

BRITISH COLUMBIA



Vol. X., No. 4

APRIL, 1917

*Page 13 - also 14 -*



A MONEY-MAKING CROP—GROWING BEANS, LILLOOET.

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These special lines are built to stand hard wear.

For women in the suburbs—on the farm—at camp—or in the city during rough weather—no better boots could be had.

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Established 1890.

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# BRITISH COLUMBIA Fruit and Farm Magazine

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

Vol. X.—No. 4

Vancouver, British Columbia

\$1.00 per year  
in Advance

## A Great Dairy Farm at Cloverdale

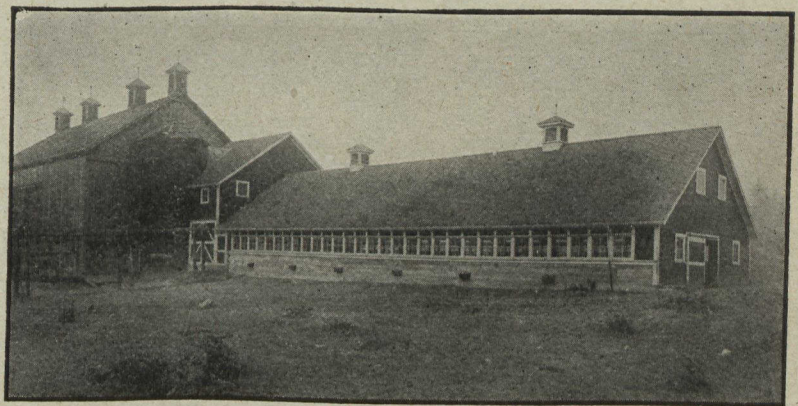
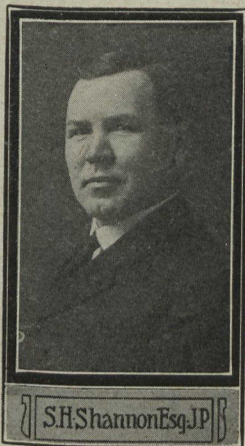
Valuable Stock Bred in B. C., Sold All Over The World.

(By BEVAN L. HUGH.)

As I alighted from the B. C. Electric train at Cloverdale I saw, three-quarters of a mile to the east, the large barn and silos belonging to Shannon Bros. nestling near the brow of the hill at the edge of the bush. I met Mr. Sam Shannon in the milk house and he was kind enough to show me over the extensive farm belonging to him-

Cloverdale and is valued by them at \$4000. She is the second high cow in record of performance work in Canada and is the first Ayrshire cow in this country to go over 20,000 pounds. "Lessnessock Comet" was imported by these progressive dairymen from Scotland and ranks as one of the five best Ayrshire bulls in Canada. "Royal

There are 15 horses altogether on the ranch. Of the feed produced on the 180 acres under cultivation, timothy yields 65 tons, vetches 35 tons, oats 45 tons and clover hay 45 tons. The silage consists of corn, vetches, oats and clover. For the benefit of farmers who are unable to obtain both vetches and clover, together for silage, either one will



COW BARN ON SHANNON RANCH

self and brothers. The whole farm consists of 226 acres, part of which is on the flats and part on the hill and incline, where the dwelling, barn, milk-house, silos, etc., are located. 180 acres are under cultivation, growing the food-stuffs used in connection with the feeding of the cattle. The cow stable is a concrete floored, well-lighted building adjoining the barn, 36 feet wide by 100 feet in length, and houses 65 head of cattle, 45 of which are pure bred Ayrshires and 20 grades. Three units, operated by electric power supplied by the B. C. Electric Co. are used for milking. Plank flooring is used where the cattle stand and Beattie standions in the place of halters, thus assuring perfect sanitation where the production of milk is concerned.

The stable is equipped with electric light throughout so no danger arises from the negligence of leaving a lantern where it could be knocked over. The two silos adjoining the barn have a total capacity of 250 tons, one holding 100 tons and the other 150 tons.

Of the 45 pure bred Ayrshires, "Grandview Rose" ranks first, her test showing that she produced 21,423 pounds of milk, giving 890 pounds of butter fat, which equals 1040 pounds of butter in 365 days. This cow was bred by Shannon Bros. at

Salute" of Tanglewild, is another valuable bull and the reader may fully realize the force of this statement when it is known that "Primrose" of Tanglewild, is his dam. "Primrose" is the ex-world's champion, producing 16,195 pounds of milk, giving 629 pound of butter fat. Several of the two-year-old heifers are remarkable animals at their age; "Grandview Grace" producing 8932 pounds of milk, giving 397 pounds of butter fat; "Grandview Blossom" producing 5122 pounds of milk, giving 348 pounds of butter fat; "Grandview Minnie" producing 8750 pounds of milk, giving 376 pounds of butter fat; "Grandview Edith" producing 7690 pounds of milk, giving 344 pounds of butter fat. These records were made under ordinary farm conditions of two milkings per day. "Spring Hill Live Wire" is the sire of the latter four heifers as well as of "Grandview Rose," the cow to go over 20,000 pounds. Of the "grade cattle" all are excellent producers of good type at the pail, one cow producing over 10,000 pounds of milk and another animal producing 11,000 pounds, the sire of which is "Spring Hill Live Wire."

Although Shannon Bros. centre their breeding in their Ayrshires yet they have some valuable pure bred Clydesdale horses, three of which are mares and five stallions.

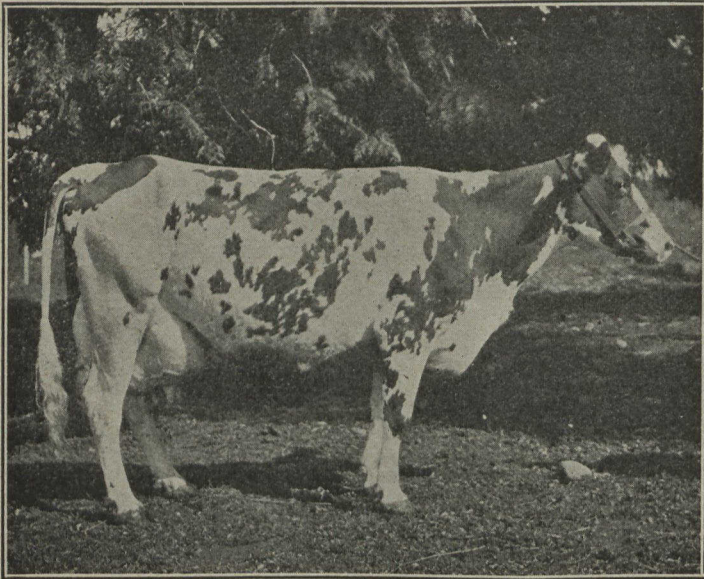
do. Eighty-five gallons of milk are sent in to Vancouver and New Westminster daily in 350 bottles, both quarts and pints. After the cows have been milked the milk is cooled to 50 degrees Fah., bottled and set in cold water over night.

During the summer time ice is put in the boxes when the milk is sent to the cities. In the milk house is a steam turbine washer. The bottles after having been washed are put in with their milk pails and all the necessary bottling appliances in the sterilizing over and sterilized by steam heated by a furnace to 180 degrees. The floor of the milk house is concrete and after the milk operations are completed the floor is washed down with hot water and cold water.

The father of the four boys, Sam, George, Tom and John, came from Ontario and settled on the present farm which was in the forest, far from any railroad at that time. At present, the B. C. Electric and the Great Northern cut through the place. Mr. Shannon Sr. cleared a large part of the farm and broke the land for his sons, all of whom are native born. The younger generation commenced the breeding of fine cattle in 1909 and in that year laid the foundation of their present business in Ayrshire dairy cattle. Shannon brothers receive many or-

ders for their prize stock from dairymen all over the North American continent, and they strongly emphasize the fact that dairymen wishing to have good cattle should use good sires. Everything in the line of modern machinery and labor-saving devices is to be seen on the place, the grain

crushers, pulpers, chaff cutters, etc., are all driven by electric power while electric light lamps are in evidence everywhere in the buildings. A gasoline ditch digger has been busy during the spring making a trench preparatory to putting in of 8000 3x8 inch tiles for underground drainage.



**AYRSHIRE COW "GRANDVIEW ROSE"**

bred by S. Shannon, Cloverdale, completed her test and produced 21,423 lbs. of milk, giving 900 lbs. of butter fat, in 365 days. She is due to freshen in April and is the first Ayrshire in Canada to go over 20,000 lbs.

## MAKING YOUR HOBBIES USEFUL

### How Spare Hours May Be Turned to Production.

A person without a hobby is only half living, but nearly everyone in British Columbia is fully alive, consequently nearly every one has a hobby. Some of these hobbies are of no more value than to create a diversion, which in itself is beneficial no doubt, but how much more valuable it would be if in addition they afforded an influence of good to others, and they might be made to be of even a universal advantage, which anything is at the present time that goes to produce more food stuff. We know a man whose hobby a few years ago was the production of beautiful flowers. Last year he changed it to vegetables and we well remember carrying a big bunch of lettuce and carrots away from his home, presented to us, with as much pride and pleasure as he used formerly to display in presenting us with a bunch of beautiful roses, and he stated it took just as much care and attention and created just as much satisfaction to produce a fine specimen of carrot as it does to produce an excellent rose.

A boy in Mount Pleasant has been rearing fancy pigeons for years. He sometimes sold a few pairs for fancy prices. Now he raises all he possibly can and sells them as squabs, netting quite a nice financial return and producing just as much pleasure as formerly.

Many ladies are now knitting socks when a few years ago it was lace, tatting or crochet which whiled away their spare moments.

Some diversions such as motoring, shooting, etc., are hard to convert into means of greater production, but possibly some other

inclination could be developed towards this end, and without any loss of interest. We have in mind a university man whose inclinations run to motoring and art work in brass. He would not give up either, but a greater application to the latter would be a manner of securing some money in prizes at the coming August fair or be a benefit to some raffle or bazaar. We used to breed a few fancy horses as a pastime. We changed our breeding operations to Cattle, and now have as much interest and pleasure as formerly although had anyone told us that such would be the case we would have been surprised.

The public school system of this country is admirable in this respect. Boys and girls are being taught to take up the hobby of gardening, of manual and industrial work, of domestic science. What is the result? Boys now can teach their fathers how to run a lathe, how to mend a chair, a table, or any piece of furniture. Girls can give lessons to their mothers in home-cooking and scientific methods, and in gardening both boys and girls in numerous instances, can give lessons to their parents. This is advancement; this is progress. Just visit the Vancouver exhibition and you will see the ocular demonstration of what the public school system of this country is doing for the uplift of the young idea. You will see there the exemplification of self reliance, of striving to excel, in fact of man and woman in the making, for the boy or girl properly equipped with the knowledge how to use their hands and their brains will meet and overcome life's troubles, when they become men and women, with confidence and self-reliance will be better citizens, better fathers and mothers themselves, and the country will be better for their helpful and self-sustaining presence.



## Synopsis of Coal Mining Regulations

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

Application for a lease may be made by the applicant in person to the Agent or Sub-Agent of the district in which the rights applied for are situated.

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

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

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

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

For full information application should be made to the Secretary of the Department of the Interior, Ottawa, or to any Agent or Sub-Agent of Dominion Lands.

W. W. CORY,

Deputy Minister of the Interior.

N.B.—Unauthorized publication of this advertisement will not be paid for.—33575.

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J. E. HUGHES, Manager.

**ENTOMOLOGISTS IN ANNUAL MEETING**

The British Columbia Entomological Society met in annual session at the Natural History Museum, Parliament buildings, Victoria, last week, and a number of very interesting papers were given by several members present, among which was the question of the mosquito control in the Lower Fraser valley and other parts of the province. "Hibernation of Larvae," the "Snow Flea" and one by the late Mr. Tom Wilson (who lost his life at the disastrous fire at Hope) on the habits of the red ladybird beetle, was read.

Mr. Treherne of the Dominion department of agriculture, drew the attention of the members to the presence of several new insect pests which have appeared in the province, notably the apple maggot, chrysanthemum midge, pea weevil and mangold aphid. He specially mentioned the codling moth as presenting a serious problem in the Okanagan and advised orchardists to prepare themselves to fight this pest. Much experimental work had been carried on during the past year on these local problems which had met with excellent results.

Mr. Williams Hugh was appointed secretary for the present year.



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A properly constituted Calf Meal is equal to and better than cow's milk for raising calves, because it takes the place of milk, thus saving 50% of your feed bills.

### Lilly's Calf Meal

is thoroughly cooked under 60-lb. steam pressure. It is all food, easily digested, fresh and sweet with that nutty flavor so relished by calves.

Most Dealers sell it. If yours does not, write

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Blatchford's Calf Meal prevents scouring, insures early maturity, costs only one-third as much as new milk and raises the finest calves. Send for booklet "How to raise the finest Calves with little or no milk"

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**B. C. FRUIT AND FARM MAGAZINE**  
615 Yorkshire Bldg., Vancouver, B. C.

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

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**GRANT LANDS LOCATING CO., BOX 610 PORTLAND, OREGON.**

# Solution of Our Logged-off Land Problems--

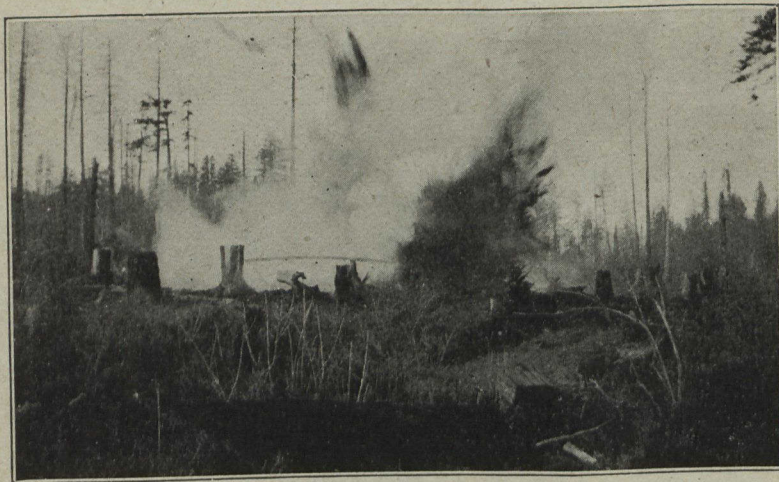
## Stumps Worth Money

There are thousands of acres of logged-off land in British Columbia which is first class agricultural land when cleared, but the difficulty in the past has been the high cost of removing the stumps. From extensive experiments made in the States a solution of this logged-off land problem is now indicated. Stumps are worth money! By the installation of a wood-distilling plant, they can be made to produce not only enough to pay the price of clearing the land, but a profit besides.

The charcoal, when analyzed, was found to be 95 per cent pure carbon, equal to the best hardwood charcoals. The non-condensable gas was piped to the furnace where it gave an intense heat, but it could have been used for light, heat, or to run a gas engine.

For the wood turpentine there is a ready market in the paint industry. The fir oil can be used for medicinal purposes, but it can also be used in connection with the wood creosote and so make very superior

This opens up a new industry for British Columbia and should appeal to the capitalists of the country. The company furnishing the capital would earn a profit from the increased value of the land, as well as from the allied industries. It would be the means of converting our waste products into marketable articles that could be sold in all parts of the world, bringing money here. At the same time, the logged-off land would be put in shape to raise food products now shipped in.



A BIG BLAST

There are two distinct methods of wood distillation, the steam and the dry, and the following products are obtained, charcoal, oils and acids.

### Steam and Dry Distillation

In steam distillation the wood is chopped up fine and super-heated steam is passed through it in the steel retort, which drives out the lighter oils and the acids, after which it is subjected to direct heat, which drives out the higher temperature oils and reduces the wood to charcoal.

The dry distillation subjects the wood to dry heat in which the temperature is increased as the distillation progresses until all the oils and acids have been driven off and the charcoal remains. This is the most practical method and is the only one adapted to the distillation of fir stumps.

By this dry method the following yields of products were obtained from an average cord of fir-stump wood weighing about 4000 pounds: 30 gallons of oils, 60 to 120 gallons of acid, 50 bushels of charcoal and about 15 per cent of the weight of the wood produced as a non-condensable gas.

After experiments with a two-cord retort it was found that the condition in which the products came from the retort made them unmarketable, as the industry was a new one on the coast.

Refineries were then constructed to separate the oils. The thirty gallons of oils from a cord of fir stumps yielded about three gallons of wood turpentine, six gallons of fir oil and eight gallons of wood creosote, the remainder being Stockholm tar.

The pyroligneous acid yields per cord about five gallons of wood alcohol, ten gallons of acetic acid, some acetate, acetone and water.

fir oil shingle stains. The Stockholm tar has various uses. These oils can also be used in the manufacture of numerous outside paints.

### Various Uses for Charcoal

Wood alcohol is a staple product on the market. The acid in Eastern plants has been made into acetate of lime and shipped to Germany in large quantities for further refining.

In the grinding and sifting of the charcoal, a charcoal dust was obtained which by mixing with potassium chlorate, made blasting powder for blowing up the stumps. This can be made very cheaply.

