

FARM AND DAIRY

& RURAL HOME



DEVOTED TO
BETTER FARMING
AND CANADIAN
COUNTRY LIFE



Toronto, Ont., December 20, 1917



Comm. of Conservation
Asst. Chairman Jan 19

A FEW OF THE MILCH COWS IN THE PURE BRED HERD OF DR. A. A. FAREWELL, OSAWA, ONT.

Winter-Killing of Alfalfa

Factors Which Influence Longevity (Page 3).

The Profits of a Brood Sow

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A Cheap Hog Cabin

As Used at the C. E. F. (Page 5).

Farm Methods and Farm Profits

Two Eastern Ontario Experiences (Page 5).

ISSUED EACH WEEK.

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because it adds to his comfort,
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and because it looks—and is—
the best of its kind, the Gillette
Safety Razor is the one sure-to-
please Christmas Gift for a man.

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FOR HIS CHRISTMAS

51st Annual Dairymen's Convention and Dairy Exhibition

Dairymen's Association W. Ont.
Stratford, Ont.

Wed. and Thurs., Jan. 16 and 17, 1918

SPECIAL RAILWAY RATES

R. W. Stratton, Pres.
Guelph, Ont.

F. Hems, Sec.-Treas.
London, Ont.

Current Comments on the Farming Business

The Sale of Oleomargarine

OLEOMARGARINE may now be legally sold in Can-*a*. Hundreds of licenses have been taken out by retail grocers and others who desire to deal in the product. As yet, however, it is available in only a few centres, and little of it has been sold; not enough to have any appreciable effect on the demand for butter. No oleomargarine has been imported, or is likely to be imported in the near future, as the United States Government has placed an embargo on cottonseed oil, which is one of the chief constituents in even the better grades of oleomargarine. Small quantities are being manufactured in Canada, and the home product is now on the market.

This Canadian-made oleomargarine is selling in departmental stores in Toronto at 33 to 37 cts. The wholesale price is 32 cts. Dealers report that there is a good enquiry for oleo., but this enquiry must be as yet attributed to the curiosity of the public, rather than to the merit of oleomargarine, as most of those who are now buying it never tasted oleo. before in their lives. The margin at which it has been sold above the wholesale price is also small, dealers probably preferring to take small profits until demand has been stimulated. Higher prices may be looked for later on. The chief duty of the dairymen and their organizations is now to see that restrictions on its importation, and sale are strictly enforced, and that no new concessions are made to Canadian manufacturers of margarine.

Some Costly Potatoes

LAST spring the members of the Toronto police force decided that they would not again pay exorbitantly high prices for potatoes—they would grow their own and have them at cost of production. The results of their experiment are now to hand. Eleven hundred bags of potatoes were cultivated at a cost of \$2,300, or \$2 a bag. This bill of costs does not include labor, which the policemen contributed themselves, nor the rental of the land, which was turned over to them free for the purpose. The police commission professed to be satisfied with the result, and expect to repeat their experiment next year. Much of the satisfaction of the police commission doubtless arises from the fact that they are eating the fruits of their own industry that they have earned by the sweat of their brow. It certainly cannot be said that they have demonstrated to the public how cheaply potatoes can be grown.

In the city of Peterboro, several score of the employees of the Canadian General Electric likewise decided that in 1917 they would grow their own potatoes. Unlike the Toronto policemen, however, these Peterboro citizens paid a nominal rental for their land and hired a good part of the work done, contributing only a small part of the labor themselves. The results of this experiment, too, are now available. The money outlay of each of the shareholders in the potato farming scheme was \$13, and the share of the potatoes allotted to each was four bags. Cost of production represented, therefore, \$3.25 a bag, plus several hours of labor. We have not heard whether these citizens of Peterboro are thinking of repeating this costly experiment or not, but we are rather inclined to think that \$3.25 a bag would cause many of them to exclaim "Too much, too much, and on account of the muchness we'll grow no more."

A large organization at Hamilton grew potatoes extensively this year with similar success (3). Members of smaller organizations everywhere are sowing potatoes this winter which they secured at "just the cost of production," but, unfortunately for them, "cost of production" represented a greater money outlay than the market price of the same quantity of potatoes. Doubtless, many of these city farmers have decided that the professional farmer is not such a profiteer after all. In all, probably thousands of them will be quite content to allow the professional farmer to grow their potatoes for them next year.

Milk Prices Comment

MANAGER E. G. SHELDONWOOD, of the Fraser Valley Milk Producers' Association, has announced that the retail branch of the association has reduced the price of milk to eight quarts for a dollar instead of seven quarts as hitherto prevailing. This action was necessary to comply with the mandate of the Food Controller that the margin between producer and consumer should not be more than five and one-quarter cents per quart. Other dealers in Vancouver are expected to fall in line and make a similar reduction, although their profits in so doing, they claim, will be reduced to the vanishing point.

