tree fairly open to admit an abundance of sun and air.

I have dealt fairly extensively with the pruning of the apple, and in dealing with the other fruits will touch principally on the points on which their treatment differs from the apple.

The treatment of the pear is very similar to that of the apple. Many varieties are very compact growers and require to have their centres kept open by removing the crowding branches in their entirety; by cutting the young branches back to the old wood the danger of aggravating the trouble is greatly reduced.

Pears naturally produce fruit spurs more freely than do apples and therefore require less hard pruning.

In its early years the plum requires similar treatment to the apple but when once the foundation of the head is laid very little pruning is needed, other than keeping it shapely and to prevent crossing and overcrowding. The stubs like enlarged thorns produced by the plum tree especially when young should not be cut off as they in time will develop into fruit spurs.

The pruning of the cherry is similar to that of the plum, when once the head is formed, the less pruning it needs the better. What pruning may be required is best done in summer so that the wounds will quickly heal and reduce the risk of gumming to which cherries are liable to a minimum.

The pruning of the peach once the head has been started is quite different from any of the above, as it produces its fruit chiefly on the young wood the practice of spurring back to from fruit spurs is out of place. In this case the production of young wood is encouraged by removing the old barren wood, the idea being to have the tree covered with fruiting wood from top to bottom.

Having nearly reached the limit of my



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Catalogs on Application





space it is impossible for me to go into details on peach pruning but may do so at a later date. The black currant is similar to the peach in so far as it also produces its fruit on the young wood. When young it ought to be pruned hard to lay a good foundation for the bush but in after years every encouragement ought to be given the young wood. The bush is very liable to become overcrowded when the old branches ought to be removed and preference given the young; and by systematically cutting back an old branch here and there close to the ground a fresh supply of strong young wood will be assured. Red and white currants are spur bearers and require treatment similar to some of the fruit trees. When young the bush ought to be hard pruned and subsequently about a dozen branches selected to form the bush, training them as equidistant from one another as possible.

The side growths from these branches must be spurred back the same as for apples, and the tips of the leaders may also be shortened to ensure a uniform production of fruit spurs from the ground up. Summer pruning has a very marked effect on the quantity and quality of red and white currants.

The pruning of the gooseberry is a combination of that advised for black and red and white currants. They bear fruit on spurs on the old branches and on the young wood as well; the chief points in pruning the gooseberry is to keep the bush open so that the fruit can be easily gathered, spur back the breastwood to encourage the production of fruit spurs, but do not stop the leaders as with red and white currants unless it is for the purpose of forming new branches.

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

The British Columbia Nurseries Company, Limited, of Vancouver, is showing commendable enterprise in extending its business even in the face of the prevailing war conditions.

The firm is very optimistic in regard to the future of the nursery business in British Columbia, and have decided to increase their growing area by securing a considerable tract of land admirably adapted to the growing of certain lines of nursery stock, which will place the company in a better position than ever to supply their numerous patrons with the choicest trees and plants.

The location of this new nursery site is very convenient for the quick handling of shipments, being located adjacent to the B. C. Electric Railway and the Canadian Northern, and this will further enhance the company's reputation for delivering choice trees and shrubs in prime condition. This land is situated near Chilliwack in the fertile Fraser Valley.

The company handles a full line of nursery stock, consisting of all the newest and best varieties in fruits, shrubs, roses and ornamentals, all grown under ideal conditions by men of long experience in the business. Trees and plants of all kinds from this company can be depended upon to prove true to name and to grow, if given intelligent care by the planter.

THE LEADING INSECTICIDE deserves THE LEADING FIRMS to handle it. PHYTOPHILINE, THE GREAT INSECTICIDE AND PLANT TONIC, is accordingly for sale at the following well-known houses in Vancouver, Victoria and New Westminster:

**VANCOUVER—**

B. C. NURSERIES CO., LTD., 1493 Seventh Avenue West.  
 BROWN BROS., Florists, 48 Hastings Street East.  
 A. R. McDougall, Seedsman, 524 Kingsway.  
 W. M. RENNIE CO., LTD., Seedsman, 1138 Homer Street.  
 RITCHIE BROS. & CO., Seedsman, 840 Granville Street.  
 F. R. BEDFORD, Florist, 2410 Granville Street.  
 CHAS. KEELER, Florist, 145 Fifteenth Avenue East.

**VICTORIA—**

BROWN BROS., Florists, 618 View Street.

**NEW WESTMINSTER—**

DAVIES AND SON, Florists, Columbia Street.

Grade 1 for general use; Grade 2 for spider and woolly aphid on very tender greenhouse plants; Grade 3 for spider, woolly aphid, mildew, rust, etc. Postpaid prices, 55c, 85c, \$1.55 and \$2.80. CASH WITH ORDER. Representatives and salesmen wanted everywhere.

Apply **PHYTOPHILINE DISTRIBUTORS**, 1493 Seventh Avenue West, Vancouver, B. C.

The business methods of the company are carried on on strictly honest principles and close attention is given to all orders, large or small. Their motto is "A satisfied customer is our best advertisement," and this strictly lived up to has caused their business to increase by leaps and bounds.

The company has from time to time shown enterprise in introducing valuable new varieties of fruits, one of which is likely to prove of great and lasting benefit. We refer to the VROOMAN FRANQUETTE WALNUT. Many hundreds of these trees have already been planted in the province, and the interest in this new industry is fast developing. Leading horticulturists are beginning to see the magnitude to which the walnut industry may be developed.

This new industry, yet in its infancy, is being welcomed as one of great possibilities, and those who have not yet become acquainted with this subject should write the company for information. The company invites correspondence from interested planters of any kinds of trees, or shrubs, and a General Catalogue and a Rose Catalogue, as well as information as to Walnuts can be had, on application to the company's office, 1493 Seventh Avenue West, Vancouver, B. C.—Advt.

**BIG ORDER FOR BOOTS COMES FROM OTTAWA**

The J. Leckie Co., Ltd., have received from the War Purchasing Committee another large order for army boots, according to a telegram received from Hon. A. E. Kemp, chairman of the committee, by Mr. H. H. Stevens, M. P. The latest order is for 20,000 pairs, an order large enough to keep the full staff working overtime for some time to come.

Fruit grown in the province of British Columbia is now shipped regularly to Australia by vessels of the Canadian-Australasian line, plying between Vancouver and Sydney. The feature of the outward cargo of the liner Makura, which left Victoria lately for Auckland and Sydney, was 24,000 cases of British Columbia apples. On her last outward voyage the liner Niagara carried 30,000 boxes of apples, in addition to various consignments of other fruit. Large consignments of B. C. apples are also being taken out by the Canadian-Australasian cargo steamers Waimarino and Wiruna, both now on the coast.

**OFFERS AUTOMOBILE.**

**Paul & McDonald Offers Valuable Prize in Contest.**

With an automobile as the prize, a guessing contest is the latest offer made to the public by Paul & McDonald, the well-known Vancouver jewellers, and it will continue until December 31.