Another discovery was made by a method of mixing ground charcoal with cement and made what is called charcrete. This is like concrete in that it is fireproof and indestructible. It differs from concrete in that it is very light in weight, is flexible within certain limits and a nail can be driven into it like wood. It is suitable in many ways as building material, and with it cheap fire-proof homes can be built. It is also suitable for railroad ties, mine props, telephone and lamp posts.

The raw products of fir stumps as they come from the retorts are worth from five to ten dollars a cord. It costs not more than five dollars a cord to get the stumps out of the ground, to reduce them to proper size, distil them in the retort and prepare the land for agriculture. The land should be worth at least a hundred dollars more an acre after it is cleared than before, and it costs nothing to clear it.

There is no theory about this as every phase of the problem has been tried out; it is the only practical method of solving the logged-off land problem.

## VICTORIA SEED GROWERS' ASSOCIATION

Growers Ready to Discuss Contracts With Department of Agriculture.

The activities of this association have now passed the embryo stage, for the seal of success was placed upon the efforts of the members of the Home Products Fair held in the city last year, the seed exhibit on that occasion, being the subject of warm praise from those versed in matters of commercial seed production.

At the annual Seed Fair held in New Westminster a month or two ago, the first prize was awarded to one member of the association. The association has come to the conclusion that there is no reason why the excellent lands adjacent to Victoria should not be devoted to this branch of production and earn the reputation for supplying seeds for the whole of the Dominion.

The secretary, Mr. Cuthbert, of the Seed Growers' Association, is in touch with the minister of agriculture at Ottawa, with regard to arrangements for an increased output of root and garden seeds to be put on a commercial basis. Mr. McMeans of the seed branch of the department is now in the west and will endeavor to meet the Victoria body.

The minister of agriculture at Ottawa, makes it clear that members of the association will need to be in a position to enter into definite arrangements for the production of seed on contract with wholesale seed merchants and at prices comparable to those paid to California seed growers.

The minister says further that ability to handle the matter from the practical angle, would place Mr. McMeans in the position to conclude arrangements for the production of certain kinds and varieties of vegetable seeds.

It is made clear by the department that Mr. McMeans will place orders for seed only with men who have proven their ability to produce them in a satisfactory manner, the contract that would be entered into by local farmers being dependent upon full understanding of what is required and expected of them.

## ADMINISTRATION PLOT WILL BE CULTIVATED IN VICTORIA

There is to be a demonstration plot for the city of Victoria conducted by the department of agriculture, and a suitable sight is being looked for which must be of average soil, and within the mile circle of the city so as to be easily accessible for inspection. The work of ploughing and harrowing is being handled in a systematic way and is going on successfully, and cultivation will be started as soon as possible.

# Giant Powders and Why They Are Superior for Agricultural Uses

**H**ERE are some of the reasons why you should insist upon Giant Powders for all farm blasting:

1. They are made especially to suit Canadian farm and orchard conditions, by a Canadian company with many years' experience.

2. They are the genuine Giant Powders—the product of the manufacturers who originated the name. The fact that other explosives are often called “giant powders” indicates the high quality of the genuine.

3. They go further than ordinary dynamites. They exert their strength over a wide area, cracking, splitting and heaving out stumps, roots and all, rather than shattering and throwing them high in the air.

4. They will not freeze at ordinary temperatures. This reduces the labor of thawing.

5. They are being used by thousands of Farmers, scores of whom state that the Giant brands “give better results”—“save money”—“have wider breaking power”—“shoot the roots”—and “are always uniform in strength and action.”

Giant Stumping Powder and Giant Powders, 40%, 50% and 60% are high explosives which have been developed to the point of greatest efficiency known at the present time.

Giant Stumping Powder is particularly efficient for stump blasting, for subsoiling and for blasting tree beds. Some kinds and grades of explosives tend to shatter and pulverize anything the gases come in contact with, since they act too quickly. These dynamites do not do the work well and cost more than Giant Stumping Powder, which exerts its strength, comparatively speaking, in a slow manner. It disrupts, cracks, splits and heaves the roots or soil and extends its action over a wide area. It loosens and throws out the stumps in pieces, and loosens and pulverizes the soil instead of caking and packing it and throwing it high in the air. This is the action that is wanted in stump and soil work, and the action that the so-called “high strength” dynamites will not give. When you use Giant Stumping Powder the finished job costs you less money.

Giant Stumping Powder will stand a good deal of cold before it becomes so chilled that good detonation will not take place. It will stand 32 degrees for days without requiring thawing, and in practice it may be used with little protection at a much lower temperature. This saves both in winter work and saves money, too. Ordinary dynamites may become chilled in cold ground before they can be fired, losing strength.

Giant, like other high explosives, re-

quires a shock to explode it; but Giant is safer than ordinary dynamites because it requires a much heavier shock than others. No cap of a strength less than No. 6 will detonate it properly. It is made in this way so that it will be safer.

In addition to these advantages it is water resisting, and may be

used freely in wet work without lessening of its strength. It can be stored without damage for lengths of time and in places that would ruin other high explosives.

No matter what work you have to do with explosives, there is a Giant Powder that will save you money and labor.

*Continued Next Month.*

## Let us give you this book

It will show you how to reduce the cost of clearing land.

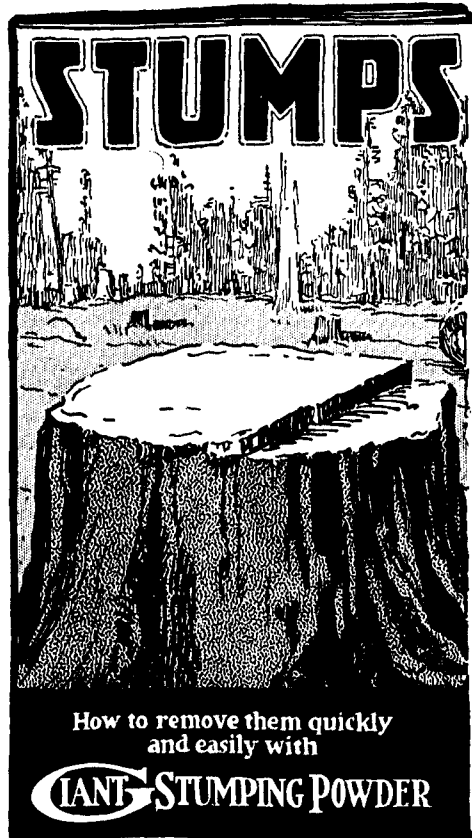
It contains 44 illustrations of the most effective methods of blasting.

It gives diagrams showing how you can place the charges in ways that will cut down the quantity of Powder needed.

Mail the coupon and the book will be sent free.

**Make this test** Get a trial case of Giant Stumping Powder. Use it alongside of any other explosive.

Keep track of the cost. You will find, as thousands of other British Columbia farmers and lumbermen have found, that Giant Stumping Powder goes further and breaks up the stumps better than ordinary explosives. Giant Stumping Powder has been made in Canada for 32 years, especially for British Columbia stump blasting.



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Send me your book “Better Farming with Giant Stumping Powder.”

I am interested in the subjects which I have marked X:

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| <input type="checkbox"/> STUMP BLASTING   | <input type="checkbox"/> TREE BED BLASTING    |
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# The Evolution of Agriculture

By L. S. KLINCK, Dean of Agriculture, University of British Columbia.

The present status of agriculture was not attained at a single bound. It is the result of accumulating experiences and is the climax of a long line of gradual evolution.

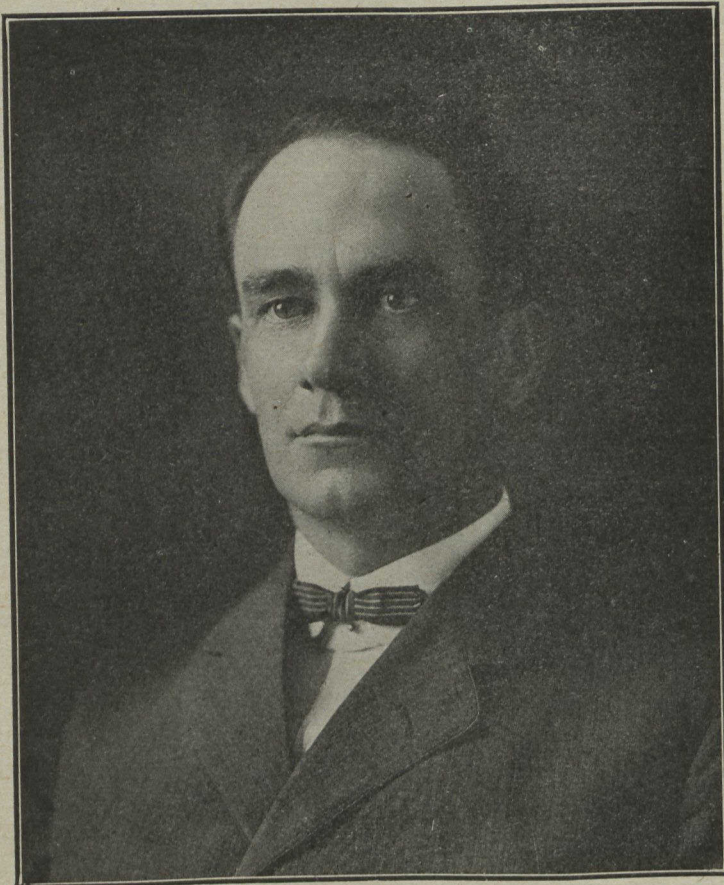
flavor of antiquity, but the questions with which they deal are perennial. Although the translation from the classics are not my own, it is hoped that the presentation of

many more than those who actually live by the land.

This, however, is not the time for attempting an extended review of the subject assigned. A brief reference to a few age-long searchings after agricultural truths and a passing allusion to some of the more important economic, social and educational movements must suffice.

The history of the evolution of agriculture is yet to be written. We are still confined to literary sources for the greater part of our information. Until recently the real history of agriculture, which is largely economic and social, has received but little attention. Literary men were, with few exceptions, better writers than farmers; and historians were, as a rule, more concerned with recording events than with making any serious attempt to discover the underlying causes and trends of the movements recorded. It is not to be wondered at, therefore, that many of the early writers, especially the poets, disregarded the truth in order to turn a graceful phrase, and sought rather to delight their readers than to instruct the husbandman. Even the earliest writers availed themselves of the poet's licence and were more careful of their language than of their doctrine. Of the few who took a genuine interest in their farms, all saw to it that the sustained and strenuous labor involved in intensive tillage was left to others. While loud in their praises of country life, they made it the vehicle for some of their most delicate satire. Like the barons of mediaeval times, they rebelled against the minute and continuous labor of farming. The ancient prototypes of "Farmer George," of "Turnip Townshend," or of Coke of Holkham were rare, and we may safely assume that few of their estates verified the truth of the maxim that "the Master's foot fats the soil."

As a result, the great majority wrote in a grandiose way of rural life and employment as though there were no small landlords, tenants or laborers in their day. In some of these poems is to be found as pretty a bit of gasconade about living in a cot-



DEAN KLINCK

A fairly extended retrospect is, therefore, essential to an intelligent understanding of the present status of the subject. In this retrospect some of the references have a

subject, as a whole, will be of interest to all those who are concerned with the advancement of this great "mothering occupation", a category which, happily, includes

## The Vernon Fruit Co., Ltd.

1908.

1917.

The old reliable company that has always made good.

### Remember

We are a British Columbia

### Company

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

Head Distributing Office:

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## When It's Nitrate Time for Apples

Use 200 pounds of Nitrate of Soda broadcast per acre in late February or early March, or use at Blossom Time.

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Wrapping  
Papers**

**DUPLEX FRUIT WRAPS**

Medium weight, glazed on one side

**SULPHITE FRUIT WRAPS**

Lightweight, strong, durable and transparent

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

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

**LAYER PAPER**

**CORRUGATED STRAW PAPER**

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

Mail orders receive special attention.

**Smith, Davidson  
& Wright, Ltd.**

Paper Dealers

VANCOUVER, B. C.

tage in the country and subsisting on love and a few home grown vegetables as any present-day "back to the land" enthusiast could wish.

The one outstanding exception to this criticism is found in Virgil's Georgics. I suspect that Virgil's practical experience as a farmer was not extensive, but he was a close observer and an insistent questioner of every sagacious landlord and tenant he fell in with. During the seven years he spent in composing and polishing the Georgics he had the advantage of personal contact with Varro, and it is from this source that Virgil drew the practical farming lore for which he has been extolled in all ages.

In marked contrast to the references to agriculture made by the lesser poets, are those made by some of the foremost prose writers of the times. Many of these men had been bred in habits of simplicity and rural industry; they had thoroughly mastered the art of good husbandry and, in later life had used the leisure snatched from study, or from attention to matters of government, in the intelligent supervision of their country estates. From their writings we learn what kind of farm managers they were, or wanted to be thought to be. Much shrewd common sense and mature agricultural wisdom is recorded in these works. The great fundamental truths upon which agriculture rests, and which simple experience long ago demonstrated, they grasped and ever kept in view. The chief value of these works lies in the fact that they set forth well-digested systems of agriculture, evolved by successful farmers who had seen and practiced all that they recorded.

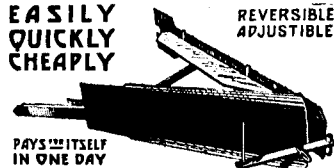
Students of agricultural practice who endeavor to keep posted on all the most approved methods for pushing lands which have an awkward habit of yielding poor crops into the better habit of yielding larger ones, may feel chagrined to find these writers who lived centuries before the Christian era laying down rules of culture "so clear, so apt, so full," that we who have all the advantages of an additional two thousand years of recorded experience find little in them to laugh at unless it be a few oblations to the gods.

A few of the Roman writers who were of a sociological and economical turn of mind, recorded some interesting facts bearing on the domestic life of their contemporaries. From them we learn that the early Romans esteemed those who lived in the country above those who dwelt in the town, and condemned the tenant of a villa as an idler in comparison with the strenuous life of the tiller of the soil. When they sought to command an honest man they termed him "good husbandman, good farmer." This they rated the superlative of praise. So long as they regarded the sedantry occupations of the town as a waste of time from their habitual rural pursuits they kept their farms fertile and they enjoyed good health. Moreover they felt no need of those Greek gymnasia which, later, every one was convinced he must have in his own house; nor did they deem that in order to enjoy a country home that they must give high sounding Greek names to all its apartments. From the same source we learn with surprise how little they regarded their oxen except as work animals and their sheep except for wool and milk. To an Anglo-Saxon it is well-nigh incomprehensible, "that men who could appreciate the iambs of Horace, and the eloquence of Cicero, should have shown so little fancy for a fat saddle of mutton or for a mottled sirloin of beef."

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Do you know that SWARTZ BROTHERS, 155 Water Street, Vancouver, B.C., sell more fruit for the British Columbia Farmer than any other commission house in Vancouver, B. C.

**WHY?**

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

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

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

**15 Per Cent Charged on All Goods.**

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**SWARTZ BROS.**

# Keep up the Food Supply and Help Make Victory Sure

**I** AM assured that my people will respond to every call necessary to the success of our cause—with the same indomitable ardour and devotion that have filled me with pride and gratitude since the war began."

HIS MAJESTY KING GEORGE

**O**UR soldiers must be fed; the people at home must be fed. And—in spite of Germany's murderous campaign to cut off the Allies' Food supply, by sinking every ship on the High Seas—an ample and unfailing flow of food to England and France must be maintained.

*This is National Service—  
Not to the Farmer only—  
But to YOU—to everybody—  
This appeal is directed*

**W**E must unite as a Nation to SERVE—to SAVE and to PRODUCE. Men, women and children; the young, the middle aged and the old—all can help in the Nation's Army of Production.

**E**VERY pound of FOOD raised, helps reduce the cost of living and adds to the Food Supply for Overseas.

*For information on any subject relating to the Farm and Garden, write:*

INFORMATION BUREAU  
Department of Agriculture  
OTTAWA

**P**LANT a garden—small or large. Utilize your own back yard. Cultivate the vacant lots. Make them all yield food.

**W**OMEN of towns can find no better or more important outlet for their energies than in cultivating a vegetable garden.

*Be patriotic in act as well as in thought.*

*Use every means available--  
Overlook nothing.*

**Dominion Department of Agriculture  
OTTAWA, CANADA.**

HON. MARTIN BURRELL, Minister.

From miscellaneous sources we learn of the practice of finishing chickens in fatten-in crates, and of catering to their appetites by the addition of a little sweetening to their barley gruel; of the breaking of the legs of young doves that they might the more readily fatten upon their stumps; of the darkening of the thrush houses so that only enough light is admitted to enable the birds to see their food. In some cases the birds were fed bread, soaked in good wine, to improve the flavor, hasten maturity, and induce relaxation of the muscles and tendons. This practice is still followed in Virginia in connection with fattening turkeys, the result being that the birds get into the condition which put our ancestors under the table. A modern writer has directed attention to the fact that there is a humanitarian side to the practice which should commend itself to prohibitionists as well as to epi-cures.