The Federal Food Administration is now conducting an investigation into Chicago milk prices. The Producers' Association demanded and secured a price of \$3.44 a cwt. delivered. The food administration practically compelled the producers to sell at a price of \$3.25 a cwt., payable by the consumer at the present investigation. At time of writing the sessions have been under way only a few days, but present indications are that the producers have fully justified the original price that they demanded. The accounts of many producers show that in selling milk at \$3.25 a cwt., they are selling at below cost of production.

Along with the increase in price of milk a greatly decreased consumption is noticeable in all the cities of the United States. One dealer in Chicago who distributed 4,000 quarts of milk a day in September, distributed only 2,500 quarts in October. In New York it is estimated that 2,300 families with young children are taking from one-fourth to one-half less milk than before the price went up. This is especially regrettable when we consider that even at the lower price these families are not taking enough milk to properly nourish their children. And yet the farmer wishes to increase the price of his milk because of increasing costs of production is as much the victim of circumstance as the wage-earner who feels that he cannot afford to pay the additional price for milk that must be demanded.



We Welcome Practical Progressive Ideas.

FARM AND DAIRY & RURAL HOME



The Recognized Exponent of Dairying in Canada

Trade increases the wealth and glory of a county; but its real strength and stamina are to be looked for among the cultivators of the land.—Lord Chelmsford

VOL. XXXVI

TORONTO, ONT., DECEMBER 20, 1917

No. 51

How Are We to Prevent Winter-Killing of Alfalfa?

A General Discussion of the Subject by A. M. Ten Eyck, a Well Known United States Authority on Alfalfa Questions

THE writer's experience with the study of alfalfa has extended over a period of more than twenty years in five different states, and he has observed the winter-killing of alfalfa under several conditions in each of these states. Winter-killing is often the result of unfavorable local conditions as regards the soil or seed-bed in which the alfalfa is planted. Alfalfa will not succeed without inoculation in soil which is lacking in the alfalfa bacteria, and fields seeded under such conditions usually winter-kill the first or second winter. Another requirement of alfalfa is a sweet soil containing an abundance of lime, and when the soil is too acid the alfalfa will not thrive well and its weak condition causes it to gradually kill out or a severe winter may entirely destroy a field of weak plants, where a field of strong plants growing under favorable soil conditions will survive.

Poor drainage is another cause for winter-killing. It is a common saying that alfalfa will not grow with "wet feet", and in land which is not well drained the crop will either drown out or heave out in the course of a few seasons. A deep, loose seed-bed is an unfavorable condition for starting alfalfa, and the young plants in such a seed-bed are likely to dry out or heave out during the first year. Other factors which have to do with decreasing the vitality of alfalfa plants, thus making them more susceptible to winter-killing, are weeds, insects, diseases, and animal pests, particularly moles and gophers.

The factors named are qualifying factors which reduce the vitality of the alfalfa, making it more likely to winter-kill, but even under the most favorable conditions of growth, alfalfa frequently winter-kills in our northern states, and this is the condition which we desire to investigate.

Kinds of Winter-killing.

Winter-killing is brought about in different ways—by the heaving of the soil, by the smothering of the plants under ice, and through the killing of the roots by extreme cold.

The heaving of the soil by alternate freezing and thawing lifts the soil with the roots, and when the soil thaws it settles again, but the roots do not settle with it, and the soil again freezing takes a new hold on the roots which are again raised. Thus the alternate freezing and thawing gradually draws the roots of the plant out of the ground, sometimes several inches, breaking off the tap root, and in the case of young plants the roots are frequently thrown out on the surface.

Winter rains or winter thaws may cause the folds to become covered with a sheet

of ice, which if it continues long, is almost sure to smother alfalfa or clover, and even grasses and fall grains are liable to injury in this way.

The killing by extreme cold is most likely to happen in a dry, open winter, and new seedlings, especially late seedlings, in which the plants are shallow-rooted and afford little cover, are most likely to be affected.

Protective Measures.

In the ordinary winter, the protection afforded by a strong fall growth is usually sufficient to prevent any winter-killing, but last winter this did not prove true, since all old fields were more or less thinned in stand, while new seedlings, even when well protected with aftermath and stubble, were almost entirely killed. This killing was evidently due in most cases to extreme cold and not to smothering with ice or heaving.