The entrance fee to this contest is the purchase of \$1 worth of goods at the store during the period the contest is open. The car is a Ford, and it will be on exhibition in the store window, the frame work of which had to be removed in order to place it there.

**OUR SPECIALTIES**

**MIXED FERTILIZERS**

BRANDS

"A," "B," "C," and "D"

- NITRATE OF SODA
- SUPERPHOSPHATE OF LIME
- THOMAS' PHOSPHATE (Basic Slag)
- BONE MEAL
- LIME-SULPHUR SPRAY
- SOLUBLE SULPHUR COMPOUND (Nicotine Sulphate)
- "BLACK LEAF 40"
- ARSENATE OF LEAD
- SULPHATE OF IRON

No order too large for our capacity, none too small for our careful attention

**The Victoria Chemical Co., Ltd.**

VICTORIA, B. C.

WRITE FOR CATALOGUE

**BRAND'S CUT FLOWERS**

The Most Acceptable of All Christmas Gifts—Roses, Carnations, Chrysanthemums, Violets, etc.—Holly and Mistletoe.

**JAMES BRAND & CO.,**

Seedsman and Florists. 723 Robson Street, Vancouver, B. C.

SPECIAL—Choice box of Cut Flowers for \$1.00



# POULTRY SECTION

## ABOUT BANTAMS.

### Pigmy Fowls Are Great Layers and Splendid Table Fowls.

Bantam fowls are generally looked upon as mere pets, but as a matter of fact they have many strong economical points and useful qualities. Five Bantams can be kept in the space required for two of the large or three of the small sized breeds. Leghorns or Hamburgs, for instance. They afford good meat, and are great layers as a rule. The Black Africans rival the Leghorn for number of eggs produced, while 15 of their eggs will go as far in cooking as 12 of most breeds, so that for small quarters, what one loses in size, one makes up in numbers.

Game bantams are specially good eating, and if hung until a trifle "gamy" and cooked as quail should be, are no mean substitute for that worthy bird. It is said that some restaurants make this substitution. One having room for, say 20 hens only would do well to occupy it with 50 Bantams. The Black Africans are not setters in many cases, but a couple or more of good old "biddies" will help out here. For small back yard Bantams are of great value. Cochon Bantams produce the largest eggs, and are the most docile of any of the little breed, but all of them are easily tamed. All the varieties except the Cochon require netting over their yards, for they can fly like quail.

If you want to cut the wings off your

fowl so that it will not disfigure them leave the two long flight feathers uncut and when the wing is folded it will have no chopped off look. The effect as to flying will be the same as the old ugly way.

In competition with 8,000 birds, ten representatives of Mr. J. A. Thurston's poultry farm at Central Park won the following prizes at the Panama Exposition at San Francisco: First for white Cornish cockerel and pullet, second for sock and fourth for hen; first for white Bantam cock and hen, second for cockerel and pullet; third for black rose comb Bantam cock and hen. In such a crowd the bringing away of ten prizes with ten birds is very creditable.

## SOME COMMON POULTRY AILMENTS

It is easier and more profitable to guard against disease in the poultry yard than it is to make progress when the flock is attacked by some epidemic. Most of the diseases attacking poultry are preventable. The chief causes of attack are filth, dampness, lack of fresh air, improper ventilation, lack of sufficient nourishing food or too much of one kind, or the introduction of new and diseased birds into the flock. Of all these causes, filth is probably the most dangerous. In its wake we are apt to find dampness and impure air. The remedies are obvious. Cleanliness should be practised as it is the foe of all diseases. The

houses should be thoroughly cleaned and whitewashed or sprayed with a good insect killer or disinfectant as often as possible each year. The type of house adopted should partake of the open-front or curtain-front style, so as to provide the birds with plenty of fresh air even at the expense of temperature. These should be accompanied by plenty of good food without overfeeding, and plenty of exercising room. Of course, some diseases are more or less hereditary in their nature and in such cases removal from the flock may be best, but if this is not contemplated, conditions should be made such that it will be easy for the birds to remain healthy. If this is done it will be comparatively seldom that they will be attacked by disease.

**Roup**—This is one of the worst diseases that the poultryman has to contend with. In its first and milder stages it partakes of the nature of catarrh. But unless speedily checked it soon develops into something more serious, passing through the various stages of influenza and sore throat. The first symptoms of roup are loss of appetite and general lassitude. The breathing becomes hard and rasping and the nostrils become closed with thick mucous. As the disease progresses, the sides of the head and throat swell and it is not uncommon for one or both eyes to swell shut. When fowls reach this stage they may as well be killed and burned as they will seldom recover, and may be of little use even if they do.

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

Sitting hens are scarce when most wanted early in the year, and to make Poultry Keeping Pay, chicks must be hatched early.

## THE HEARSON INCUBATOR

will hatch every fertile egg in any temperature and at any altitude. It is much more reliable than a hen and is always ready when the eggs are. There is no incubator made to equal Hearson's. The purchaser of an incubator represents a considerable outlay and in your own interests you should not fail to investigate the merits of every machine which you may have in your mind. Ask the opinion of your poultry journal, well known breeders, and others who have had practical experience, and carefully read the book entitled "The Problem Solved,"

which will be sent you free by us on request. If the Hearson was not the best incubator we could not afford to invite such searching investigation.

### Hearson's Patent Hydrothermic Foster Mother,

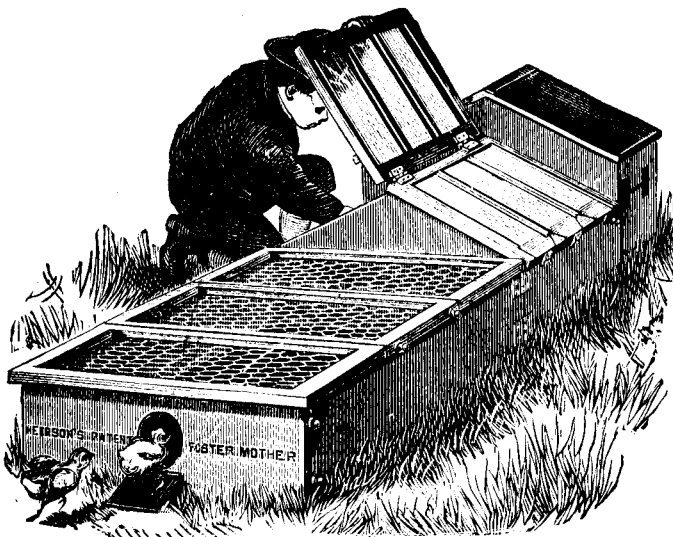
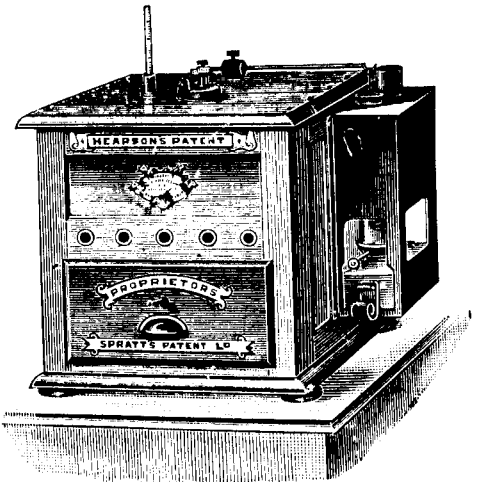
an outdoor or indoor rearer for chickens, substantially built, will rear every healthy chick. Hearson's Hydrothermic Foster Mother consists of three chambers, viz., a sleeping compartment or dormitory, a glass covered run, and a wire covered run. The dormitory is heated by means of a petroleum lamp which burns in a windproof lantern situated at the rear; this imparts the heat to a copper tank filled with hot water which occupies the upper part of the dormitory.