The Romans had learned many things in other departments of agricultural practice which we are now learning again, such as the selection of seed; green manuring, including legumes; the preservation of the chemical content of manure; the composting of the rubbish of the farm; the benefits of surface drainage and of irrigation; the practice of soiling and of seeding green feed crops at different dates; the testing of soils for acidity; the addition of lime to heavy lands; the intensive cultivation of the fallow; the benefits resulting from a judicious rotation of crops and the importance of live stock in a system of general farming. Methods of propagating plants were described and the theory of the relation of plant life to soils was indicated. "The foundation of their agriculture was the fallow, and one finds them constantly using it as a simile—in the advice not to breed a mare every year, as in that not to exact too much tribute from a bee-hive. Ovid even advises a lover to allow fallow seasons to intervene in his courtship."

A study of the Roman treatises on farm management is profitable to the present-day farmer however practical and scientific he may be. In them he will find many excellent correctives and preventatives of undue self-satisfaction. True, he will not find anything about bacteria or nodules in respect to legumes. The origin, formation and classification of soils is not discussed. The ancients made no distinction between free water, capillary water and hygroscopic water. Potential and available plant food were not differentiated. Insects and fungus diseases were numerous, but insecticides and fungicides were practically unknown. The contributions made to agriculture by modern science were undreamed of. In these works, however, the reader will find a background for his daily routine, and an appreciation that two thousand years ago men were studying the same problems and, by intelligent reasoning, were contributing to their solution.

**Grain Needed in Calf's Ration.**

A grain ration of equal parts corn, oats and bran, with a small quantity of oil meal should be provided for the calf, is the opinion of an expert. Even when only a few weeks old a calf will begin to eat grain and nibble at hay. Whole oats are better than ground oats for the young calf. Clover hay, or mixed clover and alfalfa, is superior to alfalfa alone, as alfalfa is alone too rich for the kidneys and digestive tract.

Calves dropped in the fall and early winter will do well on pasture the first summer, if provided with some grain and shade, while calves dropped in the spring and early summer are much better off when properly cared for in the barn during the first summer.

**I cleared my land with a**

**Kirstin Stump Puller**  
"MADE IN CANADA"

**And You Can Make Your Farm Just As Productive**  
The Farmers in European Countries raise enormous crops on just a few acres because they utilize every foot of ground while many Canadian Farmers waste from 15% to 25% of their best land by permitting stumps to remain. Are you one of them?  
Our illustrated booklet "The Gold in your Stump Land," which will be sent for the asking, gives particulars about the KIRSTIN METHOD of clearing Land, (the Method that is guaranteed to do the work from 10% to 50% CHEAPER THAN ANY OTHER.) Mail the coupon and find out how easy it is to increase the production of your farm.

**A. J. Kirstin Canadian Co.**  
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**Largest manufacturers in the World of Stump Pullers—hand and horse power**

**Kirstin One Man Stump Puller**

29-2-17

**Revision of B. C. Dental Act**

**THIS LEGISLATION IS DISTINCTLY IN THE PUBLIC INTEREST AND DESERVES THE HEARTY SUPPORT OF THE GENERAL PUBLIC**

**What is Sought by this Revision**

**MORE REPRESENTATIVE CONTROL OF DENTISTRY**

By providing that control be vested in a Dental Council of five registered dentists, who serve for one year, two members to be appointed by the government

and the other three elected by the dentists; instead of the present rule, whereby the Council is elected for five-year terms on the vote of dentists only.

**PLACE BRITISH COLUMBIA ON COMMON GROUND WITH OTHER PROVINCES.**

By providing for the recognition of certificates to practise granted by the Dominion Dental Council (the highest dental body in Canada) just as is now done in Nova Scotia, New Brunswick, Ontario, Manitoba, Alberta and Saskatchewan.

**MAKE THE DENTAL ACT SUFFICIENTLY ELASTIC TO MEET PUBLIC NEEDS**

By providing that graduates of dental colleges approved by the Council may be granted permits to practise in the office and under the supervision of a registered dentist for a period not exceeding six months (Provincial examinations for dental licences are held only semi-annually).

**IS NOT SUCH A MOVEMENT IN THE PUBLIC INTERESTS?**

If you agree with the outline noted above, write your representative in the House, expressing your views and asking him to support the legislation.

If further particulars on the subject are desired, drop a postcard to room 3, 407 Hastings Street West, Vancouver, and secure a pamphlet outlining in full the terms of the proposed revision.

## POTATO CULTURE WILL BE HELPFUL

### Industry Will Be Given Special Assistance.

Hon. John Oliver, minister of agriculture, in an interview at Victoria, states that his department will give special attention to the potato industry. As a first step the department is changed somewhat, so that all potato work will be under the direction of the horticultural branch of the department of agriculture. The minister proposes such an aggressive and sustained campaign as will help toward placing the industry on a proper footing.

The immediate problem is an adequate supply of good seed potatoes. A certain shortage exists undoubtedly. It is due partly to the fact that the growers have for years past been inclined to neglect the ordinary precautions of planting good clean seed on clean land, with the result that there was more disease in the 1916 crop than ever before, while the yield per acre was below the most profitable average. The trouble is accentuated because of the export demand, for which only the very cleanest potatoes are accepted, which took a big share of the 1915 crop and a still larger part of that of last season, including much that should have been kept for seed. The shortage is still more acute because many growers are now convinced that small and scabby seed does not pay, and they want to get new and clean stock.

### Export Encouraged.

The minister has encouraged the export trade, because exports mean money, and money coming in spells prosperity. British Columbia potatoes have made good—in Australia, on the prairies, in Ontario and by the hundreds of carloads in the United States. This trade can continue only with clean and high-grade potatoes, which in the past season were only about 20 per cent of the crop.

It is Mr. Oliver's opinion, based on the statistics of the potato supply still remaining that good stock still available should be kept in the province for seed, or that, in other words, the holders of high-grade stock should give our province first call on it. To facilitate this he offers the services of the department to put sellers and buyers in touch with each other. In writing the department, sellers should state variety, quality, size, quantity and price. Buyers should similarly state their requirements. All correspondence should be addressed: Horticultural Branch, Department of Agriculture, Victoria.

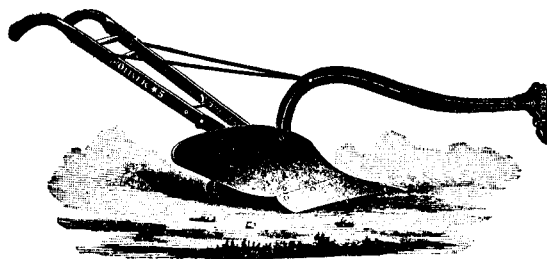
### Practical Demonstration.

To get potato growers started right on seed selection and disinfection practical demonstrations will be given throughout the province by department experts during the latter part of March and early April. At these demonstrations growers can learn to recognize the diseases of potatoes, learn how they work and how to guard against them; how to select seed potatoes and how to start seed plots for future years.

McCormick Disc Harrows.

McCormick Seed Drills.

Buy  
The  
Best



They  
Cost No  
More

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VANCOUVER, B. C.  
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Planet Jr.  
Seeders.

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## Carter's Tested Seeds

of England

We have a full stock of Carter's Seeds on hand, also their well known Grass Seed, the best obtainable for lawns and tennis courts.

Sow now your early Peas, Beans, Onion Sets, Potatoes and Sweet Peas.

Call and get our Catalogue and prices before placing your order.

Cut Flowers and Funeral Designs a specialty.



## Brown Bros. & Co., Ltd.

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#### NURSERYMEN AND SEEDSMEN

Main Store and Office:  
48 Hastings St. East.  
Vancouver, B. C.

Branch Store:  
728 Granville St., and  
618 Vine St. Victoria,  
B. C.

The department, it is expected, will also formulate a system of producing clean, strong, healthy seed potatoes of high grade varieties, which will be sold under government certificate. The advantages of such a system and the steps in growing the class

of seed potato that will be entitled to the government blue ribbon, will be explained at the demonstrations above mentioned, the dates of which will be announced by the department shortly.

**CANNING FACTORY FOR  
KEREMEOS**

A syndicate of coast capitalists have organized a company and are completing arrangements for the establishment this spring of a fruit and vegetable canning plant at Keremeos.

Mr. Robert Broder who operates a similar canning establishment at New Westminster is interested in the project and will have charge of the work of installing the up-country plant.

The company behind the project has been incorporated and gazetted. The plant installed will be up to date and capable of handling the fruit and vegetable products of the district.

In this connection Mr. Harry Tidy, a New Westminster gardener and florist, has left for Keremeos where he will engaged in growing tomatoes on a more extensive scale than was ever before attempted in B. C. He has leased 100 acres of the finest land in the Keremeos district.

Mr. Tidy will have modern machinery by which all the planting will be done as well as the cultivating and the only hand work will be the picking and crating of the fruit.

All the tomato plants for this extensive acreage will be given a start under glass at New Westminster and shipped to Keremeos for planting. It is expected that the first crop will be ready for the coast market by July 15.

The spot selected for this enterprise is conceded to be the earliest part of the irrigation district of B. C. by fully two weeks. Frosts in the autumn are said to be two weeks later so that full advantage of the long warm season will be taken.

If the venture proves a success plans for extending operations to include growing cantaloup, watermelon, grapes and casaba melon, all of which are said to do well in the Keremeos district.

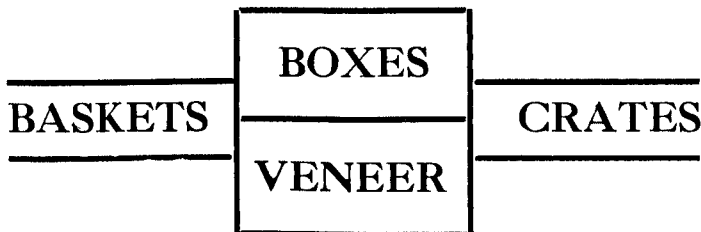
**MOSAIC DISEASE OF TOMATOES**

The Mosaic disease is seen in tomato leaves when the plants are about a foot high or later. It is not a leaf spot or blight, but consists of a general unhealthy condition of the leaves, indicated by light or yellowish-green areas with dark green normal areas between. Since the lighter parts are not so vigorous, the normal, healthy areas often grow faster, thus producing an irregular or blistered effect. Diseased plants are weaker than healthy plants and set less fruit.

The disease appears to pass the winter in two ways: (1), in the field, in the soil or in the old plant remains; (2), in the seed bed. The first does not seem to be of serious importance; but it is not advisable to grow tomatoes on land where the mosaic disease has been had during the previous year. Seed bed infection, on the other hand, seems to be responsible for all the bad cases of the disease yet seen. The common practice of adding new soil to that of the old tomato seed bed is what causes the trouble, since the disease germs still linger in the old soil. Danger from this cause can readily be avoided by completely changing the seed bed soil as soon as the disease appears in the field. This discarded soil is apparently harmless for other plants.

**British Columbia  
Manufacturing Company, Ltd.**

Manufacturers of



If you wish to eliminate that sawdust nuisance use our Standard Rotary Cut Berry Crates.

No order too large, no order too small to receive our prompt and careful attention. Write for Prices.

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# WAR LOAN

## DOMINION OF CANADA

### Issue of \$150,000,000 5% Bonds Maturing 1st March, 1937

Payable at par at Ottawa, Halifax, St. John, Charlottetown, Montreal, Toronto,  
Winnipeg, Regina, Calgary, Victoria, and at the Agency of  
the Bank of Montreal, New York City.

**INTEREST PAYABLE HALF-YEARLY, 1ST MARCH, 1ST SEPTEMBER.**

**PRINCIPAL AND INTEREST PAYABLE IN GOLD.**

### **ISSUE PRICE 96.**

**A FULL HALF-YEAR'S INTEREST WILL BE PAID ON 1ST SEPTEMBER, 1917.**

**THE PROCEEDS OF THE LOAN WILL BE USED FOR WAR PURPOSES ONLY.**

The Minister of Finance offers herewith, on behalf of the government, the above-named Bonds for Subscription at 96, payable as follows:—

10 per cent on application;	
30 “	16th April, 1917;
30 “	15th May, 1917;
26 “	15th June, 1917.

The total allotment of bonds of this issue will be limited to one hundred and fifty million dollars, exclusive of the amount (if any) paid for by the surrender of bonds as the equivalent of cash under the terms of the War Loan prospectus of 22nd November, 1915.

The instalments may be paid in full on the 16th day of April, 1917, or on any instalment due, date thereafter, under discount at the rate of four per cent per annum. All payments are to be made to a chartered bank for the credit of the Minister of Finance. Failure to pay any instalment when due will render previous payments liable to forfeiture and the allotment to cancellation.

Subscriptions, accompanied by a deposit of ten per cent of the amount subscribed, must be forwarded through the medium of a chartered bank. Any branch in Canada of any chartered bank will receive subscriptions and issue provisional receipts.

This loan is authorized under Act of Parliament of Canada, and both principal and interest will be a charge upon the Consolidated Revenue Fund.

Forms of application may be obtained from any branch in Canada of any chartered bank and at the office of any Assistant Receiver General in Canada.

Subscriptions must be for even hundreds of dollars.

In case of partial allotments the surplus deposit will be applied towards payment of the amount due on the April instalment.

Scrip certificates, non-negotiable or payable to bearer in accordance with the choice of the applicant for registered or bearer bonds, will be issued, after allotment, in exchange for the provisional receipts.

When the scrip certificates have been paid in full and payment endorsed thereon by the bank receiving the money, they may be exchanged for bonds, when prepared, with coupons attached, payable to bearer or registered as to principal, or for fully registered bonds, when prepared, without coupons, in accordance with the application.

Delivery of scrip certificates and of bonds will be made through chartered banks.

The issue will be exempt from taxes—including any income tax—imposed in pursuance of legislation enacted by the Parliament of Canada.

The bonds with coupons will be issued in denominations of \$100, \$500, \$1,000. Fully registered bonds without coupons will be issued in denominations of \$1,000, \$5,000 or any authorized multiple of \$5,000.

The bonds will be paid at maturity at par at the office of the Minister of Finance and Receiver General at Ottawa, or at the office of the Assistant Receiver General at Halifax, St. John, Charlottetown, Montreal, Toronto, Winnipeg, Regina, Calgary, or Victoria, or at the Agency of the Bank of Montreal, New York City.

The interest on the fully registered bonds will be paid by cheque, which will be remitted by post. Interest on bonds with coupons will be paid on surrender of coupons. Both cheques and coupons, at the option of the holder, will be payable free of exchange at any branch in Canada of any chartered bank, or at the Agency of the Bank of Montreal, New York City.

Subject to the payment of twenty-five cents for each new bond issued, holders of fully registered bonds without coupons will have the right to convert into bonds of the denomination of \$1,000 with coupons, and holders of bonds with coupons will have the right to convert into fully registered bonds of authorized denominations without coupons at any time on application to the Minister of Finance.

The books of the loan will be kept at the Department of Finance, Ottawa.

Application will be made in due course for the listing of the issue on the Montreal and Toronto Stock Exchanges.

Recognized bond and stock brokers having offices and carrying on business in Canada will be allowed a commission of three-eighths of one per cent on allotments made in respect of applications bearing their stamp, provided, however, that no commission will be allowed in respect of the amount of any allotment paid for by the surrender of bonds issued under the War Loan prospectus of 22nd November, 1915, or in respect of the amount of any allotment paid for by surrender of five per cent. debenture stock maturing 1st October, 1919. No commission will be allowed in respect of applications on forms which have not been printed by the King's Printer.

**SUBSCRIPTION LISTS WILL CLOSE ON OR BEFORE THE 23RD OF MARCH, 1917.**

**WOMEN WORKERS SUGGESTED FOR B. C. FRUIT FIELDS**

At a meeting held last week in Vancouver under the auspices of the Consumers' League and attended by representatives of the Local Council of Women, Imperial Order of Daughters of the Empire, Women's Forum, School Board, South Vancouver mothers and wives of soldiers, American Women's Club and others, the question of the women coming to the rescue of the growers in the way of berry pickers for the coming season was discussed.

This meeting was the outcome of the Fruit Growers' Association asking the government to allow the Chinese into the country free of head tax in order to pick fruit.

Mrs. Kemp suggested that the women of Vancouver organize and offer themselves for this work during the absence of our soldiers at the front, and so keep as far as possible a white B. C. Although the women were doing good work for the Red Cross, they could still become of further use in a patriotic way to the empire by offering their services to the fruit growers at a time when all the produce that could be grown must be sent to market.

Mr. Shook said the fruit growers of the lower mainland had given most of their sons to their country and were now confronted with a serious problem with regard to berry pickers for the coming season. Not less than 1500 pickers in the district would be required in order that the crop might be shipped.

The season begins on June 1st to continue until the end of August. Ten good pickers are required to the acre. The work is piece work and a tally card system used. Last year 45c to 50c was paid and a good picker made from \$2 to \$3 per day, the hours of working depending entirely upon themselves as long as they started at a reasonable time. Huts are provided for accommodation with camp stoves and spring mattresses.

In reply to a question asked by one lady regarding the mosquito plague, Mr. Shook replied that the government had promised to do everything possible to fight this plague this year and that the growers provided veils and overalls. Contracts will be signed to safeguard the pickers and employers.

The following resolutions were adopted:

"That all representatives of societies present take steps to provide women fruit pickers for the coming season.

"That the Consumers' League call a mass meeting to bring the matter of this employment before the people of Vancouver.

"That the women of Vancouver take steps to have women who are receiving the patriotic money allowed to pick berries and also keep up the food production of the country, without forfeiting their patriotic fund allowances.

"That the fruit growers be invited to attend a mass meeting to be called next week.

"That the public be notified that the step taken by the women is purely a patriotic movement for the good of the empire."

**FOR SALE—Strawberry Plants**

Magoon and Paxton Strawberry Plants for sale.

H. H. GRIST, R.M.D. 4. Victoria.



**Write Today for These Free Apple Booklets**

Every Apple Grower should have them. Makes no difference whether you have a big orchard or only two or three trees. Tells you how to keep your trees free from Aphids, Red Bug and other insects that are proving more dangerous to orchards than scale. Kill and control Aphids with **Black Leaf 40—Kills by Contact**


Equally effective when used separately or with other sprays as directed. Endorsed and recommended by Experiment Stations and Agricultural Colleges, and guaranteed by the manufacturers. Don't delay. Get these books at once. This is the time to control Aphids. One killed now equals thousands later on. We will also send you a valuable Spraying Chart telling just when to spray. You who are interested in Vegetables, Flowers, or Fruit other than Apples should write us for literature on these subjects.

The Kentucky Tobacco Product Co. Incorporated, Louisville, Kentucky

**Kills Aphids**

**Black Leaf 40**  
40% Nicotine

**IN THE FIELD MAKING MONEY—**



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

**KENDALL'S SPAVIN CURE**

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

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

**NOTICE HIDES WANTED**

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

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

Ship to **LECKIE TANNERY**  
New Westminster, B. C.

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



Established

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We carry the largest and most complete stock of Men's and Boys' **GOOD SHOES** in B. C. This, coupled with an efficient and courteous staff to serve you, insures **SATISFACTION** always.

We buy for cash, and in large quantities, hence you get the **BEST VALUE** the market affords.

Let your, or the boy's next pair be a **GOODWIN SHOE**.

Our motto: "Honest Shoes at Honest Prices."

**\$4.00 to \$10.00**

**Goodwin Shoe Co.**

**MEN'S AND BOYS' ONLY**

**123 HASTINGS EAST, OPP. PANTAGES.**

**VANCOUVER, B. C.**

## B. C. Fruit Crop Promises Well

Labor Problem will be Very Serious One.

Conservative estimates of the 1917 fruit yield of the province show a 25 per cent increase over 1916, says the Vancouver World. Berries will likely be 40 per cent heavier. If weather conditions are good cherries may run anywhere up to 50 per cent heavier than last year, which had a light crop. Apricots and prunes should also show a marked increase as crops of both of these fruits were high last season. Crab apples will be about the same as 1916. Peaches may be from 15 to 30 per cent better. Plums will show a slight increase. Apples are expected to be heavier by 25 per cent, perhaps more. Even if the 1917 apples are only normal size and the same in number as in 1916 they will give a 15 per cent increase as last season apples were under normal size throughout most districts of the province.

### The Labor Problem.

The labor problem in the fruit districts is expected to be a serious one. In the Mission-Hatzic district alone 1700 outside helpers will be needed to harvest the raspberry crop this season. In the Okanagan labor will also be scarce, although conditions in

the orchards there will not be so serious as the harvesting of fruit is more evenly distributed than in the case of a crop such as raspberries, which ripen up in a short time and must be handled at once. Unless relief comes through the employment of city people going to the orchard districts and of boys and women and girls, there is a danger that Asiatics will have to be obtained in many sections in order to have the fruit crop from rotting on the trees.

### The Marketing Question.

The fruit marketing question in 1917 will be important. In the Pacific Northwest states and in Eastern Canada reports are that there will be a good crop of practically all varieties of fruit. This being the case the high soft fruit prices of last year will naturally disappear.

Then, again, it is anticipated that the continual apple yield this year will be considerably heavier than last season, which will make the marketing burden all the harder for the B. C. fruit grower to face. The latest difficulty in connection with the apple situation is the decision of the British government to prohibit apple importations into the Old Country in order to save cargo space for other commodities. Canada's apple exportations in 1916 ran to 1,200,000 barrels, of which over 90 per cent went to Great

Britain. Nova Scotia alone sends 600,000 barrels per year across the Atlantic, under normal conditions. British Columbia has just been breaking into the British market and last year exported 150 cars. If the Imperial prohibition is in effect next fall not only will the exports to Britain be cut off but the other Canadian apple districts will have to obtain markets for this year's crop, and as it will likely be considerably heavier than that of 1916, it seems certain that there will be more or less of a congestion in many of the buying districts and prices will consequently fall. The Pacific Northwest apple growers also having their exports to England cut off will naturally turn to a greater extent than ever to the Canadian prairies and the American middle west. The fruit year is yet young, but the season holds out a good many uncertainties for the fruit grower and the fruit seller. Despite prospects of low fruit prices, costs of paper wrappers and box material are rising. The paper for a box of apples this year will cost nine cents. Two or three years ago it cost three cents. Box material will be from 1 1/2 to 2 cents higher per box this year than previously. An increase of eight cents in the cost of paper and box material for one box of apples mean a lot for the apple grower who even now, when his investment is considered, is losing money on his fruit.



# Milk Merger

## Progressive Step of Fraser Valley Farmers.

In our last issue we referred to the steps being taken to create a great milk merger amongst the farmers of the Fraser Valley and to thus market their supply direct to the consumer. During the present month this organization has been effected.

The Fraser Valley Milk Producers' Association, with an authorized capital of \$250,000, takes over the plant of the Richmond Dairy and the name of the Fraser Valley Dairy will replace the old sign. The general business will be conducted on the wholesale line.

The treasurer of the company says that about 95 per cent. of the milk producers of the Fraser Valley have signed up, and that besides operating the former Richmond Dairy, all the milk on the north bank of the Fraser River will be controlled by the new association.

The executive, consisting of Messrs. E. D. Barrow, M.P.P.; C. E. Eckert and N. H. Vanderhoof, all practical dairymen and farmers, have studied the milk situation from every angle. At present they have a positive working arrangement with all the larger dairies in Vancouver, although none of these concerns are permitted to own one share of stock in the association. The stock is exclusively held by the actual milk producers.

The two principal objects of the association are to, first, get the milk into proper

channels, and second, to eliminate the overlapping and consequence expense in delivery to the consumer.

It is not the intention of the association to antagonize the city dealers, but merely to seek their co-operation in arranging the milk business in such a manner that will benefit both the producer and the consumer and still allow a fair margin of profit to themselves.

The association last month took over the entire Chilliwack supply and by laying off three delivery teams and eliminating the overlapping milk delivery system, effected, within a week, a saving of \$15, and it is estimated that when this system is completed in the cities that between \$150,000 and \$200,000 per year will be saved. This, it is intended, will be brought about by the co-operation of the dealers and the material assistance of the general public.

Practically every city dealer has signed up with the association for their milk supply for this season. This will enable the consumer to obtain a high grade of milk at a cheaper rate when the overlapping system is overcome.

The milk, butter and cheese handled by this association will be put on the market under the standard label of "Fraser Valley". One very important feature will be the establishment of a winter price for October milk. This change alone will make

a difference to the producer in the Fraser Valley of \$12 per can; but under the perfected delivering system this extra amount will be attended to without one cent of expense to the consumer.

The annual turnover of the association will be \$1,500,000, and in the organization between 600 and 700 Fraser Valley farmers are directly interested.

Arrangements have been made to have all the milk government tested.

The association will contract to take all the milk and cream that can be produced in the Fraser Valley and will stimulate increased production.

It is intended to organize a feed department and through this supply all members with feed in carload lots at their nearest shipping point.

There is also a plan under consideration to arrange with the various transportation companies for specially constructed cars for the shipment of milk.

The directors include a number of the most prominent farmers and dairymen on the lower mainland. E. D. Barrow, M.P.P. for Chilliwack, is president of the new concern; John W. Berry of Langley, vice-president; Wm. J. Park of Pitt Meadows, secretary, and E. C. Eckert of Chilliwack, treasurer. Others on the directorate are—C. H. Evans, Sardis; W. H. Vanderhoof, Sumas; and Alec. Davie, Ladner.

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# Seed Growing in British Columbia

By M. J. Henry.

Why should not the farmers and gardeners of British Columbia engage in this industry as well as the growers of foreign countries and the United States? The war is certainly driving the industry to the continent, and according to a report from the U. S. agricultural department, there was imported over eleven million pounds of sugar beet seed from Russia last year. Before the war as much as \$300,000.00 was paid Germany for it, now they have incorporated a company in Utah to grow it there, and why should it not be grown in the Chilliwack valley or other sections of B. C.? Beet and mangol mature their seed in perfection in B. C. as well as the other varieties I mentioned in my former article.

There are 2722 hills in an acre four feet apart each way, and each plant or transplanted root should yield one-quarter to one-half pound seed to say the least with proper care, and the growers' contract price is generally \$16 to \$20 per hundred pounds in France and other countries. At present the wholesale price of beet is 50c per pound, duties to be added.



Mr. M. J. Henry on his California Property

Seed peas are grown on contracts to seedsmen at five to seven cents per pound and as they yield from 20 to 40 bushels or 2400 pounds to the acre this means about \$100 per acre returns, and you have your crop sold before you plant it.

Biennials such as beets, mangol, cabbage, sprouts, parsnips, onions and turnips, should be contracted for two years in advance to allow time for selection of best samples of each variety in the fall, and trenched ready to plant as early as possible in the spring, and should be planted four feet apart each way, and cultivated each way as long as it can be done without breaking the plants. About 1000 pounds parsnip seed alone is used in Vancouver seed houses and it could be grown anywhere in B. C. instead of sending over the seas for it.

Celery produces excellent seed here. Parsley yields well and can be transplanted to six inches apart in rows three feet apart and the following year will go to seed. All plants not true to variety should be cut out before going to seed.

Seed peas and beans should be planted in drills about three feet apart to allow cultivation and "roughing"; this is pulling out all stragglers not true to variety. When ripe they can be cut off at surface of the ground, and if fair weather, can be threshed out in the field on a square of canvas say 15 or 20 feet square and then cleaned then spread on a floor to dry and cure for two or three weeks.

Sweet corns are a little more difficult to cure, but the early varieties such as "Golden Bantam" and "Early Cory" will ripen, and by tracing up or spreading on a slotted frame and cured in the sun or in a room with a fire; it never should be allowed to freeze before drying or its vitality will be killed.

Cucumbers and all vine seeds can be taken out of the vegetable, and if in quantity can be deposited in a barrel or tub and stirred up every day or two until they sour, when the good seed will settle at the bottom and can be washed out by filling the receptacle with water repeatedly until the clean seeds are at the bottom, when they can be drained on a sieve or in a sack, then spread out thin and dried afterwards, cleaning them in the wind or fanning mill.

Flower seeds can be cleaned with different sized sieves or in the wind.

Cucumbers could be grown in connection with a pickle factory as they should be taken off until the vines cover the ground then let them set for seed and you secure a much larger crop.

Squash and pumpkin can be utilized in a canning factory after the seed is taken out.

Onions should be planted for the seed in the fall, six inches apart in drills three feet apart and covered about six inches deep. Ripe seed pods should be cut by hand and spread on the floor to cure and dry, then threshed out and minnowed, and then thrown in a tub of water, when all good seed will sink to the bottom, dry as soon as possible by spreading out on cloth or floor.

Parsnip or carrot seeds ripen irregularly also and can be cut when about two thirds of, it is ripe and threshed off by a flail in three or four days after cutting.

Celery and parsnip can be cut when most of it is ripe.

Unfortunately I have not been able to see any of the government bulletins so am unable to judge whether I am right or not but give it to you as I have practiced in my experience of 40 years and am still at it.

None of these crops should be planted near each other when of same varieties, such as different varieties of cabbage, turnips, kale, sprouts, brocoli, as they would cross, fertilize and spoil each variety. Also beets and mangol should be planted some distance apart.

Spinach seeds well in this country and can be grown in drills about two feet apart and when ripe can be cut with a scythe and threshed out on a floor or canvas.

Radish seeds can be grown and threshed in same way, or if in large quantities threshed in threshing machine and cleaned in a fanning mill.

In conclusion, it is needless to tell the good thrifty farmer or gardener that the richer the ground, the better the crop, and that a good shovel full of rotten manure and a handful of bone meal dug in around your hills of biennial plants for seed, or bone meal scattered in the furrows of seed peas and beans will well repay you in extra yield of seeds.

Hen manure is nearly as rich as the bird

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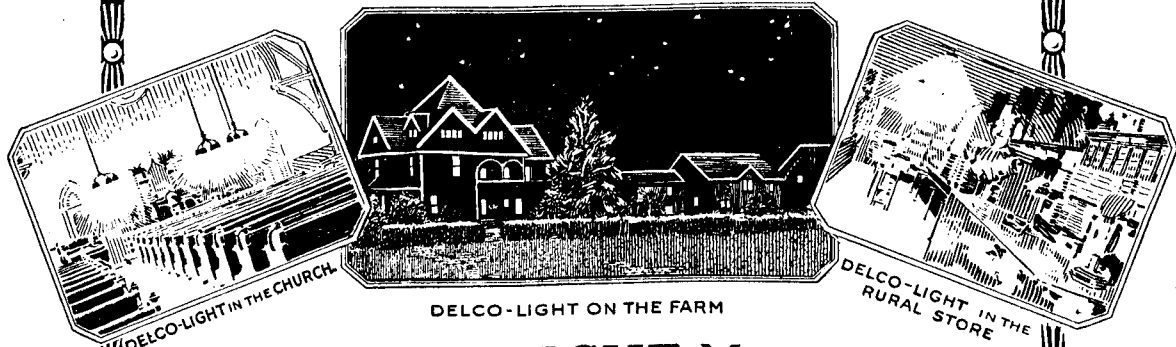
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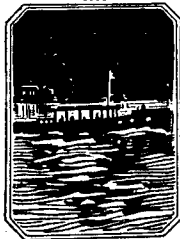
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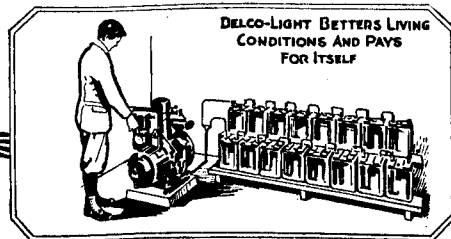
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DELCO-LIGHT BETTERS LIVING CONDITIONS AND PAYS FOR ITSELF

## Government Assistance Sought with a View to Elimination of the Mosquito Pest.

One of the great problems with which the farmers and fruit growers of certain sections of B. C. were confronted with last year was the plague of mosquitoes which breed in the back waters particularly in the Fraser Valley and which were so virulent last year that some of the berry growers were unable to retain their help, with the consequences that much of the crop rotted on the canes.

In the opinion of Reeve Catherwood of Mission fully eight cars of fruit in the Mission district alone were not picked last year resulting in a loss of over \$8000. This was due in a very large degree to the plague also spoken of.

The subject has engaged the attention of the Dominion horticultural and other departments, and recently it has been brought

to the attention of the government which was waited upon by a deputation consisting of Reeve J. A. Catherwood, Mission. Mr. F. Shook, Fraser Valley Fruit Growers' Association; Mr. J. Gascoigne, Mission Board of Trade; Mr. A. E. Catchpole, Hatzic Fruit Consumers, and Councillor R. E. Knight of Mission.

These gentlemen laid their case before the government and represented their case to the minister of agriculture, Hon. John Oliver, who had with him the deputy minister, Mr. W. E. Scott, and the provincial horticulturalist, Mr. R. M. Winslow.