For the convenience of our friends and customers in Western Canada we carry a complete stock of Hearson's Incubators, Foster Mothers and accessories in Vancouver. These are on exhibition and can be seen at the office and warehouse of our Western Agents,

**MESSRS O'LOANE KIELY & CO., LIMITED**

37 to 43 Alexander St., Vancouver, B.C.

Catalogues furnished upon application.





Isolate all birds that seem in the least affected. Thoroughly disinfect and fumigate the poultry house. Sprinkle lime and carbolic acid about the yards and runs. Dip the heads of affected or suspected birds in kerosene. As a further preventative measure put a half pint of kerosene in a gallon of drinking water, and give them no other drink for two or three days so as to compel them to drink it. Potassium permanganate in the drinking water of the flock at all times is good protection against all diseases, and has no injurious effects upon their general health. A few drops of carbolic acid in the drinking water occasionally is also a good policy.

**Chicken Pox**—Another disease which is less prevalent but also very objectionable is chicken pox. It is a contagious disease caused by a fungus growth, and is transmitted from one fowl to another through abrasions of the skin, or punctures caused by bites of insects. It appears in the form of a yellow eruption around the beak, eyes and nostrils. These give off a watery discharge after a few days which later changes to a thick yellowish matter. As the disease progresses the birds grow thin and weak and many die as a result. It is more liable to occur in warm, damp weather, and attacks the young of the flock first, though older ones are not immune. It is best to keep all the affected birds by themselves, and keep the houses clean and dry. Apply carbolic ointment, or glycerine containing a solution of carbolic, to the affected parts. In the case of mild attacks they may recover without treatment, but it is advisable to take immediate steps to stop the attack and hasten recovery.

**Scaly Leg**—This disease is found in very many flocks, and is too often looked upon as of little consequence. But bad attacks will very quickly reduce the output from a flock, and hence affected birds should be looked after immediately. This unsightly malady is caused by a mite which burrows beneath the scales of the feet and shanks. A remedy can easily be applied. Wash the affected parts in soapy water and apply a mixture of kerosene and lard, or some similar mixture. The frequent application of kerosene alone will effect a cure.

**Limber Neck**—This trouble is occasionally found in poultry yards, but not so frequently as some of the other diseases. It appears to be a paralysis of the neck occurring chiefly in warm weather and is usually caused by eating putrid flesh or poison of some sort. There is but little remedial resources for the fowl once affected. Death is the general result. A teaspoonful of castor oil does, sometimes, prove beneficial if the bird is not too far gone. Burn or bury all affected carcasses, and do not leave anything to decompose to which the birds are likely to obtain access.

Bowel trouble is caused more or less by indigestion due to faulty feeding, impure drinking water or lack of grit. In young chicks it is often caused by their becoming chilled or over heated. Boiled milk and boiled rice are considered good foods to use in overcoming the disorder. Feed dry feeds mostly, instead of succulents. Exclude meat and green bone from the diet and provide plenty of grit. Charcoal is an excellent remedy as well as preventive. It is sometimes advisable to give a tonic in soft feed for two or three days. Scald all feeding and drinking vessels, scatter lime about the house and yards, and aim to keep these clean and wholesome and little difficulty will be experienced in building up the flock.



**YOU CAN GET MORE EGGS FROM YOUR HENS**

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

**BARLING'S BEEF SCRAPS**—  
An excellent egg-producing food. Absolutely free from useless fat, and moisture. Try this.

**RED STAK BRAND ALFALFA MEAL**—  
Best green food for winter use. Clean—no fibre—made from leaves and blossoms.

**OYSTER SHELL**—  
Contains lots of lime. Clean—no dirt—no waste.

At All Dealers  
WRITE FOR FREE SAMPLE TODAY

**VANCOUVER MILLING & GRAIN CO., LTD.**  
Vancouver, Victoria, New Westminster  
Nanaimo

#### DUCK DON'TS

Don't keep two or three different kinds of ducks. Choose one variety and breed for quality.

Don't try to raise ducklings on whole wheat, cracked corn or commercial chick feeds. If used at all, these feeds should be well cooked for, ordinarily, ducks do not consume enough grit to grind dry grain.

Don't try, by mixing it with their food, to force ducks to eat more grit than they want.

Don't be afraid of overfeeding. Ducks should be fed four or five times daily.

Don't omit fresh vegetables and green stuff from the diet.

Don't allow the feed to stand from one meal to the next and expect ducks to be satisfied with it.

Don't give ducks sour feed; it is likely to cause convulsions.

Don't forget plenty of clean, fresh, water.

Don't let their coops become damp and filthy.

#### LIMITED TOO MUCH

Mr. Frederick C. Elford, Dominion Poultry Husbandman, who has been on a visit to the coast, expresses himself as amazed at the number of poultry farms established in the southern section of Vancouver Island. He says there are few places in the Dominion where there are so many chicken farms, but thinks the majority of those in business make the mistake of limiting themselves to a single class of stock. The price of feed was, of course, a drawback, but this would be remedied in time.

Mr. Elford said that, owing to the importance of the industry on the island, it was the intention of the department to specialize in poultry at the Sidney Experimental Farm. This year preparations will be made to house the birds, and the stock which will be introduced in the Spring will be of the best quality.

"The time is coming when the people will realize that the poultry industry requires men of brains, intelligence, experience and judgment, and that it cannot be taken up by anyone," said Mr. Elford.

"The future of the industry, in my opinion," he said, "lies in the combination of poultry with fruit or with dairy farming. There are many places in British Columbia where the land is unsuitable for ordinary crops, but can be put to profitable use for birds. The low bottom land is too valuable as a rule for poultry, and should be used for crops, whereas on high rocky land the poultry thrive, and can be moved in the fall on to the lower land when the crops have been taken off. The price of feed, as well as of land, is a great drawback to the industry here. It should be possible to deliver feed from the prairies considerably cheaper, including the freight, and yet give a fair margin to the parties handling the same. Organization to that end should, I think, be emphasized.

"The producer has a lot to learn yet both with regard to the supply of eggs at the right season, when prices are firm, and in the marketing of dressed poultry. Instead of killing off the hens in the fall, when they compete with the roosters in the market, they should be got rid of in the spring and early summer."