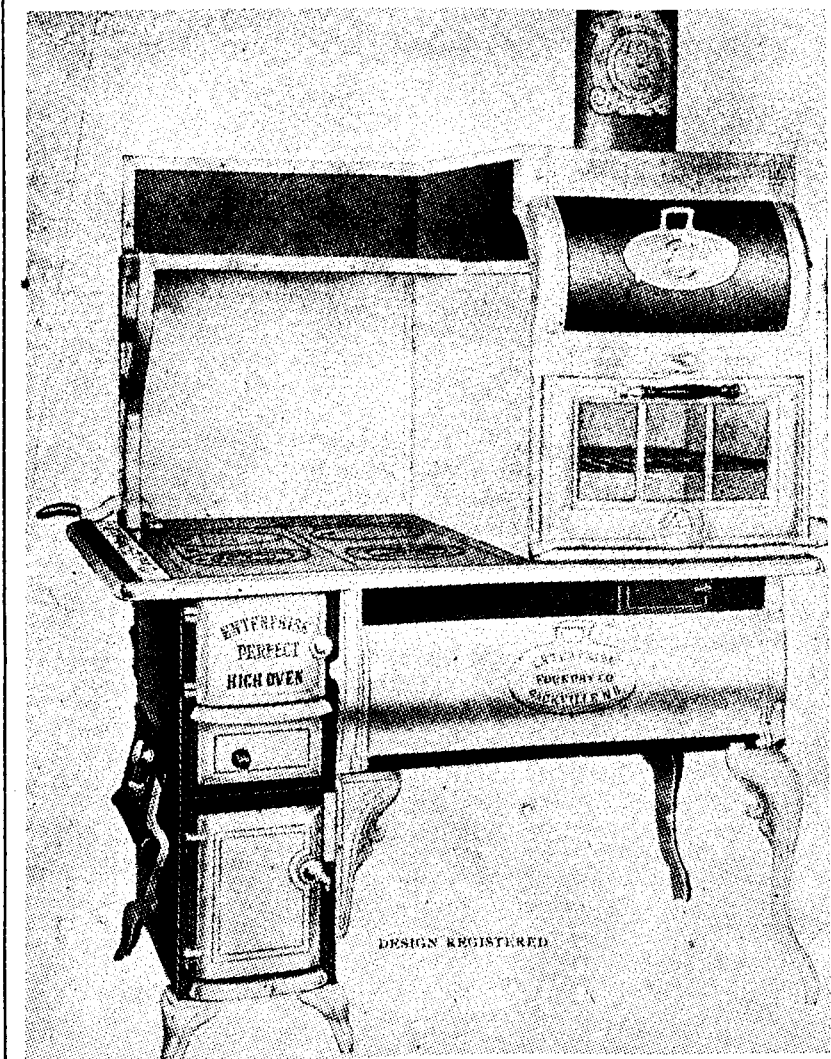
Their suggestion was that a systematic oiling of the sloughs on the bank of the Fraser should be undertaken accompanied of course by more extensive dyking and draining operations. It is hoped that action will be taken by the government in this direction.

## FRUIT GROWERS OBTAIN CONCESSIONS

**Dominion Express Company Will Permit Unloading in Transit on Small Fruit.**

The British Columbia Fruit Growers' Association has just obtained valuable concessions from the Dominion Express Company in connection with the express shipment of cherries, berries and currants in carload lots, by which it is expected that the growers and shippers of British Columbia will save thousands of dollars during the coming season. The express company has agreed to giving unloading-in-transit privileges covering unloadings at five dollars apiece. In past years it has been impossible to obtain this concession, with the result that the British Columbia shippers of small fruits were not able to make as full use of the express carload method as they desired.

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## Hudson's Bay Reception Affords Patrons Opportunity to Inspect New Modes.

One cannot in bare words portray all the picturesque charm which attended the opening display of Spring finery at the Hudson's Bay Stores. Spring in all her airy finery was viewed to advantage by throngs, and in the evening, with the management and staff as hosts, the store lavishly decorated with palms, Vancouver had the opportunity of inspecting the beautiful array of Spring merchandise from the world's fashion markets, without any urging from the salespeople to effect a sale, and also to see into the very inside workings of the store, where a huge fortune has been expended to give the people of Vancouver service, the equal of any on the continent.

With every blind up, the great store's illumination added a wonderful charm to the corners of Granville, Georgia and Seymour Streets. Long before the hour for the reception arrived hundreds of people walked from one to the other of the twenty beautiful show windows, and drank deeply of the fashion inspirations interpreted through their magnificent presentation. It was a sight Vancouver can be proud of—and great credit is due to Mr. C. Greer, the master display manager of the Company, through whose genius the exposition was possible. The display was a magnificent proof of the truism of the old adage—that the windows are the index to the character of the store. At 8 o'clock the store opened and immediately the ground floor was like a beehive, and crowds assembled at the Adjustment Bureau, where experienced guides were in waiting to take guests through the store, to view its inner workings, and it is safe to say that the 4000 or more people who had the pleasure of taking in the store's sights leisurely and under the guidance of competent people, have a better idea today of the immense undertaking it is to run a store the size of the Hudson's Bay, who are doing their very best to give Vancouver a metropolitan service.

Starting on the Sixth Floor at the receiving office, where goods entering the store are marked present, visitors were taken to the large stock rooms (which even today are filled with a \$200,000 stock), thence to the machinery room which runs the large passenger elevators, and then through the furnished bungalow. From here they went via the employees' fireproof staircase to the Fifth Floor, where they got an idea of the complicated workings of the Audit Room, and for a few minutes revelled among the latest importations of fine furniture.

Leaving this floor, the visitors were taken to the great Carpet, Drapery and Wallpaper sections on the Fourth Floor, where the decorative art of blending these three lines together is attended to by experts, whose practical experience has helped to make homes beautiful in many parts of this city. From here they went to the Imperial Restaurant Kitchen, where the latest devices of the culinary art were shown—and not the least magical were the dish washing machine, which washes 8000 pieces of crockery in an hour, and

a vegetable peeler, capable of peeling 25 pounds of potatoes per minute.

From this floor the visitors went to the Candy Factory, where the best appointed machinery was revealed to their view. From here they visited the Women Employees' Rest Room, Employees' Lunch Room, and Belle Hudson's (the personal shopper's) quarters. The ladies were eager to get to the Fashion Departments on the Second Floor, where the beautiful suits, dresses, coats, blouses and millinery caused many an expression of satisfaction and pleasure. On this floor, too, is the Emergency Hospital, the Telephone Exchange, the Alteration Room, the Ladies' Rest Room, and the Hairdressing and Manicuring Parlors, all of which were commented upon most approvingly. After visiting the Main Floor, the next point of interest was the Tube Room on the Lower Main Floor, where the cash is received from every section of the store. Another interesting feature on this floor was the Grocery Order Room, where twelve people are ready to give immediate execution of grocery telephone orders. While on this floor the refrigerators of the Meat Department were inspected.

Leaving this floor for the basement, one saw the assembling into the Shipping Room of parcels by conveyors from all parts of the store, and their mode of distribution to the delivery wagons was fully explained. Then the Machinery Room was visited, and many a person was non-plussed at the sight of such wonderful engines whose wheels speed at the rate of a mile a minute and weigh twelve tons, and going further into the bowels of the earth (fully 40 feet below the level of the street) one saw the oil burners, which eat up 11,000 gallons of oil per day. After leaving this floor, the visitors were taken

up again to the restaurant, where some of the 100 people employed in this department served them with light refreshments.

It was a grand evening—and hundreds of people will say today they wouldn't have missed it for anything.

## FRUIT OUTPUT FOR 1917

It is allowed by those who are in the best position to know that the demand for fruit (fresh and preserved) during 1917 shall be considerably larger than in past years.

This is your opportunity to increase your output, reap a good harvest and at the same time to

**SOW GOOD SEED FOR BIGGER SALES**

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**LET EACH PACKAGE SPEAK FOR ITSELF**

Familiarize your brand by label to the jobber, wholesaler, retailer and general public.

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Vol. X. APRIL No. 4

## EDITORIAL

### ORGANIZATION OF AGRICUL- TURE

Recent efforts on behalf of the British government to contract for the wheat crop in the prairies, and steps taken by Mr. Lloyd George to ensure a minimum wage to our neighbors, have marked a tremendous stride in what a few years ago would have been described as the socialization of industry in British lands.

The wheat buying plan seems to be a gigantic one on the face of it, and yet those who have followed the speeches of Premier Hughes of Australia in the Old Country, must have been struck with the effective and drastic way in which the Commonwealth government coped with a similar situation. It must always be remembered that in the case of the Australian states which are insular and self-centred, many of these problems are easier of solution than they are in countries such as Canada bordering on other lands.

It was in an effort to accelerate production when Premier Hughes and his ministers adopted the radical step which have now become familiar to the world. Agriculture, he says, is one of the best illustrations in the world of a completely unorganized industry, but under the strain of the war some of the state governments in Australia offered to the farmers a minimum price per bushel for all wheat grown on new lands, they say "You cultivate new land and we will guarantee you a minimum price per bushel." As a result of this guarantee and some other subsidiary inducements, the Australian last harvest produced about two and a half times as much wheat as was ever produced before, their output jumping from 60 million bushels to 140 million bushels.

The Australian government went further, and by buying up bottoms became a big and almost monopolistic charger of freights, so that Australia had freights at 110s while Argentina, 4000 miles nearer Great Britain, had to pay 185s. But they went further still. Farmers had had a bad year the previous harvest and required money at the earliest possible moment, the government therefore devised a scheme by which they gave every farmer who delivered his wheat at the railway siding 3s per bushel and they undertook to market it and to give the farmer the balance when sold.

Over 25 million pounds have thus been advanced to the farmers in Australia, although the government have only sold between eight and nine million pounds of the wheat, with the result that the money is circulating among the farmers, thus facilitating the planting of a larger crop for next season.

### A GOOD MAN GONE

In the disastrous fire in the Coquihalla Hotel at Hope, B. C., a week or two ago, there perished a man who was known throughout the length and breadth of British Columbia not only by the white farmers and fruit growers, but by great numbers of the Indians of the province, in whose agricultural education he took the warmest interest. This reference is to Mr. Thos. Wilson. He was a man of large stature and a correspondingly large heart and of warm friendship, and leaves behind him a memory which will be cherished by large numbers of people in his adopted province. For years he was inspector of Dominion orchards and took the keenest interest in enlisting the activities of the men of the rancheries and reserves in the improvement of their fruits. He was an entomologist of considerable ability and a member of the Mountaineering Club.

### THE SEASON'S PROBLEMS

The growers of B. C. have always felt that they have had a larger number of problems and perhaps more peculiar ones than their brother farmers in other parts of Canada. This year however they are confronted with a condition so extraordinary that it is little wonder that some of them are imbued with feelings of dismay.

Generally speaking the products of the farm and of the orchard in this province will command good prices during the coming season. This applied in the main to all classes of produce and fruits until the speech of Mr. Lloyd George was delivered, which indicated that an embargo would be held against all importations of apples and other fruits into the United Kingdom until the present situation is relieved.

This matter has formed a subject of negotiations through the Dominion government with the Imperial authorities, but at the time of going to press there seemed to be little prospect of relief, as Australia too has placed an embargo, the situation is extremely grave.

On top of this comes the acute problem of labor, a difficulty in B. C. increased a hundredfold at the present time because of the heavy drain which the demand for men to the colors has made on the male population of B. C.

The acreage in fruit for instance this year will probably be 20 per cent or 25 per cent greater than last year, while the blossom promises an equally heavy yield per acre. It has been this prospect which has led some sections of the country to ask for the importation of Chinese labor, a demand which is very unlikely to be granted and which might, probably would, if granted, bring problems of its own more prolonged and more distressing than those which confront us this year.

There are signs, however, that a certain man and woman power which has hitherto been unsuspected and which has been largely latent is to be mobilized in a way which could not have been dreamed of before the outbreak of the war.

Owing to enlistments for overseas service and to the number of men employed in the manufacture of munitions, the government has passed an order-in-council which provides that any person working as a farm laborer in Canada in the present year is entitled to have counted as resident on any homestead, pre-emption or purchased homestead which he may have entered, the period during which he was employed and cultivation duties may be performed in two years instead of three years.

In another column there is an account of a meeting held in Vancouver when the fruit growers of a portion of the Fraser Valley

met with some of the leading women of the city in an effort to devise ways and means to get the assistance of women as pickers to prevent the great loss which occurred last year.

In addition, in some parts particularly in the Okanagan, a combined effort is to be made to secure the services of the school children. The department of education, working in co-operation with the department of agriculture are facilitating this by making provision that in school districts where 75 per cent of the tax payers petition for a five weeks' holiday, so that the children may be permitted to assist in the harvesting; that this may be granted there have even been steps taken to secure pickers from the cities.

One grower in the Okanagan, writing to the editor of this magazine makes a strong appeal for bodies of boy scouts to go into the fruit districts and assist in taking off the crop under the direction and discipline of scout masters. We see no reason why this plan may not be enlarged to include a large portion of the school population, as the cadet are now taken to a common camp in the summer, and there used to ease the labor situation. In fact it seems quite feasible to retain some sort of school classes in the forenoon with proper teacher and permit the children to use the afternoon for picking.

The co-operation of the railways in the form of special rates would be essential, but the influence upon the children themselves, quite apart from what they might earn, could not be anything but beneficial, in fact it would acquaint some of our boys with factors of our country life of most alluring character and might have a very distinct influence on the trend of our young life to the country.

Solutions have by no means been reached to all or to any of these problems, but it is a hopeful sign that women's organizations, school authorities and trades and labor associations, boards of trade, etc., are all co-operating and endeavoring to find the answer to one of the most acute situations that have ever confronted our growers.

LATER—Since this editorial was in print, a cable has been received from the Imperial government to the Ottawa authorities stating that the restrictive order as to the importation of fruit from all overseas Dominions will now be lifted up to 50 per cent of the 1916. The modification, however, applies only to the existing supplies of fruit and it will not be effective after July 1st next, unless there is a material change in existing conditions.

### Annual Meeting of the Mutual Fire Insurance Company of British Columbia.

The Annual Meeting of the Mutual Life Insurance Company of British Columbia was held on the 14th day of February, and was largely attended, in fact was one of the best attended meetings in the history of the company. Mr. Thos. Kidd, president, presided, and there were also present: A. C. Wells, honorary-president; Capt. W. F. Stewart, vice-president; Alex. Moge, treasurer; D. A. McKee, Jas. Bailey, W. J. Frederick, J. Berry, Jas. Thompson and John Laity, directors, together with a large number of members.

The manager, in his report, stated that notwithstanding the depression in the country caused by the war, the company during the year had made very satisfactory progress and was now carrying \$266,000.00 more insurance than at the time of the last report and that the assets of the company had increased to the amount of about \$8,000.00.

The manager stated that in view of the fact that during the last two years there had been relatively a very small amount of building construction, the growth the company had made was especially gratifying; and that when the times are again normal and building construction becomes general throughout the agricultural districts there is no doubt but that we shall see an even yet more rapid growth in the company's business.

The meeting was addressed by the president, vice-president and a number of the directors and members and reference was made to the care which had been taken by the agents and the management in selecting the risks carried by the company.

It has always been the custom to hold a Banquet in the evening after the Annual Meeting; but upon this occasion, by the unanimous resolution of the directors, which was heartily supported by the members present, the amount the banquet would have cost was contributed to the Canadian Red Cross Society.

**TUBERCULIN TESTS**

In an interview with a delegation of representatives of the convention of Local Councils of Women with Hon. John Oliver last month, it was decided that the administration this year would probably increase the appropriation for compensation to the farmers who may suffer the loss of cattle destroyed under tuberculin tests.

The deputation comprised of Mrs. Perry and Mrs. Griffin of Vancouver, Miss Crease and Mrs. Cameron of Victoria and Mrs. Gille of New Westminster. It was understood by them that it was the intention of the government to do away with tuberculin tests, but they urged that no such action be taken pointing out that it was necessary in the interests of health, particularly of children, to safeguard against bovine tuberculosis.

Hon. Mr. Oliver a year or two ago vigorously opposed the Bowser government's tuberculin test programme, but yesterday the minister of agriculture assured the delegation of women that their fears were groundless and that the government did not intend to do away with the tests, but would also bring in certain amendments to the regulations so as to improve conditions.

Stricter inspection of all dairies, dairy farms, and tuberculin tests of dairy cattle would be continued and arrangements for more practical working of the regulations were being made.

Hon. Mr. Oliver stated that the appropriation for compensation of the farmers, who had cattle destroyed was \$10,000 but an increase was proposed this year.

He declared, "I personally have some doubt as to the efficiency of the tuberculin test but the preponderance of opinion favors it and it will therefore be continued."

**B. C. GOAT BREEDERS' ASSOCIATION FORMED**

Representative Gathering of Enthusiasts Form Provincial Organization.

A goat breeders' association for British Columbia has been formed at a representative gathering held in the room of the Vancouver Exhibition Association. There were about twenty representatives present from the island and mainland of British Columbia, and they were made welcome by Manager Rolston of the Vancouver Exhibition Association.

Mr. T. R. Arkell, chief of the sheep and goat division of the federal department of

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The cotton crepes will be sold by post this year at the same prices as last year, that is so long as the present stock lasts.

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agriculture, was present. Others present were: Reginald Samuels, Alverston, Ont.; G. E. O'Brien, Windsor, N. S.; B. M. Muckle, Crowfoot, Alta; D. Mowat, McKay, B. C.; G. H. S. Cowell, Port Alberni; N. F. Tunbridge, Penticton. Mr. D. Mowat, McKay, was elected president and Mr. Geo. Pilmer secretary. Mr. Pilmer is associated with the provincial department of agriculture, and Mr. W. T. McDonald, of the live stock branch of the same department, has been very energetic in his assistance.

Mr. Albert French of Vancouver was elected to represent the B. C. Goat Breeders' Association on the Vancouver Exhibition directorate.

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# Beekeeping in British Columbia

By Williams Hugh

## APRIL IN THE APIARY

### Some Seasonable Hints for the Bee-Keeper.

As soon as weather permits overhaul your colonies, provide clean bottom boards in place of those in use during the winter.

Provide a receptacle for water within easy reach of the bees, add a little salt to the water, this will keep it fresh. Bees during brood raising consume a lot of water.

Weak colonies can be stimulated by feeding thin syrup, one cup of water to one of sugar; this must be fed inside the hive.

Make up your mind if you are to work for increase in your colonies or a surplus of honey. Unless you are a practical bee-keeper, do not try to do both. It is a difficult problem on the Lower Mainland.

Have your bees in such condition that the slightest flow of nectar can be gathered and stored. Remember it takes 21 days from the time the egg is laid by the queen, until the baby bees commence to climb out of the cell, to act as nurses and general servants inside the hive; then a few days more before they enter the strenuous life of the foragers, gatherers of pollen and nectar.

The secret of your success will depend upon having a crowd of bees ready for the harvest. Some times, owing to climatic influences, the harvest may be short or long. If you have the workers ready you are bound to get some surplus, even during a short season. A knowledge of the life history of the worker will enable you to know when to get ready for the harvest.

Have a few extra supers ready, with frames containing full sheets of foundation. When the new wax commences to be seen on the top of the frames in the brood chamber, it will be time to place a super on. If your bees are in a cool place, where the nights are cold, try the suggestion set out in February issue under "Spring Management," by gradually enlarging the super with frames as it is filled.

Whenever you examine the brood during the spring or early summer, keep a sharp lookout for symptoms of American Foul Brood. Healthy larvae are always a pearly white, and plump in form. As soon as something is wrong with the brood there is a slackening of bee activities, unless the colony is exceptionally strong. Keep drilled into your apiarian activities the information on bee diseases as set out in Bulletin No. 26, page 47, "Bees and How to Keep Them," issued by the department at Ottawa. Be your own foul brood inspector, as it is your duty to be, both in your own interest and that of your fellow bee-keeper. "By proper treatment disease can be controlled and the spread checked."

Bees taking larvae and young bees outside of the hive is evidence of shortage of stores. During a late spring you may find well developed brood dead in the cells. This is brought about by want of food; there is no disease.

The problem of the control of swarming confronts the beekeeper every spring and early summer, not only because of the loss through absconding swarms, but the time lost in building up again at a season when the beekeeper requires every bee for the harvest. Here are a few hints handed out at this season to enable us to control swarming.

Cutting out all queen cells every eight days, always provided they are removed early in development.

Giving room between frames, adding supers and ventilation.

Demaree plan of control.

Providing all colonies with young queens. Shook swarms.

Some of the foregoing hints will give satisfaction one year and perhaps the next year will have no effect at all. Bees will swarm in some instances in spite of every effort of the beekeeper to prevent them. Look out for the queen whose bees very seldom swarm, and breed from her stock.

## AMONG THE HONEY PRODUCERS

Vancouver Exhibition, August 20 to 25. Beekeepers, whether you can own one or more colonies, ought to make a supreme effort to produce surplus honey either for your own consumption or for sale. By so doing you are helping Canada; you are producing wealth, and why not exhibit your produce at the forthcoming Vancouver Exhibition? Even a jar will help, it will at least show you are trying to do your bit.

How have your bees wintered? Have you lost any colonies this winter? Have you had any experience, gained some information you would like to tell another beekeeper who has not gone quite so far along the road as you have? If so I am sure some one would be glad to hear. Will you send it along? The production of honey in B. C. for the year 1916 is alleged to be 120 tons. What was your share, did you send in any report? If not, why not? We can only arrive at a true return by sending the information asked for. I notice the district of Victoria is put down as averaging one pound per colony. That's bad, but I know an

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apiary on the mainland that did worse than that. It contains over 30 colonies and produced ten pounds of honey. To offset this a beekeeper in the Kootenay district produced two tons of extracted honey, and 500 comb honey from 41 colonies, spring count. This particular beekeeper cleared over \$1000 net from the sale of honey and bees.

Mr. John Reagh of Ladner, winner of the highest award at the Vancouver exhibition for honey, brought his trophy to the annual meeting. The gold medal was greatly admired by the members. John Reagh is an ornament to the beekeeping fraternity, and like our friend W. H. Lewis, is only too willing to assist the beginner with information, always provided you do not know too much.

Beekeepers throughout the province will be glad to know that Mr. H. T. Lockyer, general manager of the Hudson's Bay Company, Vancouver, has generously offered another gold medal for this year's exhibition. To use his own words, "I can assure you it gave us much pleasure to donate the medal in question, and that it will likewise give us pleasure to, if so desired, renew the offer this year." Surely this is a case of "It blesseth him that gives, and him that takes."

The price of foundation has gone up, evidently in keeping with other commodities when people want the said article. This is supposed to be governed by the laws of supply and demand. Throughout United States the price of foundation has been advanced 5 cents per pound "on account of high price of beeswax." There is no truth in the statement that the workers have gone on strike for an increase of pay and fewer hours of labor. Prices in B. C. are as follows: Medium brood, 80c; light brood, 85c; thin section, 90c per lb.

If you have a few colonies and you have not a Solar wax extractor, make one. It will pay for itself very quickly and you will have the added satisfaction of being able to exhibit your wax with the chance of winning a prize.

### AMENDMENTS TO THE FOUL BROOD ACT

In the annual report to the department of agriculture, the directors suggest a clause should be inserted in the Foul Brood Act granting compensation to beekeepers whose bees or hives were destroyed owing to foul brood. The proposition was taken from the Quebec Act, of 1908, passed three years before the B. C. Act came into force. It is as follows: "When the destruction of hives, bees, or accessories is deemed necessary by the minister, he shall indemnify the proprietor or possessor thereof, or both, as the case may be, upon an equitable basis, which shall be left to his discretion." In view of the power given an inspector of apiaries under the B. C. Act, the clause was slightly altered to meet the powers bestowed on him as follows: "When the destruction of hives, bees or accessories is deemed necessary by the inspector, the department of agriculture shall indemnify the proprietor or possessor thereof, or both as the case may be, upon an equitable basis, which shall be left to the discretion of the minister or his deputy." Mr. W. J. Sheppard, honorable secretary of the Kootenay Beekeepers' Association, writes: "With regard to the question of compensation to beekeepers whose hives, etc., found to be affected with disease are destroyed, I am requested to inform you that my association are quite in agreement with the recommendation of your association, as mentioned in your letter of the 23rd. An opinion has been expressed that it would be a great plan if each inspector

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was provided in the future with a painters' blow lamp for searching out hives, so that there would then be no need to burn them along with the bees and combs.

In view of the legislature being in session and there being no time to introduce amending legislation, it has been suggested the whole act be considered by beekeepers during the coming year, and an act more in keeping with the spirit of justice and British institutions be brought before the legislature in 1918. Will all interested in the question send me suggestions? We have advanced a step in the right direction when we find Mr. Sheppard suggesting the use of the blow lamp for disinfecting instead of the destruction of hive bodies by fire.

### HOW TO TRAIN AND DOMESTICATE BEES

Bees located in a secluded place and not disturbed by the presence of human beings are apt to become very cross or vicious, and very difficult to examine unless you are clad in armour plate, and stupefy with smoke. Some need very little protection and are very seldom stung owing to their continually moving among the bees and use very little smoke when manipulating the bees. Here is an interesting item taken from an Old Country book, "How to tame bees." This is done by making them accustomed to the sight and form of human beings. A scarecrow or two (what the Scotch call potato bogies or bogles) placed in front of their hives soon makes them all right. The scarecrows can be shifted from

**CHILLIWACK**

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

one position to another a few times. Some years ago I bought a hive in the country and placed it amongst some others at home. The bees would not let me go near their hive. A bogle was placed in front of it, and to me it was interesting to watch the attack; one or two of the savage creatures were seen eyeing the face, and looking for a tender spot on which to dart. In a few days they became as quiet as the rest.

### SWARMING

By F. W. L. SLADEN.

Dominion Government Inspector.

Swarming is the bees' natural method of increase and is likely to occur in the majority of the colonies in spring and early summer when the hives are populous and honey is being collected, and also sporadically at any time in the summer during a honey flow.

A few days before swarming the bees commence to rear queens, and the swarm containing the old queen usually issues about the time when the earliest queen cells are capped.

The swarm generally settles upon the branch of a tree near the apiary. In securing the swarm, advantage should be taken of the bees' fondness for running into a cavity. The new hive containing frames fitted with foundation, should be prepared to receive the swarm. This hive may be brought close to the clustering swarm. Some of the bees should be shaken in' to the hive; the remainder should then be shaken into a box and immediately dumped into a sheet spread before the entrance of the hive. If it is not convenient to bring the new hive to the swarm the bees should be shaken first in' to the box which should then be turned upside down on the ground nearby and propped up with a stick or stone to collect the stragglers. A comb containing brood may be placed in the new hive to prevent the swarm from absconding.

A swarm will need feeding on the third day after hiving if bad weather has prevented the bees from collecting honey. About eight days after the issue of the first swarm, the first of the young queens will emerge and then a second swarm may go off with some of these queens. A third swarm may come out and go off a few days later. Second and third swarms are usually too weak to be of much value, and should be returned the day after they emerge or they should be united.

It should be noted that the earliest sign of definite preparation for swarming is the presence of eggs in queen cells, the first of which are usually laid about eight days before the swarm is due to leave. Queens are also reared when the colony is preparing to supersede its failing queen, but in this case there is much less than the normal amount of brood. A colony that is superseding its queen is not unlikely to swarm if it is strong, though it usually delays to do so until the first of the young queens emerge. Since queens are sometimes lost on their mating flight it is advisable to make an examination of colonies that have thrown swarms about twelve days after the young queen has emerged. If eggs are present the queen is probably fertilized. If there are no eggs, a frame of brood in all stages should be given; from this the bees will raise a queen if their queen is lost.—From Bulletin No. 26, "Bees and How to Keep Them," issued by the Department of Agriculture, Ottawa, Ont.

## WINTERING

By EON ARLOR.

At first thought it may seem strange to introduce the subject of wintering at this time of the year. It is, however, the logical time to make plans for next winter.

Last winter was an exceptionally severe one and the death rate among the bees was high. The present winter, from the effects of which we are just emerging, may prove even more disastrous for many beekeepers than the previous one. This is on

account not so much of the cold, but on account of the length of time through which the bees passed without a flight. From about the beginning of December until the middle of February not a bee stirred. In districts where honey dew was plentiful I am informed that the winter losses ran high.

It is with the idea of overcoming some of this loss that this article is written.

In the second last number of "Gleanings" the editor passes the remark, if we may call it such, that the best beekeepers are wintering their colonies in double-storey hives, both where winter cases are used and where single-walled hives only are in use. It has been my contention for some time, that other things being equal, bees would winter better in double-storey hives, and the note in "Gleanings" is merely another step in the proof.

The reason of the better wintering seems evident. The honey is placed in the upper storey for winter and the bees cluster below it down into the empty cells of the hive below, and gradually move upward as the honey is consumed, thus following nature very closely.

Then again the dead air spaces created by the innumerable cells in the combs together with the long narrow air spaces between the combs themselves neutralize and deaden any air currents entering the front entrance of the hive before they have reached the bees snugly tucked away in the upper part of the combs. Whereas in a single storey hive the bees are clustered close to the bottom-board and every blast and current blown in at the entrance spreads out beneath the frames and sends its demoralizing chill into the outer layers of the cluster of bees.

The winter is about over and perhaps your losses have been heavy or may be more fortunately light. However, now is the time to scan the past winter which is fresh in mind and take an inventory of the points wherein your present system has failed.

Many beekeepers (not beginners either), often find a populous colony dead with plenty of honey in the hive, and are puzzled to know the reason. There is but one—starvation. More colonies are lost from starvation (and with honey in the hive) than from any other cause.

During a long cold spell the bees often will consume the honey within reach in the combs on which they were at the commencement of the cold spell and will not move down under or around the end of the frames. The danger from this source can be lessened to a very great extent by laying strips crosswise of the combs under the blanket thus allowing the bees to pass over the tops of the frames.

These points are all worthy of consideration and now is the time to plan for next winter with a resolve to remedy the defects in your present system. But be sure and write it down in your note book for future reference, for the promising spring and summer just peeping forth after the frost-bound winter with the budding flowers and plants will soon drown the memories of past failures (or might I say mishaps) making us all too apt to drop into the same pitfalls another winter.

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**AIDS TOWARDS MORE PRODUCTION**

Series of Instructive Addresses Are Given By Mrs Chalmers in Chilliwack.

Mrs. J. S. Chalmers of Thrums, B. C., who has been sent by the department of agriculture to arouse interest for "More Production" amongst the rural communities of the province, held afternoon and evening meetings in Chilliwack, March 7 and 8.

These meetings were held in the city hall under the auspices of the Women's Institute, and though they were not as well attended as the merits of the lecture warranted, those that did attend obtained many useful and practical hints.

The topics under discussion were the home garden, poultry, home canning of fruit, vegetables and meats and live stock on the farm, together with soils and crops.

The selection of flowers, both annuals and perennials, preparation and use of a hot bed, times and methods of planting seeds—were all dealt with, as well as the best methods of culture for vegetables, planting and rotation of crops, and varieties, cultivation of tomatoes, onions and melons, etc.

The care of baby chicks, preparations for a "good hatch," line breeding, etc., was listened to with interest by members of the poultry association among others, and questions were asked and helpful hints from several given.

The most popular lecture was that on home canning, fish, meats, milk, fruits and vegetables were all taken in turn.

Jelly may be successfully put up for the winter with half the usual amount of sugar,

also strawberry and raspberry jam. Recipes for making candied orange and lemon peel and also hard times mincemeat were given.

The closing evening the lecturer told how she and her husband were succeeding on a 7 1-2 acre farm, the secret being in treatment of soils, ensilage, soiling of crops, garden and the making of every square yard earn its share; four cows are kept, besides pigs and poultry, geese, etc.

Throughout the upper country the subject of silos was of especial interest, many on the Arrow Lakes planning to erect these as soon as possible, after finding that they might have saved their last season's hay had they had one, for rain and flooding of their land left them with but scant winter feed for the stock.

In one community where meetings had been held, the women were most keen for help, the total man-power available there being eight persons, all other had enlisted, and these, too, would have gone had age and physical infirmities not prevented. In this and many other communities the women are running the farms and hope to succeed in their brave response to the Empire's call for More Production. All honor to those who are thus trying to do "their bit".

**CLOTTED CREAM FROM GOATS' MILK**

To make clotted cream with your goats' milk is a very simple matter. The only utensils required are a particularly clean jug, two small pieces of butter muslin, and a large saucepan. As soon as the milk is drawn, strain it carefully through one piece of the muslin into the jug (which should be just full enough to enable it to be safely carried), and place it carefully in the coolest corner of your pantry; put the other piece of muslin over it, and leave it alone for quite 12 hours. Then put a small plate in the bottom of the saucepan, stand the jug of milk on it (and be very careful not to disturb the cream when you carry it) fill the pan with cold water until it nearly reaches the top of the jug, and place the whole on the stove. Let the milk come almost, but not quite, to the boil, and then remove the jug very carefully so that the cream will not be disturbed. Set it aside with the muslin over it till it is quite cold. You will then be able to lift the clot of cream off with a dessert spoon. At first you may get some of the milk with it, but a little practice will put that right. If you accidentally let the milk quite boil, the cream is still edible, but is not nearly so good as if it were only scalded.

The skim milk beneath may be used for puddings or soups, or for the hens' mash instead of water. When this is done little more than half the usual supply of meal is given.

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# Gardening for the Home

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

Judging from the popularity of the "Patriotism and Production" movement it is safe to assume that more vacant lots adjacent to cities will be cultivated this year than ever before. It is to be hoped that every one who makes the venture is fully aware of what he is "up against."

A burst of patriotic fervor of the horticultural variety is not sufficient in itself to produce a good garden of vegetables, but must be supported by a deal of hard work and a determination to see the thing through to a successful finish, even though it means six or seven months' unflagging zeal.

A man may possess all the above qualities but for lack of practical knowledge his efforts may be doomed to failure unless he avails himself of the experience of some reputable gardener or farmer, or someone he knows whose advice can be trusted, especially in the matter of choosing a piece of soil suitable for the occasion.

In the first place find out if the soil is worth the trouble, it may be too sandy or gravelly to respond to cultivation without first being heavily manured. Then again, is it liable to dry out in summer and leave your carefully nurtured crops to perish of drought; it may be wet enough at this time of year but will it continue. To determine this latter condition, if previous experience of the land is lacking, take a good look round; is it situated near a deep ravine, deep street cutting or on top of a gravelly hill? Is the subsoil coarse gravel or hard pan, and is the existing vegetation chiefly broken and sollar brush? If so, it had better be avoided as the chances are that it will dry out in summer. On the other hand if it is situated in a level neighborhood, or on the lower slope of a hill where seepage water is likely to continue, if the soil and subsoil are fairly fine in texture and where a fair portion of the existing herbage is grass it may safely be presumed to be safe from drought. Again the land may be too wet now and at all times for cultivation, but may quite easily be drained by breaking through the rim of the basin which holds the water. Where water collects is often where the best kind of soil is to be found, but unless it can be drained at little expense it is of no use for the purpose under discussion.