# NEWS FROM FARMERS' INSTITUTES

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

## STRAWBERRY CROP COMPETITION.

The members of the Hammond Farmers' Institute, taking advantage of the prizes offered by the Horticultural Branch of the Department of Agriculture, held a very successful strawberry crop competition this summer. The competition calls for the best strawberry patch, one-quarter acre in extent, and judged on the following points: Fertilizer, 10; weeds, 5; evenstand, 10; bloom and berry, 15; cultivation, 15; moisture, 10; vigor, 25; blemishes, 10.

The total prize money offered was \$52.50, and was divided amongst the first five growers. The winners were: First, N. G. Knotts, score 87; second, C. P. Metcalfe, score 82 3-4; third, W. J. Faris, score 75 1-4; fourth, G. C. Burnette, score 73 7-8; fifth, G. A. Davenport, score 73 3-8.

These competitions are open to any institute or group of fruit growers who have strawberry patches one-quarter acre in extent, and when eight or more growers are willing to enter.

## SALMON RIVER. Farmers' Institute.

The first winter meeting of the Farmers' Institute was held in Glenemma Hall, on Monday evening, Nov. 1, R. Chamberlain, president, being in the chair. After the minutes had been read and confirmed, the first item was the consideration of resolutions passed by the Revelstoke Institute asking that the conference might be held in Victoria this year, the same as in Manitoba and Saskatchewan—Agreed upon.

2. That all improved land should be exempt from taxation, and all unimproved land be taxed.—Agreed upon.

3. That the government should take charge of the poisoning of gophers, and charge it up to each rancher.—Disapproved.

A strong resolution was sent in to Victoria asking that a conference might be held in the interior, under the same conditions that govern the Women's Institute if it should be decided that the expenses of a conference in Victoria is too great.

A resolution was passed that at the end of the year a sum of money be set aside to provide prizes in the boys' and girls' competition.

A well attended meeting of the Grand Forks Farmers' Institute was held in the Board of Trade rooms on Wednesday night, Nov. 8. R. M. Winslow, provincial horticulturist, was present and delivered an interesting address.

## POWDER ADVANCES.

DENNISON, Matsqui, Nov. 18.—Secretary Philip Jackman of the Matsqui Farmers' Institute has sent out notices to the members that until further notice the price of stumping powder will be \$6.85 per case. This is an advance of 75 cents on the case. Non-members will have to pay a still higher price, as the Farmers' Institute only furnishes the powder at the quoted rate to its own members in good standing.

## WESTBANK.

The regular monthly meeting of the local Farmers' Institute was held in the school house Tuesday, Nov. 2, there being a fair attendance of members.

## ENDERBY.

### Crop Competition Awards.

Six entries were made in the crop competition held this season by the Department of Agriculture through the Farmers' Institute, for standing fields of wheat, and eight entries were made in the mangel competition. The secretary of the Farmers' Institute this week is in receipt of the judges' score card on these competitions, showing the winners and the scores of each. The prizes given by the department consisted of: First, silver cup, medal and \$20 cash; second, \$15; third, \$10, in each competition.

The winners in each competition are given in the order named below. We give at this time only the total marks received by each contestant.

Wheat Crop—First, W. J. Fenton, total score, 94 1-4; second, C. S. Handcock, 93 3-4; third, Thos. Skyrme, 92; fourth, H. Hallett, 91; fifth, E. Harrop, 89 1-2; sixth, Thos. Gray, 89 1-4.

Mangel Crop—First, J. Moore, 104 1-2; second, H. Hallett, 104; third, W. Monk, 103; fourth, T. Skyrme, 101; fifth, Rupert Davy, 100 1-2; sixth, A. Hamilton, 99 1-2; W. D. George and T. Gray, none sown.

## CROP PRIZE WINNERS.

DENNISON, Matsqui, Nov. 18.—Following is the score and the list of prize winners for the oats and potato competition of the Matsqui Farmers' Institute: First prize for best oats, F. Coughlan, with a score of 93; second prize, W. S. Hill-Tout, score 91; third prize, P. Jackman, score 85. Other scorers were H. R. Philips 83 3-4, W. Towland 83 1-4, and Victor Ferguson 80.

W. S. Hill-Tout captured first honors in the potato competition with a score of 98 3-4; second prize went to F. Coughlan, who was rated at 96 1-2, and the third prize was awarded Jas. Allen, who scored 96 1-4. Other scorers were H. R. Philips 95; P. Jackman 94, and W. Towland 85 1-2.

Department of Agriculture,

Victoria, B. C., Nov. 9, 1915.

To Secretaries of Farmers' Institutes:

### Re Seed Competitions.

Provincial Seed Fairs will be held at New Westminster and Armstrong on the following dates: Armstrong, Jan. 19 and 29, 1916; New Westminster, Jan. 26 and 27, 1916. The following is the prize list, \$10, \$8 and \$5 being the first, second and third prizes, respectively, in each event: Best two bushels of spring wheat; best two bushels of winter wheat; best two bushels of winter oats; best two bushels of 6-rowed barley; best two bushels of field peas; best twelve ears of fodder corn; best bushel of potatoes; best bushel of alfalfa seed; best bushel of alsike seed; best bushel of red clover seed; best bushel of timothy seed; best twenty pounds of potatoes grown by a competitor in the boys' and girls' competition; best two bushels of registered white oats; best two bushels of registered spring wheat; best two bushels of registered potatoes; best twenty pounds registered mangel seed; best twenty pounds registered turnip seed; best ten pounds registered field carrot seed.

All exhibits must be grown by the exhibitor in 1915.

**What is  
Your Best Horse  
Worth to You?**

Yet your best horse is just as liable to develop a Spavin, Ringbone, Splint, Curb or lameness as your poorest!

## KENDALL'S SPAVIN CURE

has saved many thousands of dollars in horse flesh by entirely curing these ailments.

Nelson Griffith, Limerick, Sask. writes:

"I have been using your Spavin Cure and find it one of the best liniments. It completely cured a curb on a driving mare."

Don't take chances with your horses. Keep a bottle of Kendall's handy, \$1—6 for \$5. Our book "Treatise on the Horse" free at druggists or

Dr. E. J. KENDALL CO., Enosburg Falls, Vt. 103

Every winner of a first prize at the Seed Fair who wins with an exhibit from his plot entered in the field crop competition will be paid a bonus of \$5 by the Department of Agriculture.

All competitors who exhibit at the Provincial Seed Fairs from the Kamloops Farmers' Institute and other institutes east of Kamloops will compete at Armstrong, and from Nicola and west of Nicola at New Westminster.

The exhibits may be shipped by the cheapest way possible (parcel post, express or freight) to the Provincial Seed Fair at the expense of the department, but the exhibits shall become the property of the Department of Agriculture.

Posters advertising the Provincial Seed Fairs will be forwarded to you in a few days, which you will kindly post up in a conspicuous place.

W. E. SCOTT,

Deputy Minister and Supt. of Institutes.

## Rules and Regulations Governing 1916 Seed Distribution.

1. That certain registered seed varieties will be offered for crop improvement as follows:

(a) Registered Marquis or Red Fife wheat not more than four bushels to one member at three cents per pound.

(b) Banner or Garton's No. 22 oats not more than six bushels to one member at two and one-half and three cents per pound respectively. Garton's No. 22 is a variety adapted to coast conditions.

(c) Corn of one of varieties listed below—not more than three pounds to one member at five cents per pound. In ordering state first, second and third choice: Minnesota No. 13, Northwestern Dent, Longfellow, Wisconsin No. 7, Quebec No. 28.

(d) Sludgdrop mangel seed, not more than five pounds to one member at 30 cents per pound. We have about 600 pounds of this seed, grown by J. M. Steeves, Steveston, B. C., which we purpose distributing in small lots, preference being given to applicants in order of receipt of orders.

(e) Alfalfa seed northern grown, not more than five pounds to one member at 20 cents per pound. A nominal charge of 25



cents will in the future be made for alfalfa nitro culture, money to accompany order.

2. That registered seed will be offered for general seeding in larger quantities than the above at: Wheat, three cents per pound; oats, two and one-half and three cents per pound; corn, six cents per pound; mangels, 30 cents per pound; alfalfa, 30 cents per pound.

3. That if sufficient seed of the desired grade cannot be secured to fill all applications the said applicants will be notified and their money refunded before Jan. 31, 1916.

4. That in the event of a seed shortage after the seed for crop improvement has been allotted the applications for seed for general seeding shall be filled in order received by the department.

5. That the Department of Agriculture does not purpose distributing seed as a commercial enterprise, and accordingly where the money paid for the seed by the farmer exceeds the actual cost of the seed to the department, a refund will be made.

6. That the Department of Agriculture does not purpose to carry on this branch of the work indefinitely and urges the farmers to familiarize themselves with the practice of seed selection.

7. That in view of the above, all members securing registered seed from the Department of Agriculture shall upon application, be recommended by the department for membership in the Canadian Seed Growers' Association.

8. That all applications for seed shall be delivered to the secretary of the local Farmers' Institute before Dec. 7, 1915.

9. That the secretary of the local Farmers' Institute shall countersign all applications for registered seed submitted by the members, and forward same to Soil and Crop Division, Livestock Branch, Department of Agriculture, Victoria, B. C., before Dec. 18, 1915.

10. That cash accompany all applications.

11. That the department shall pay all freight charges to nearest shipping point of purchaser.

Note—That during the month of January, 1916, we will hold Provincial Seed Grain Fairs at New Westminster and Armstrong. Prizes to be awarded as per page 11 of Field Crop Competitions Bulletin No. 61. Plan to attend one of these fairs.

W. E. SCOTT,

Deputy Minister and Supt. of Institutes.

W. T. McDONALD,  
Livestock Commissioner.

**HINTS FOR THE FARMER.**

Every farmer should raise bees.

Dryness is more essential than warmth in the hog-house.

Honey is an especially profitable crop for the fruit farmer.

Bees are easier to care for than chickens, and yield good returns on the investment.

Late sown carrots, beets, etc., store much better than those which are sown early and are too old when harvested.

Cut out and burn the old raspberry canes as soon as they are through fruiting. Cultivate the young shoots and keep out all the weeds.

Alfalfa offers one of the best honey making materials. Alsike is also valuable, as is sweet clover, which may be grown to advantage in most provinces.

It will cost not less than 75 cents to raise a Brahm chick up to the point of laying. Leghorn chicks could be raised for about 50 cents, as they mature much earlier in life.

It pays to prepare vegetables as well as fruits neatly for market. Clean, attractive packages do not cost much more than unattractive ones and bring much better prices. Try it.

When it is necessary to prune trees, the branches should be cut or sawed off smoothly and a thick coat of paint applied to the cut surface, and a second coat applied after the first is dry.

The mammoth Russian sunflower is grown for its seeds. While it is blooming at the back of a lot it is a sight worth seeing. The seeds are used for chicken feed and a variety of purposes.

Molting hens need particular care and attention. The change of coat is a big drain on the bird's system, and vitality. You must make up in food. An occasional feed of sunflower seed is good. Mix a little oil meal in the mash, and give increased ration of meat, green bone, beef scrap or whatever it may be.

The colony plan for keeping poultry is best suited for the farmers and those who have plenty of land at their disposal. It makes it possible to keep several hundred hens on the ordinary farm without the expense of yarding them, and still have them away from the home buildings. It's the farmer's way.

From eight to fifteen colonies of bees are the right number for the average farmer to have, ten being usually preferable to a larger number, and still fewer being desirable to start with. For the fruit farmer bees should be regarded as a necessary side line just as chickens are in many parts of the country. The equipment cost for five colonies of bees is about \$50.

It is possible for careless help to leave a considerable portion of the grain crop in the field by neglecting to gather up scatterings, loose bundles, etc., and by hauling grain on open-bottom racks. From a few pounds to a few bushels of grain may be saved every day during stacking, by using a tight-bottom rack, or a canvas over the rack that will catch all of the heads. In seasons when the grain shatters badly, a surprisingly large amount of grain can be saved in this way.

**CAP AND FUSE.**

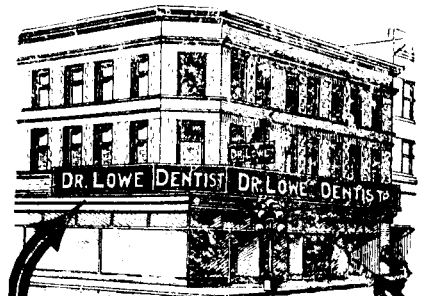
Continued from page 787

I remember seeing men spend much time and labor whittling round sticks to use as plugs for the holes. A groove was cut the length of the plug to take the fuse. Besides being unnecessary work, this method never gave such good results, because the plug was never driven quite up to the cap and powder (or if it had unpleasant things might have happened, to put it mildly.) When a space was thus left between the powder and the plug, that part around the hole would be well splintered—the force of the explosion would be on that side—while the rest of the log would not be split much at all. The dry sand gives a much better result and at the same time is much safer.

Comparatively speaking, using 25 per cent stumping powder is not very dangerous. The accidents are caused by ignorance or pure carelessness. Blasting powder is something never likely to be made 'fool-proof.' One sure way of courting suicide is to wait for a few minutes after the charge should have gone off, and then go up to see why it has not exploded. The men who will do that are hopeless. Yet it is remarkable how often it is done.

(Signed) B. V.

Little River,



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**Target Tips and Hunting Helps.**

By ALFRED P. LANE

W. S. A., Vienna, Va.

Will you please give me the relative advantages and disadvantages of hammer and hammerless shotguns?