When a suitable piece of land has been decided upon, the next thing will be its preparation. If there is any brush growing on it it must be rooted out and burned. Then it will depend upon the cultivator whether the land will be dug or ploughed; if he has time to do the work himself he ought to dig it but if not then it will be cheaper to plough it, but it must be ploughed deep. It will also be worth considering whether the land ought to be manured or not, and unless it is very rich a load or two of manure will certainly pay for itself; it should be spread on the land and dug or ploughed in.

The above problems may seem rather formidable to the city man with no knowledge of these things, but are quite simple

to the experienced man who should always be consulted in cases of doubt.

If the land has been broken for the first time considerable labor will be required to get a good surface tilth; if the space is small this will have to be done by fork and rake, but on large areas horse and harrows will greatly assist.

When a good tilth has been obtained, by whichever method is most expedient, then comes the important matter of seeding. Potatoes, from their high price this year, and a likelihood of continued high prices for some years, will be the chief vegetable grown and deserve a large part of our attention. Owing to the excessively high price of potatoes a month or so ago, it was rather widely suggested that the housewife be asked to save her potato peelings for use as seed. That potatoes can be grown from peelings has been variously demonstrated under the most favorable conditions, but for purposes of vacant lot gardening or the production of marketable tubers is absolutely useless. It will pay better to plant potatoes at \$5.00 per sack than to plant peelings saved from the rubbish bin, better save by refraining from peeling the precious potato at all.

The best potato to use for seed is one typical of the variety and about medium size, cut up into pieces containing one or at most two eyes. With a little practice this is easily done so that each piece will contain a solid "chunk" of the potato; thin slices should be avoided.

Commence at the stem end or heel of the potato and work to the tip. It is easy to get fair sized pieces with one or two eyes until you get right to the tip where a cluster of eyes are usually found, where it is impossible to separate them into single eyes with a "chunk" attached; the best plan is to save one or two eyes back a little from the tip and pare the cluster of eyes off. The above is what long experience has taught to be the best seed potato and the best way of handling it under reasonably good conditions; but good results may be had by using smaller seed, say down to about half the size of a hen's egg. When seed of the latter size is used the cluster of eyes at the tip should be pared off, the reason for this is that it has been proved that the tip eyes produce a greater proportion of small potatoes than do the eyes placed further back.

The proper depth to plant varies with conditions from four to six inches, the latter depth on light sandy soil in good condition, the lesser depth on heavier soil or soil that has not been thoroughly worked. The distance apart varies a little with different varieties, 15 to 26 inches for the dwarf kinds; 18 by 30 for the ranker growers.

Another important vegetable that has increased in price lately and which is very easily grown is the bean.

There are a number of different varieties of bush and pole beans; Canadian Wonder and Wardell's Kidney Wax are good

representatives of the former; Scarlet Runner and Kentucky Wonder of the latter, although there are several other varieties which may suit individual tastes better. The seeds of these beans may be planted from the middle to the end of April, or if green beans are desired exclusively, at intervals of two weeks up to the end of June or even later. Bush beans may be sown thinly



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In drills two inches deep and two feet apart and when the plants are well up thin out to four inches apart. Pole or runner beans may be planted in hills three feet apart each way, a few seeds to each hill, or planted in rows like green peas. The green beans are a delicious summer vegetable and can be preserved in different ways for use as green vegetables in winter and early spring when green stuff is scarce. Beans reach their highest food value however when allowed to ripen on the vine and used as dry beans, and the home-grown kind at least appear to taste better than the kind you buy in the store possibly because they are your own growing and possibly because they are fresher. From the middle to the end of April is a good time to sow carrots for main crop; beet, turnip, lettuce, further sowing of peas and if not already sown, onions, parsnip, parsley and broad beans. The flower and fruit garden has been entirely neglected this month but will receive their full share of attention next month.

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

**PROBLEMS OF THE FRUIT-GROWER AND BEEKEEPER**

(Continued from last month)

R. C. Treherne, Field Officer, Entomological Branch, Dominion Department of Agriculture.

(Delivered before the members of the Beekeepers' Association of B. C.)

**Arsenical Spraying.**

Arsenic in various forms is being recommended to fruitgrowers for the control of all biting insects. Without exception economic entomologists are agreed that arsenic, in an insoluble state, is the most effective means of controlling injurious insects which feed directly upon plant tissues. The arsenic compound most commonly in use is the form known as arsenate of lead. This material is insoluble in water and is present in a spraying mixture in a finely divided condition held by constant agitation in a state of suspension. It is deposited on the plants, following the application of a spray, as a fine white powder, more or less evenly distributed over the plant tissues. Unfortunately, this process of spraying with arsenic has its disadvantages from the viewpoint of the beekeeper. Numerous instances have been recorded in Canada as in the United States where millions of bees have died by direct arsenic poisoning brought about by the action of spraying when the trees were in full bloom. On the other hand, on other occasions, no damage has resulted to the bees, after spray application at unsuitable times, and carefully conducted experiments performed with the express purpose of testing this point have been known to produce safe results. The reason why such results have been obtained may be answered probably by the well-known fact that honey-producing plants, at times, fail to secrete nectar; such conditions being fostered by adverse climatic factors in the form of excessive moisture and cold, and that the bees visited the blossoms but did not feed. It is possible

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before aphids multiply and before they get the protection of the foliage.

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Yours faithfully,

WALTER B. HILL.

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some such condition as this may have prevailed during the season when such results were obtained, because it is recognized now that bees are liable to suffer if trees are sprayed when in full bloom.

Spraying with arsenic in the spring, however, is just as essential to the orchardist as the health of the bee is to the beekeeper. Consequently, a compromise had to be ar-

ranged which would tend to remove the causes of friction.

It has been definitely decided that no useful object can be served by spraying fully expanded blossoms. Apart from any considerations of the relations to bees, damage to the anthers and stigmas of the plant, which are peculiarly delicate at this stage, is possible, by the chemical action

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of the spraying liquid. Therefore, orchardists are advised to apply their spray when the bloom is in the "pink" or, in other words, at a time just previous to the expanding of the blossoms, and again after the blossoms fall. This allows the bees full liberty of action at a time which is most favorable for satisfying their needs and when there is a minimum of danger.

Acts of parliament have been passed forbidding arsenical spraying during the period of full bloom. Trouble may often arise between the orchardist and the beekeeper concerning the commonly used term, "period of full bloom." Is it taken to refer to all fruit trees in a collective sense or to the individual blooming period of certain trees or varieties? All fruit trees do not bloom at the same time and in the case of many varieties the petals persist for some time after the process of fertilization has been completed. Fruitgrowers, particularly, when large areas require spraying, and in the more temperate sections of our country, commerce operations as soon as possible after blossoming, in order to cover the whole area within a certain length of time. For instance, in the case of spraying for the first brood larvae of the Codling moth, about ten days are required to cover the period essential for spraying. It is necessary with this insect that the calyx cup of the apple and the pear be filled with minute particles of poison, and it may be readily understood that the time available for this work is limited to the period between the fall of the petals and the closing of the calyx cup. Fruitgrowers probably err, at times, in attempting to spray a trifle early after blossoming to suit the interests of the beekeeper, but it is only fair that the orchardist be allowed a certain latitude provided he indicates his endeavor to commence operations on those varieties of fruit which blossom earliest. Beekeepers should not assume that the visitation by bees of the fruit blossoms towards the close of the blooming period is for the purpose of collecting nectar.

Frequently bees only visit flowers to examine them and if they are satisfied no nectar is available, they leave. The term "full bloom" used in an act, would embody the meaning implied, as well as any other expression, but it should be understood to be confined more particularly to varieties individually than to all fruit trees collectively.

It is said that beekeepers do not consider fruit-tree blossoms of much value in the production of honey. This is doubtless correct owing to the usual short season of bloom. The clovers, alfalfas and wild trees and plants are of much more value to the apiculturist. In this connection, therefore, it would do no harm to draw attention to a danger, in the matter of bee poisoning, which may be more serious under certain circumstances than spraying fruit trees at a debatable time. Often we find honey-producing plants growing between the rows of fruit trees, subjected to drenching by the poisonous liquid applied to the tree above. Laws fostered by the beekeepers, so far as I am aware, deal mainly with the spraying of fruit trees in bloom. How about spraying fruit trees after blossoming at the recommended time, with alfalfa coming into bloom around the tree? Are bees as liable to suffer from frequenting poisoned alfalfa bloom as fruit tree bloom? Botanists are inclined to question the feasibility of poisoning from this source owing to the structure of the alfalfa flower, nevertheless, Professor A. J. Cook, in California, in 1915 records an instance of the poisoning of bees from this source, and he suggests that when alfalfa is grown beneath the trees it should be cut

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before it blooms. It would appear that the whole question involving the relations between the orchardist and the beekeeper in the use of arsenicals for spraying, can be settled more readily by fostering mutual goodwill than by drafting and enforcing stringent legislative acts.

**Poisoned Baits.**

We have several insecticides, which when combined with other materials form what are known as poisoned baits. They are used to control cutworms, grasshoppers, locusts, fruitflies, etc. I cannot do better than give you three typical formulas such as are recommended. For instance, against cutworms, the poisoned bran mash is used and is made up as follows: (1) Paris green, 1 lb.; molasses, 2 qts.; lemons, 3; water, 2½ gallons; bran, 20 lbs. Thinly scattered over 3 acres. Against fruit-flies: (2) Arsenate of lead, 3 lbs.; water, 40 gallons; molasses, 1 gallon. Applied direct to foliage. Against Onion Maggot flies, (3) Sodium arsenate, 5 grams; water, 1 gallon; molasses, 1 pint. Applied weekly in strips across a field.

**Dissemination of Plant Diseases.**

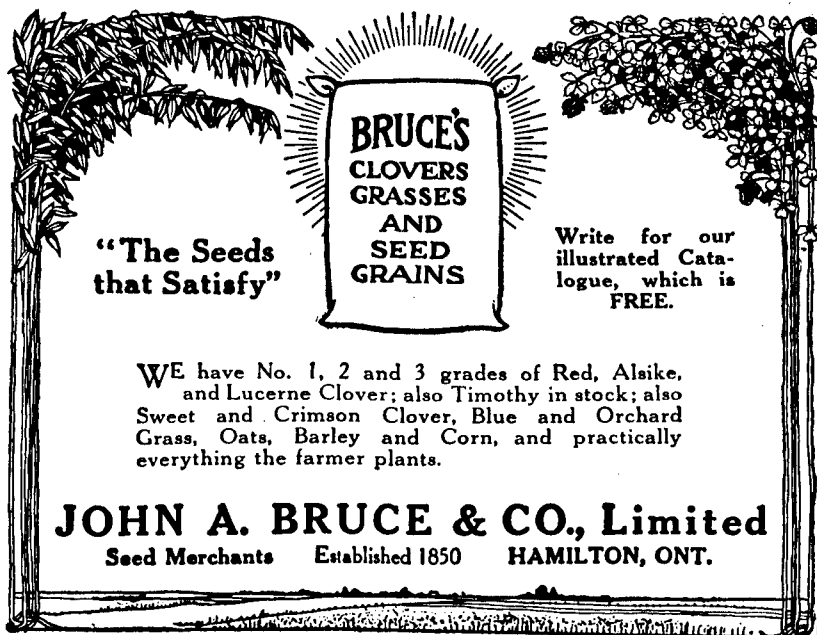
Probably the question which causes most controversy between fruitgrowers and beekeepers is that relating to the spread of destructive plant diseases by bees in an orchard. The orchard disease which is regarded of serious moment in this connection is that commonly referred to as "fire blight." This is a disease bacterial in origin, which works in the cambium layer of certain plants of the rosaceous family, to which our ordinary fruit trees belong. Its action is rapid, once entrance is made, and is of serious consequence to the trees, resulting in death to twigs, limbs and trunks. It is of greatest intensity in the spring when the "sap is running" although its activity may last throughout the season while vegetative growth continues. During the winter the germs persist in what are known as "holdover" cankers on the body or limbs of the tree. When growth commences in the spring exudations of sap appear on the bark and these discharges contain millions of fire blight bacteria sufficient to start infection in many orchards. When the tree blossoms, the nectar may be and has been found to be contaminated to such an extent, at times, that it becomes milky in appearance. It may be readily understood, without enlarging on the matter, that once the nectar cup is replete with diseased plant juices, the spread of the blight through an orchard area is simple, by means of such blossom-visitants as already mentioned.

The connecting link between the gummy exudate around the "holdover" canker and the diseased nectar in the calyx cup, is still a disputed point. One is inclined to assume that bees, intent on gathering pollen, are attracted by the exudate in the early spring and carry the infection by the simple method of visiting a blossom later in the day, or by returning to the hive, thoroughly infested and passing the germ along to other bees which, in turn, carry them out to the blossoms in the orchard. This may be so and the former method doubtless does occur at times. But certain observations have been made by

D. H. Jones of Guelph, of the insect visitors to the exudate in the spring, in an endeavor to incriminate the honey bee, but no bee was observed to settle on the gummy discharge, while the disease was observed to gather impetus among the blossoms on the trees surrounding the orchard. This record is merely stated to indicate that first impressions, though apparently obvious, are not necessarily correct, and to show that all suppositions must be sup-

ported by carefully obtained facts. Bombylid, Syrphid and blossom-frequenting flies are apt, if not more inclined, to visit the gummy exudate than bees. Ants may also play their part in spreading the disease in the early spring, possibly by crawling over diseased cuttings thrown on the surface of the soil or by passing up and down the branches of the tree. But if these means, exclusive of the honey bee, combined with the normal movement of sap within the tree, are alone responsible for commencing the disease in the spring, it is difficult to account for the rapid development of the disease in the blossoms and twigs over large areas. This has led some fruitgrowers to inquire whether or not the honey maintained in the hive over winter may not be infected by reason of the previous season's activities of the bees in diseased orchards. Professor Gossard, on an investigation to determine this point has obtained negative results and thus far has failed to incriminate the honey bee. While doubtless the honey bee does visit the gummy exudate from a diseased tree in the early spring to some extent, nevertheless, enough has been said to indicate that the question of early blight transmission in an orchard is a disputed point and one which requires further study.

We are perfectly satisfied, however, that once the nectar cup in a blossom becomes infected, the honey bee is very largely to blame for spreading the disease from blossom to blossom. The bacteria have on several occasions been found on its mouth parts and appendages and the blame is clear and unmistakable. Fruitgrowers who are prone to censure the bee in this particular have good and sufficient grounds on which to base their contentions, but in doing so, they must remember that the honey bee is not alone in this regard. All of the insects mentioned in this paper and many more besides, must be classed as blight distributors, as they are blossom visitants. Even a shower of rain or a heavy dew, which allows overhanging branches to shed moisture on those below, have been known to spread disease. In fact, it must be clearly understood that even if honey bees were absent in an orchard the disease would still continue to spread although, doubtless, less rapidly. Orchardists should bear this in mind and beekeepers must be content to accept the statement that bees are more active agents in the rapid and wider dissemination of the disease than other insects.



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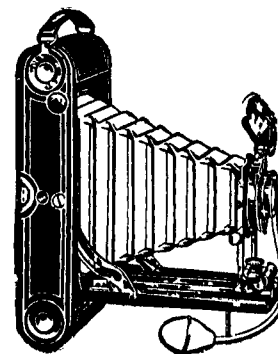
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**Injury to Fruit**

This subject may be quickly disposed of by merely stating that bees do not injure sound fruit. Repeated demonstrations have proved this point with perfect satisfaction. The mouth parts of honey bees are entirely unsuited to cutting or piercing plant tissues. Consequently, if honey bees are observed feeding on fruits in an orchard, it is certain the fruit was injured in some way previously and that the bee is a secondary and not a primary agent of destruction.

# POULTRY SECTION

## POINTERS ON MARKETING EGGS

Even though the egg crop is large, if that crop is not properly marketed there will be only ordinary profit. It is admitted that a good retail trade is the best market, but the farm is not always so situated that this can be obtained.

It is important, then, that a good wholesale custom be secured, and this makes it necessary that the goods be in such a condition that they will be sought after.

An ingenious method to advertise the eggs is to have a rubber stamp made with the wording of the farm on it, something like this:

Guaranteed Fresh,  
Purebred Poultry Farm,  
Ladner, B. C.

This stamped on each egg would at once attract attention, and if those eggs are found to be true to representation, there would be no trouble to hold that customer.

The question arises: "When does an egg cease to be fresh?"

Investigation has proved that an egg remains in a fresh state for three days. Some farms ship eggs when a day old, to allow two days' time for carriage and for the sale. This is a safe plan. As a rule, however, guaranteed fresh eggs are purchased the day they are placed on sale. Such eggs are for the "fancy, up-town grocery trade" of cities.

What is known as "Prime" eggs in the city trade are eggs of which the age is not unknown—they being from one to three weeks of age in cool weather.

"Fresh case" eggs are a class out of which it may be expected to secure six good ones, three fair ones, and three of a "demoralized" order in each dozen.

It seems that the market is always ready for good, bad and indifferent eggs. Of course, it goes without saying, that the stamped eggs are sold first, and at an advanced figure, as there is a special demand for them.