Ans. This is a rather delicate subject with some sportsmen, and I'm sure to tread on someone's toes no matter what I say. With only one or two exceptions, all of the new models of rifles and shotguns which have been brought out within the last five years or so have been of the hammerless type. The distinct tendency, at least from the unbiased observer's viewpoint is therefore toward the hammerless type. The principal advantage claimed for the hammer type is that it is very easy to tell whether the arm is cocked or not. Certainly this is true, but to anyone at all familiar with the hammerless types it is not an advantage, because you can tell whether a hammerless gun is cocked or not just as easily. The hammerless types claim the following advantages: Better appearance; there is nothing to interfere with line of sight; it is safer because there is no chance of such accidents as occur with hammer types due to letting the hammer slip when cocking it or letting it down to the safety notch, or by the hammer catching on clothing or branches, thus causing accidental discharge.

R. A., Lipscomb, Texas.

1.—Please print the maximum range and penetration of the .22; .280; .30; .33 and .35 Newton HP cartridges; also the range, penetration, velocity and energy of the .256 Newton with the new 140 grain bullet.

Ans. I do not know what you want the maximum range for, as it is of no earthly use as far as hunting or target work goes. All of the high power rifles throw a bullet farther than is of any practical use for target or hunting work. The penetration also does not indicate anything except the number of boards a bullet will go through. It does not indicate killing power. The cartridges you mention have not been standardized and are not made up by any of the larger munition factories so that it is rather difficult to give accurate figures. I would suggest that you write to the manufacturer.

2. What is the difference between pyro and nitro cellulose powder? Which is better?

Ans. There is no difference at all between pyro cellulose and nitro cellulose powder. Pyro cellulose is simply a grade of nitro cellulose, in which the nitration is between 12.4 and 12.6. It is therefore impossible to say that either is better, as they are the same thing, one being simply a particular grade of the other.

R. W. W., Dublin, Va.

1. How far will a .32 W. C. F. model 1873 carbine shoot accurately when used with black powder?

Ans. The accurate range of the .32 W. C. F. cartridge is 150 to 200 yards.

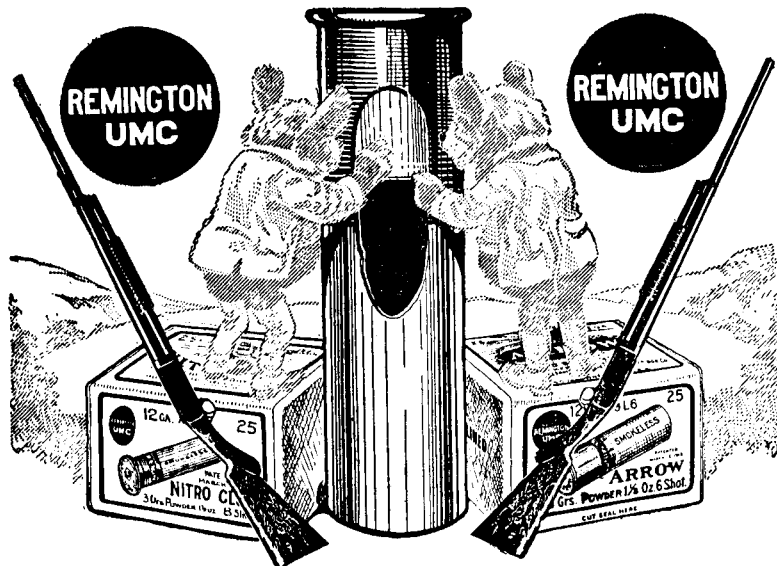
2. Is the .38 W. C. F. model 1873 carbine accurate up to 300 yards? Is it powerful enough for deer?

Ans. It is supposed to be accurate from 150 to 200 yards. At 300 yards its accuracy is not good. Nowadays it is not considered powerful enough for deer.

3. Is the .35 caliber model 1895 a good rifle for moose? How far does it shoot accurately?

Ans. The cartridge is powerful enough for the game you mention. It is accurate up to 500 to 700 yards.

Ans. The accurate range is 300 to 500 yards.



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# Domestic Science Department

Edited by KATHLEEN FERGUSON

This month to finish the old year and help on Christmas housekeeping. I am giving a recipe for boiled turkey, as some may like to keep to the old fashion of boiled turkey and celery sauce, also boiled ham for Christmas Day.

**Boiled Turkey**—Prepare the turkey as directed in last lesson. Have a saucepan of boiling water, plunge the turkey into it, boil up quickly for five minutes, then boil more slowly for 1 1/2 to 1 3/4 hours according to the size of the turkey; a very large turkey would take two hours. Remove the scum from the top of the water as it rises, this helps to keep the turkey a white color. Some housekeepers rub the turkey over with a cut lemon, then dredge flour all over the bird and tie it up in cheese cloth before boiling it; and it certainly is an improvement to the color of the turkey, though a busy housekeeper may not have time to go to so much trouble.

To improve the flavor of the turkey, vegetables should be added to the water when the turkey is being boiled. Carrots, turnips, onions, parsley, herbs washed and well cleaned and sliced just as for stock, this is an economical plan, as when the turkey is removed, you have a splendid foundation stock for soup, very valuable in cold weather.

**Stuffing**—Most stuffings used for roast turkey may be used for boiled turkey, but the simple herb stuffing is the most generally used.

**Celery Sauce**—Boil the celery and cut it

into short lengths or rub it through a sieve. Prepare some white sauce using 1 oz. of butter, 1 oz. of flour, 2 level teaspoonfuls of corn starch, 1-2 pint of milk (or half milk and half water.) Boil the milk and butter together, stir in the corn starch blended in a little cold water, boil for three or four minutes so as to cook the corn starch thoroughly, add pepper, salt, a little mace. If corn starch is not convenient ordinary flour may be used, but the sauce requires extra cooking to avoid a raw taste.

**To Boil Celery**—Have the water boiling, add salt, and if liked, a little onion, lemon juice and mace, pepper and salt. Boil the celery for 25 minutes until tender, then use with the white sauce as directed above.

**To Boil Ham**—Soak the ham for 24 hours in cold water, changing the water frequently, wash it thoroughly clean and trim away any rusty or smoked parts. Put the ham into cold water, bring the water to the boil and simmer slowly for four or five hours according to size. Remove the scum as it rises. The time for all salt is generally reckoned as 25 minutes to the pound from the time the water boils. Four hours ought to be sufficient for a ten-pound ham, five hours for 15 pounds. A good plan is to pierce the ham with a skewer; if it goes in easily and the flesh feels tender, the ham is sufficiently cooked. It is a very good plan to leave a ham in the water in which it is cooked until nearly cold, this keeps in the juices and is a wonderful improvement to the taste of the ham if to be

eaten cold, but if to be eaten hot, remove the ham and peel off the skin, shake dried browned bread crumbs over the ham or glaze it if preferred.

**To Skin the Ham**—Loosen a little piece of the skin, take hold of it with a cloth and pull the skin towards you. If the ham is sufficiently cooked it comes away quite easily.

**To Glaze a Ham**—You can buy glaze ready made just to melt and brush over the ham, but a simple glaze is made by boiling water, adding gravy coloring to it, and a little gelatine. Brush this over the ham giving it more than one coat if necessary.

**To Decorate a Ham**—Plain lard beaten with lemon juice and put through a pipe or paper in patterns over the ham looks well, some white, some colored pink adding a few drops of cochineal. Butter also beaten with lemon juice added and some chopped parsley makes a very effective decoration put through a pipe or paper.

Aspic jelly cut in fancy shapes is often used to decorate a ham.

**Fluffy Cakes**—1-2 lb. of corn starch, 2 level teaspoonfuls of baking powder, 1-4 lb. of sugar, 6 ozs. butter, 1 tablespoonful of milk, 1 teaspoonful of essence of vanilla, 2 eggs. Beat the butter and sugar to a cream, whisk the eggs and add them to the butter and sugar, sift in the corn starch and baking powder gradually, beating well, mix the milk and vanilla and stir them in. Grease some patty tins with lard or olive oil, sprinkle them over with ground rice, half fill them with the above mixture and bake in a quick oven for 10 minutes. Small cakes require a quick oven, at the same time give them time to get done through.

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# WOMEN'S SECTION

## British Columbia Women's Institutes

Motto—"FOR HOME AND COUNTRY"

### MISSION CITY.

The Women's Institute met on October 28 with an average attendance. Red Cross work and its needs occupied a good deal of attention.

Owing to a very small attendance at the September meeting, the delegates' report to convention was held over and given at this October meeting.

A most interesting paper was also given by Mrs. H. Deagle on "The Twentieth Century Woman, Her Needs and Opportunities."

Considerable discussion ensued concerning the Christmas gifts of woolen wear the Institute is sending this month to the boys who have gone overseas from this vicinity. A bit of Christmas cheer is to be given in the shape of chewing gum or a bar of chocolate, the money for same to be taken from the general fund, and not from the Red Cross treasury.

A prize was presented Mrs. E. J. Abbott from the pumpkin pie contest in September.

### SHAWNIGAN LAKE.

Three weekly meetings devoted to Red Cross work were held by Shawnigan Women's Institute members at Cobble Hill and Shawnigan Lake during the past month; the meeting in the fourth week being occupied with institute work. A large consignment of articles, shirts, pyjamas, slippers, socks, etc., were dispatched to Temple Building, Victoria, on October 28, together with cash donations amounting to \$59, a sum which included the profits realized from the Trafalgar Day entertainment in the S. L. A. A. Hall, at Shawnigan Lake.

It is hoped that some of the children's scrap books may be ready to go off with the next monthly parcel on the 25th instant.

Satisfactory evidence of activity was given in the reports of their work by the four sub-committees, though much concern is felt that at present the children at the Shawnigan school are debarred from enjoying the privilege of the traveling school library. The teacher does not feel able to assume responsibility for the care of the books, and members are anxious to learn of some kind friend near the school who will house and superintend the loaning of the books to the children.

The recreation committee and other dancers have been invited to repeat the dances performed on Trafalgar Day at Cowichan, on the 12th instant, in aid of the Red Cross society's funds. Considerable amusement as well as interest was caused by the response to the invitation to members to bring with them to the monthly meetings the household utensil most valued by its owner. There was quite a good display, and many helpful hints were gained by all present.

There has been much sorrow and sickness among the members recently. Votes of sincere sympathy were transmitted to those who have suffered bereavement, accident or illness. An art loan exhibition is to be the feature of the December monthly meeting at Shawnigan Lake.

At the recent conference of the National Council of Women in Toronto, Miss Alice Ravenhill's report on "Professions and Em-

ployment for Women" was read by Mrs. George Watt.

### SURREY WOMEN'S INSTITUTE.

CLOVERDALE, Nov. 12.—The Surrey Women's Institute held its November meeting in the municipal hall, Cloverdale, Mrs. Croft, president, in the chair. Seventeen members answered roll call, a special one—"my pet economy"—and four visitors were also present.

Mrs. Hill gave a most interesting paper entitled "Are Fairy Tales True?" Mrs. H. Tarves demonstrated the making of Scotch shortbread which was afterwards served with afternoon tea.

At the next meeting on Dec. 7, Mrs. Macrae will be the speaker and a good attendance is hoped for.

### STRAWBERRY HILL NEWS.

At the last regular meeting of the Farmers' Institute on Nov. 6 it was decided to hold an organization meeting at South Westminster. It is the intention of the institute to hold a meeting there each alternate month, and cover more of the district by so doing. Mr. Marshall has kindly offered the use of the hall to help encourage the movement.

### WOMEN'S INSTITUTE BENEFIT.

HATZIC, Nov. 17.—Last week the sum of \$120.80 was placed to the credit of the Hatzic Women's Institute, being the money collected for the machine gun from Hatzic, several months ago. A vote of the contributors to the fund was taken, and this disposal of the fund was decided upon.

There was an average attendance of 25 a day at the lectures delivered by Miss Kennedy of Vancouver for three days to the Port Haney Women's Institute.

### KELOWNA WOMEN'S INSTITUTE HOLD SUCCESSFUL MEETING.

The meeting of the Women's Institute held November 6th was one of the largest and most successful they have ever had, over 82 members attending. Mrs. B. McDonald gave a most instructive demonstration of "candy making." In a discussion which followed on the advisability of doing something to alleviate the condition of the prisoners of war in Germany, it was decided that the Institute make itself responsible for one prisoner. This would mean a monthly outlay of \$4 which would enable a parcel of food or other comforts to be forwarded regularly.

It was also agreed to adopt the suggestion of the local Council of Women throughout Canada and make a special appeal for cast-off furs to be forwarded to Italy, where the soldiers are fighting amongst the Arctic rigors of the high Alps. Any such contribution may be left at Oxley's store.

November 22nd to the 24th a series of lectures under the auspices of the Provincial Women's Institute will be given in Kelowna by Nurse Fanny Steed, on "Home Nursing." The lectures are for the benefit of the local institute members, and any lady wishing to join before that date should send in her name to the secretary, Mrs. Harold Newby,

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**Cowichan Women's Institute**

When the institute met on Tuesday, Nov. 9th, \$8.20 was then subscribed and \$2.80 given afterwards to be sent to London to procure Christmas hampers for Canadian prisoners of war who have no friends. The name of one of these men is to be given so that the institute may adopt him just as Shawnigan Institute has already done.

The Rev. A. J. Munro gave an interesting address on "The Turks." Committee reports show that the institute is flourishing and doing good work.

The members find it necessary to leave the Agricultural Hall as it is too cold. In future headquarters will be at the K. of P. building (Mrs. Townsend's old store).

**HATZIC WOMEN'S INSTITUTE**

Hatzic Women's Institute met Nov. 18 as usual. A very interesting paper was given by Mrs. A. S. Henry, on "Home Industries." A buttonhole contest made a pleasant change from the ordinary business of the meeting. \$25 was voted to the Prisoners of War Fund, and \$25 to the Mission District branch of the Canadian Patriotic Society.

The members are all anxious to help in the patriotic work of the institute and turn out in large numbers to the sewing meetings which will be held every Wednesday during the winter months.