In nearly all the large cities there are grocers who cater to a fancy trade, and these are only too glad to arrange with some farm having a reputation for furnishing eggs that are strictly fresh.

Eggs should be gathered at least once a day, and even twice or three times easily is better. They should be placed in a cool, clean cellar, away from any impure odors, for an egg will quickly absorb any impurity that might be near it.

Eggs should not be marketed that are not regularly found in the nest. Eggs from hidden nests, or picked up in the run, are risks, and should be used at home. Great care must be taken in this particular. All stains and dirt should be wiped with a cloth and then allowed to dry. A little vinegar will often remove the most obstinate stain.

Those who become discouraged by mistakes are not very progressive. Instead of being stumbling blocks, mistakes are object lessons that arouse one to a sense of closer observation and point out facts. However, the man who makes the same mistake twice is not a very observing person.

The older the egg the less is that sweet, rich flavor noticeable.

It is more important to know the work of the individual hen than the average of the flock.

There is no foundation for the assertion that the "sweet, rich clover" of the egg be-

longs to the breed. That condition can only be brought about by the quality of the food.

There is a decided difference in the weight of eggs from pullets and hens, and of these laid by different breeds. These figures are approximately correct: Single comb Brown Leghorn pullets, 17 1/2 ounces per dozen; hens, 21 1/2 ounces. Light Brahma pullets, 23 1/2 ounces; hens, 23 ounces; Black Langshan pullets, 24 ounces; hens, 26 1/2 ounces. Pekin duck, 35 1/2 ounces.

The question of feeding flavor into eggs, was practically settled some years ago by Professor F. E. Emery, of the North Carolina experiment station, who tried feeding onions to hens, with the result that the eggs of all those hens which ate the onions showed a more or less distinct flavor. Therefore it appears that to get fine flavored eggs it is necessary to restrict runs enough so that no considerable amount of the food can be of such a character as to yield ill-flavored eggs.

The large breeds are best for caponizing. A few months old capon is no better than a cockerel. A capon will more readily put on fat and get large and prime after maturity. The object in caponizing is to secure quality and size, but quality is the most important. Age does not impair a capon as it does a cockerel, provided the bird is not kept longer than a year and a half. Capons will have to mature before they can get much finish, and for that reason they cannot be sold while young.

No poultry meat excels, if any equals, a half-grown Guinea, split down the back, broiled and buttered. It is meaty, tender and of splendid flavor.

Feeding skim milk has a tendency to whiten the flesh.

Remember "good condition" does not mean overfat.

It must not be forgotten that food flavors the flesh as well as the egg.

Our American breeds fatten very readily, making them ideal market poultry.

The yolk of the egg spoils much quicker than the white.

The first one or two litters of eggs laid by pullets are not so serviceable, so sure or profitable for hatching as is their later product, for the reason that they were first formed at a time when the pullet was growing and the organs not fully developed.

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**Are Made From the Cleanest, Choicest Ingredients**

They contain a high percentage of Protein—the food element that builds bone, flesh and strength.

Not "high-priced" food—yet is a food that will nourish and bring to a full, healthy, strong maturity.

Positively will not "scour" young chicks.

The Beef Scraps in our Chick Food and Growing Food is the famous "Darling Beef Scraps," universally recognized as the best and most economical.

These feeds are put up in the following sizes:

Royal Standard Mills Chicks Food; sacks, 100 lbs., 50 lbs., 25 lbs. and 10 lbs.  
Royal Standard Mills Growing Food; sacks, 100 lbs., 50 lbs. and 25 lbs.

Order now from our nearest branch and be prepared.

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An authority says that if an egg is placed on the side or large end, the heavy yolk will settle to the bottom and come in contact with the shell which admits the air. If it is placed on the small end, it will always have a layer of white between it and the shell.

Colonel Roessle once said there may not be any very large fortune to be made in poultry raising, but there is a handsome living for any one who has the love for the pursuit, the ability to raise and care for the stock, and a small capital to start with. These three things must go hand in hand; separately they cannot bring success.

Bad cases of feather eaters have been cured by painting around the bare places on hens that have had their feathers plucked, with a preparation made of powdered aloes dissolved in alcohol. Hens do not like the bitter taste.

A French naturalist asserts that the use of pounded garlic with the usual food has been made to completely eradicate the gapes among pheasants in Europe.

The beginner finds many stumbling blocks in the artificial methods, but experience soon shows the trick of how to easily step over them.

Over-feeding of green bone is apt to cause leg troubles, diarrhoea, bowel complaints and worms.

A poultry keeper living some distance from the city says he found it difficult to secure animal food for his fowls, so he experimented with beans, peas, nuts, sunflower seed and peanuts with as good results as obtained from animal food.

Some years ago Professor James Dryden delivered an address before the Utah Farmers' Institute, from which this extract is worthy of reproduction: A short study of the composition of wheat and of eggs will explain why a profitable egg yield cannot be expected from wheat alone. Supposing you feed a hen which weighs 3.5 pounds 3.25 ounces of wheat a day. Of course a hen of that weight would not long consume that weight alone. Supposing, further, that the hen uses 2.75 ounces of that for the maintenance of the body; that leaves half an ounce to be conveyed into eggs, assuming that all the food is digested, which of course is not the case. In half an ounce of wheat there is about .06 of an ounce of protein. So that, assuming that the hen consumes and digests 3.25 ounces of wheat per day, and that she uses 2.75 ounces of that for maintenance of the body, there is available each day just one-fourth enough protein for an egg. In other words, it will take four days to get the necessary amount of protein for an egg. But the egg has other constituents; so has wheat. The half ounce of wheat contains about one and one-half times as much carbohydrates and fat as one egg contains. The hen fed on wheat alone has a surplus of one material and a deficiency of another. In other words, she has enough carbohydrates and fat to make an egg and a half a day, but has only protein enough to make one egg in six days. You place the hen in an awkward position by feeding her wheat alone. Wheat does not contain the egg-making materials in proper proportion. Corn is even worse than wheat in this respect.

**Sixth International Egg-Laying Contest, held under the auspices of the Provincial Department of Agriculture, at Exhibition Grounds, Victoria, B. C., from October 6, 1916, to October 5, 1917; 12 months.**

**Fifth month's report, for month ending March 5, 1917:**

**CLASS I.**

**Light Weight Varieties, six birds to a pen.**

Pen No.	Name and Address.	Breed.	Month's Eggs.	Total Eggs.
1	J. O. M. Thackeray, Chilliwack, B. C.	White Leghorns, first	86	328
2	D. Edwards, Someos, V. I., B. C.	White Leghorns, third	82	243
3	A. V. Lang, R. R. 3, Victoria, B. C.	White Leghorns	58	170
4	Norie Bros., Cowichan, V. I., B. C.	White Leghorns	54	207
5	Mrs. A. F. C. Kenward, Invermere, B. C.	White Leghorns	46	140
6	W. McEwan, R. M. D. 1, Duncan, B. C.	White Leghorns, second	92	313
7	W. Bradley, Maywood, V. I., B. C.	White Leghorns	89	192
8	Graves & McCulloch, Saturna Is., B. C.	White Leghorns	84	233
9	Mr. and Mrs. R. W. Chalmers, Thrusis, B. C.	White Leghorns	51	194
10	G. O. Pooley, R. R. 1, Duncan, B. C.	White Leghorns	38	188
11	Madrona Farms, R. R. 4, Victoria, B. C.	White Leghorns	51	144
12	F. E. Pullen, Whonnoek, B. C.	Anconas	91	208
13	H. A. Hincks, Langford Sta., B. C.	White Leghorns	48	155
14	C. G. Golding, Qualicum, B. C.	White Leghorns	56	126
15	M. H. Ruttledge, R. R. 2, Sardis, B. C.	White Leghorns	65	203
16	H. Dryden, Corvallis, Oregon	White Leghorns	55	197
17	J. L. Smith, Shawnigan Lake, B. C.	Buttercups	15	193
18	L. M. Ross, Cowichan, B. C.	White Leghorns	59	183
19	H. Colbourn, 49th Ave. W., So. Van.	Black Minorcas	19	74
20	F. Hoey, R. M. D. 1, Duncan, B. C.	White Leghorns	61	184
21	P. D. Hillis, Rocky Point, B. C.	White Leghorns	51	143
Total			1,251	4,023

**CLASS II.**

**Heavy Weights.**

22	W. H. Mahon, Duncan, B. C.	White Wyandottes	42	238
23	W. H. Willins, Stannard Ave., Victoria	Rose Comb Reds	51	152
24	W. H. Catterall, Mt. Tolmie, Victoria	White Wyandottes	80	318
25	V. T. Price, Cowichan, B. C.	Single Comb Reds	93	362
26	J. P. Wood, R. R. 1, Cowichan Bay	Single Comb Reds	88	229
27	G. D. Adams, Box 840, Victoria, B. C.	White Wyandottes, first	82	479
28	Norfolk Farms, St. Williams, Ont.	Barred Rocks	95	229
29	R. N. Clerke, Vernon, B. C.	Rose Comb Reds	108	246
30	F. G. Barr, Colquitz, B. C.	White Wyandottes	34	278
31	J. B. Bloore, Chilliwack, B. C.	White Wyandottes	87	180
32	A. R. Lowe, Lake Hill P. O., B. C.	Single Comb Reds	75	244
33	P. S. Lampman, York Place, Oak Bay	Single Comb Reds	80	286
34	E. D. Read, Duncan, B. C.	White Wyandottes, third	71	397
35	S. S. F. Blackman, R. M. D., Sidney	Single Comb Reds	63	155
36	A. W. Cooke, Kelowna, B. C.	Buff Orpingtons	79	284
37	Dean Bros., Keatings, B. C.	White Wyandottes, second	111	433
38	Regan Bros., 78th Ave, Edmonton, Alta.	Buff Orpingtons	87	362
39	F. W. Frederick, Phoenix, B. C.	R. I. Whites	85	359
40	D. Gibbard, Mission, B. C.	Barred Rocks	85	269
Totals			1,496	5,500
Totals, Class 1			1,251	4,023
			2,747	9,523

Average price of eggs for month, 39.2c. Temperature: highest, 58 degrees; lowest, 19 degrees. Snow fell from 21st to 25, 3 to 4 inches. Rained on four days. Fine and sunny on 12 days. Rest of month, foggy and overcast.

Broodies in Class 2: Pen 23 (1); 31, (1), 36 (2), 38 (1).

Molting, pen 17. Great improvement in Class 1. Laying latter part of month.

J. R. TERRY, Director.  
W. H. STROYAN, Poultryman.

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# WOMEN'S SECTION

## British Columbia Women's Institutes

Motto—"FOR HOME AND COUNTRY"

### HAZELMERE NEWS

The regular monthly meeting of the Woman's Institute was held on Thursday afternoon, March 15, the president, Mrs. Tucker in the chair. Correspondence was read from W. E. Scott, deputy minister of agriculture; the Red Cross in Toronto, Vancouver and White Rock; Mrs. Davies of Chilliwack; Surrey School Board, Surrey Gazette and others. The programme for the year was compiled and it was decided to have it printed in the same form as last year. It was decided to have a "junk collection" during the Easter holidays, and prizes will be awarded the boy and girl (pupils of Hall's Prairie school) who bring in the largest collection.

A quantity of yarn and a number of hospital shirts and pyjama suits were given out. The anniversary meeting and quilt drawing in April were discussed, and it is expected prominent Red Cross workers from Vancouver will deliver addresses.

### LANGLEY FORT W. I.

The Langley Fort Women's Institute held their monthly meeting in Town Hall on Tuesday, Feb. 20, Mrs. D. M. Coulter, president, in the chair. The attendance was all that could be expected and showed the interest felt in the W. I., as the weather was very inclement.

### TYNEHEAD NEWS

The monthly meeting of the Women's Institute was held on Wednesday, 14th inst., at the home of Mrs. Bothwell, eleven members being present. The minutes of the previous meeting were read and adopted, after which the socks were handed in, over twenty pairs having been knitted by the members since the year began. Some money had also been collected for yarn and handed in, but the snow and state of the roads prevented the members from getting around to collect. More yarn is to be bought and more socks knitted. More money for this purpose will also be needed. After some discussion regarding ways and means to secure enough money to furnish one bed for the wounded soldiers it was decided to let the girls belonging to the News Club take this matter up, the Women's Institute to give them \$5 to begin with, and also to help them in every way possible. Arrangements were made for Mrs. Chalmers's visit. She is to lecture in the public hall here on the 28th and 29th inst., afternoon and evening sessions both days. Subjects: Home Gardening, Live Stock, Soils and Crops and Home Canning. The public are cordially invited to attend these lectures, which are free. Miss Olive Atcheson sang a solo, after which dainty refreshments were served by Mrs. Rothwell. The next meeting will be held on the 11th of April in the public hall, the News Club to furnish refreshments, charging each member ten cents, which will be one small way of raising funds. Several interesting letters have been received from the soldier boys overseas.

On Monday, March 12, an Art and Industry club was formed in connection with the Cowichan Womens Institute, for the encouragement of home industries, such as jams, preserves, woodcraft and art work.

Officers elected were: President, Mr. A. Burchett; vice-presidents, Mrs. Blackwood-Wieman and Mrs. Leather; committee, Mrs. Burchett, Mrs. W. Morten, Mrs. Whidden, Mrs. Barnett, Miss Wylie, Mr. A. J. Hook, Mr. Parry, Mr. H. Chambers; honorary secretary, Mrs. Macdonald.

### HUNTINGDON NEWS

The Upper Sumas Women's Institute met at the house of Mrs. Fraser York in Huntingdon on March 8. There were present Mesdames Campbell, Copley, Fraser, Hart, McMurphy, Murphy, Porter, Purvis, Skinner, Tully, Winson, Fraser York, T. F. York; also two visitors, Mrs. Bartlett and Miss Bernard.

Mrs. Porter reported sending to the Red Cross Society at New Westminster nineteen pairs socks, ten suits pyjamas, one pair pillow cases, two towels. More work was received and given out. Five pairs of socks were sent by individual members to friends at the front. Subscriptions to the Red Cross fund were received from Mr. Fooks, Mr. Campbell and Mr. Porter. Ten cents was found in the P. O. box. Mrs. Hart reported sending \$5 to the prisoners of war fund, and a letter was read concerning the restrictions on the sending of private parcels. It was moved by Mrs. Campbell, and carried, that a dollar be sent for a special parcel to go to Mr. Munroe, formerly minister at Whatcom road; also a pair of socks to be enclosed.

Mrs. T. F. York reported that Miss Henry had arranged an "increased production" scheme for her pupils at Whatcom road school. Miss Henry is giving each pupil a dollar, which is to be spent on seed, eggs for setting, or live stock, and the resultant produce is to be sold in the fall for some charitable purpose.

A letter was read from Miss Hill asking if any farmers' wives were willing to take city children as boarders during the summer. It was decided to put a notice in the post office, asking any ladies willing to do so to write direct to Miss Hill, at the City Hall, Vancouver.

Mrs. Chalmers' letter telling of the duration of the lectures on the various subjects on which she was to speak was read, and it was decided to hold afternoon meetings on Monday and Tuesday at 2:30.

Members are reminded that all women desirous of voting in provincial elections must register before April 1. A most interesting paper on "Canadian Women of Note" was read by Mrs. Campbell. On adjournment dainty refreshments were served by the hostess. A collection for prisoners of war amounted to \$1.60, and for the Y. M. C. A., \$1.90.

Mrs. Chalmers was engaged as lecturer for the 1917 spring itinerary of the Women's Institutes, and special meetings of the Upper Sumas Institute were held at the Alexandria rooms on March 12 and 13, at 2:30 p.m. each day, at which Mrs. Chalmers spoke. The subjects on Monday were: Soils and Crops, Poultry and Farm Animals. There were present six members: Mesdames Cameron, Campbell, Fraser, Murphy, Winson, T. F. York; also six visitors, Mrs. Harrison, Mrs. Owens, Miss Murphy and Messrs. Cox, Murphy and Winson. Stormy weather

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prevented a larger attendance. The subjects of the lectures were treated in a most interesting manner, and many questions showed the audience's appreciation. On Tuesday afternoon better weather conditions prevailed and thirteen members and four visitors were present. Mesdames Bebe, Cameron Campbell, Fraser, McGillivray, McMurphy, Murphy, Porter, Skinner, Winson Fraser York T. F. York and Miss Henry were the members; Mesdames Bebe, Owens, Ira Serl and Mr. Winson were the visitors. The subjects were "Home Canning" and "Home Gardens", and aroused much interest; many valuable recipes were given and all greatly enjoyed Mrs. Chalmers lectures.

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Vancouver, B. C.

April, 1917.

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This is the first opportunity I have had of addressing the Fruit Growers of our wonderful country; especially the subscribers to this magazine, and I feel it is but the beginning of a long and pleasant acquaintance.

Particularly I wish to call your attention to our Country Order Department, which has been instituted for your special benefit. I invite you to make full use of it by writing to me personally, for anything you may require no matter how small or how great.

My aim is to study the interests of each individual customer, and I am particularly careful in choosing what will please you, as though you were doing the selecting yourself, further it is a pleasure for me to shop for you.

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