The institute held a very successful Halloween Festival in aid of the Hatzic Hall, on October 29th. The lectures given by Miss M. J. Kennedy (nurse) during October were greatly appreciated and well attended.

**KELOWNA Women's Institute.**

The monthly meeting of the Kelowna Women's Institute took place in the Board of Trade rooms on Saturday, Nov. 6, when some one hundred ladies were present.

The president, Mrs. C. C. Prouse, who has been absent on a somewhat lengthy visit to Dubuque, Iowa, having returned the week before, led the meeting which opened with the singing of the "Maple Leaf Forever."

The secretary, Mrs. Harold Newby, then read the minutes of the previous meeting and various correspondence among which was an appeal for furs for the soldiers of Italy as the northern roads out of that country lay over cold mountain passes. This matter was, however, left in the hands of a selected committee.

Another appeal was made for "regular" contributions for food for our prisoners of war. Various suggestions were made as to the means of making collection, then it was moved, seconded and carried unanimously that a collection be taken up at each monthly meeting. The contributions on Saturday amounted to \$7.20.

A letter from the government department stated that Nurse Steed is scheduled to be in Kelowna on November 22, 23 and 24, and that she will give lectures on nursing twice daily, in the afternoons and evenings of the above dates in the Board of Trade rooms.

Mrs. B. Macdonald then demonstrated on the making of candy, making and giving recipes for French Findant, Turkish Delight, Heavenly Food and Maple Cream. The proverb says: "The proof of the pudding is in the eating," as plates of candy which were handed round returned to the table empty, this proved to be so.

The members of the institute had been previously requested to bring and put on exhibition any Christmas gifts they had been making. This exhibition proved helpful and interesting.

The meeting was then brought to a close in the usual manner.

**METCHOSIN.**

The members of the Women's Institute at Metchosin, Vancouver Island, evidently think the boys at the front are deserving of some recognition of Christmas Day, for they have sent no less than \$20 to The Vancouver World Pudding Fund, and 100 fighting B. C. lads will have a welcome addition to their Christmas fare.

**SUMAS WOMEN'S INSTITUTE MEETS.**

SUMAS MUNICIPALITY, Nov. 12.—The regular meeting of the Women's Institute of Upper Sumas, held yesterday afternoon, was well attended. The meeting was held at the home of Mrs. W. Farsers, at Vye. The subjects discussed were "Winter Evening Pastimes" and "Sick Room Drink." Home-made candy was served. Secretary F. A. Fadden reported satisfactory progress.

**KALAMALKA.**

A general meeting of the Kalamalka Women's Institute was held last month. Mrs. Trask, president, was in the chair. After the business was attended to arrangements were made for a social evening and entertainment to be given by the members early in December; committees were formed to attend to this. Several members then gave some very good suggestions for inexpensive Christmas gifts, and Mrs. Rayburn gave a short demonstration of rose bead making. Tea was served. The hostesses for the day were Miss Despard, Mrs. C. Brown, Miss Dillon, Mrs. Cassidy. A very pleasant afternoon was spent by the members.

The new publication issued by the Women's Institute entitled "The Women's Institute Quarterly" has just been sent round to members. The first number contains reports of conference, selected programmes, syllabus of lectures work, a paper on bread making by Miss Alice Ravenhill, also an introductory notice by members of the advisory board, together with a foreword by the Hon. W. E. Scott. It is a very interesting little magazine and will undoubtedly form a link between the different institutes whose members are induced to contribute to it. It is worthy of note that Mrs. Virginia Johnstone of Nelson who wrote two of the prize essays last year has been elected a member of the advisory board.

**THE SUMMERLAND FAIR.**

The Summerland Apple Show and Fall Fair was duly held on Wednesday and

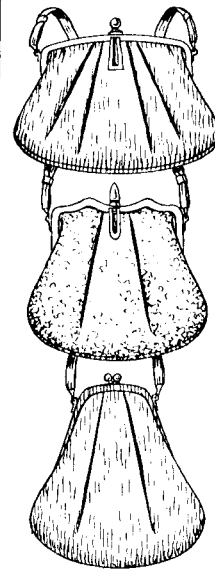
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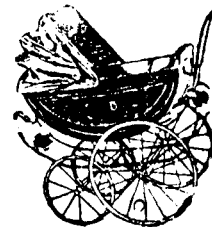
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Thursday, Nov. 3 and 4, in the Ellison Hall.

The members of the Ladies' Institute also joined in the show, and a goodly number of entries in the culinary and other branches were received. Unfortunately, it seems as if proper arrangements had not been made with the weather clerk to ensure a successful gathering, but anyhow, it rained hard on Wednesday, considerably affecting the audience, but on Thursday afternoon quite a crowd assembled. Speeches were made by Mr. Price Ellison, M. P. P., and Mr. J. M. Robinson.

The packing competition created great interest, the first prize of \$15 being won by Miss Blanche Babbett. Mrs. A. Blair and Mrs. Waite took second place, the second and third prizes of \$10 and \$5 respectively being divided between them.

The following is a copy of the official prize list as furnished by the officials:

#### Women's Institute Section.

Mesdames McGregor and Plaskett of Pen-ticton, judges.

Plain hemming (children)—1, E. Ritchie; 2, Mina Yule.

Pyjamas—1, Mrs. F. Marshall; 2, Mrs. J. Tait.

Pairs of socks—1, Mrs. David Watson, sr.; 2, Mrs. C. M. Wright.

Pair darned socks or stockings—1, Mrs. R. V. Agur.

Boudoir cap—1, Mrs. E. R. Agur; 2, Mrs. R. V. Agur.

Plain hemming (adults)—1, Mrs. E. B. May; 2, Mrs. G. E. Haddrell.

Embroidered underwear—1, Miss G. Angwin; 2, Mrs. R. V. Agur.

Buttonholes—1, Mrs. Brewer; 2, Mrs. J. L. Logie.

Centre piece—1, Miss M. Conway; 2, Miss M. Conway.

Pen and ink drawings—1, Miss J. Caldwell; 2, T. F. Knox.

Collection of fancy work—1, Mrs. F. Marshall.

Oil and water colors—1, Miss M. Aitchison; 2, Miss G. Angwin.

### The Ever-Bearing Strawberry in B.C.

Continued from page 791

cess but through a misunderstanding with the Chinamen in hoeing, the first blooming stems were shorn. The first berries were picked on July 15th. Bear in mind that our fruit season was about two weeks earlier on all varieties of small fruits. These young plants continued to bear from the middle of the month of July and are still bearing at this date, the latter part of October. Needless to say the constant wet weather has impaired the flavor of the berries and has caused the fruit to rot on the vines.

Sufficient berries were available on this patch by the first of August to ship and the fruit collected from these young plants tri-weekly assisted in a small way in filling up the crates picked off the other fall bearing varieties.

From August 1st till October 1st, 144 2-5 baskets, 6 crates in all, were shipped from this patch of young plants. These netted on an average \$2.25 per crate. Realizing the sum of \$14.90. Not a fortune by any means but enough to cover cost of planting, wedding and maybe then some.

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