It is evident that when the conditions are too severe, winter protection, while it may help some, will not prevent some winter-killing by which a good stand is thinned or destroyed. Precaution should always be taken, however, to give such winter protection as may be afforded by the growth of the alfalfa after the last cutting. Too late cutting should be avoided as well as too close pasturing. In fact, it is doubtful whether alfalfa fields north of the forty-second parallel,

should be cut or pastured after September 1st.

A light dressing of manure spread on alfalfa late in the fall is often very useful in preventing soil heaving, especially in newly seeded fields, and this practice is recommended whenever it is possible. The dressing of manure is particularly beneficial to young alfalfa, not only furnishing winter protection, but also supplying some food for the young plants the next spring, and likewise forming a mulch which helps to conserve the soil moisture.

Hardy Types.

The experiences of farmers in the northwest, especially Minnesota and the Dakotas, and the trials at the state experiment stations of these and other states and Canada leave no room for doubt but that there is a great difference in the hardiness of different strains or varieties of alfalfa for growing under northern conditions.

After careful investigation the writer is fully convinced that several acclimatized strains of alfalfa, such as the Grimm, Baltic, Cossack, and Acclimatized Turkestan, which have been grown in the northwest for many years, are much harder for growing in that climate than the common alfalfa, especially that from seed produced further south. There is abundant evidence proving this fact.

So far as the writer has knowledge, the only field of newly seeded alfalfa in Winnebago County, Illinois, which escaped without severe damage by winter-killing last winter, was a small field of Grimm alfalfa near Rockford. I have examined the latest bulletins on alfalfa from the various experiment stations and have recent letters from agronomists in several states and from a number of farmers in Wisconsin and Illinois, nearly all of which give strong testimony regarding the hardiness of Grimm alfalfa, which is the only hardy variety that has been widely planted.

Opinion and Experience.

I wish to quote briefly from some of these letters and bulletins.

In the North Dakota Farmers' Institute Monthly for February, 1914, Professor W. H. Porter of the North Dakota Experiment Station says: "In North Dakota it is very essential to plant a hardy variety of alfalfa. The best variety in this respect known at the present time is unquestionably the Grimm, and whenever need of this variety can be obtained for a reasonable price, it should be used. The Baltic and Turkestan varieties are also usually satisfactory."

In Extension Bulletin No. 49 of The Minnesota State University, Professor A. G. Arney writes: "Grimm alfalfa has demon-

CHRISTMAS-GREETINGS

AGAIN the bells ring out over a war-worn world their message of good cheer. For the fourth Christmas season we find ourselves engaged in this bitter struggle for what we believe to be right. And because of the sacrifices that are being made in this struggle by Canada's hero sons this will be to Canada a great and noble festival.

Never before was there such a season of giving. Our brave lads "over there" are giving their all in the cause of freedom. Those at home are sending thousands of parcels which will bring cheer to friends overseas. And in this giving they have caught something of the true spirit of Christmas, the season that celebrates the greatest gift of the ages—The Christ.

Let us remember that Christmas is a time for laughter and good cheer, for kind words and friendly greetings, a time when friends should draw closer to each other, a time for the breaking of the crust of selfishness from every heart. And while war's dark cloud may hide to some extent the brightness of the sun, let us not forget that the Christ whose birth we commemorate at this joyous season has promised to come again and usher in a reign of "Peace on Earth, Goodwill to Men!"

Utilization of Farm Manure

Methods Followed at the Central Experimental Farm

AL investigations go to show that farm manure has its greatest value when fresh, that the liquid portion is richer than the solid material and that the former is more readily lost through drainage and leaching. Hence it is that every precaution is taken here to ensure a minimum loss of plant food constituents in the manure, and is the chief reason for applying manure to the land, where practicable, as quickly as possible after it is produced.

At the Central Farm, Ottawa, the liquid manure is absorbed by means of litter, usually cut straw, and as each load of mixed liquid and solid manure is gathered it is taken directly to the field and is spread on the land either by hand or by means of the manure spreader, as convenient. This method is carried on consistently throughout the year, although during occasional winter seasons this system may be disorganized for a time due to the depth of snow or other causes. The contour of the land at this farm which varies from fairly level to gently rolling lends itself admirably to the foregoing plan of procedure.

The manure is always applied systematically in definite cropping systems or crop rotations. The amount and frequency of application vary according to the duration of the rotation, but, without exception, in the regular farm rotations, six tons per acre of fresh manure is allotted to each year of the rotation. For instance, in a three-year system, of hoed, grain and hay crops, 18 tons is applied for the hoed crops. In four-year rotations 24 tons is the quantity used. For a five-year rotation the amount is 30 tons of which 15 tons is applied for the hoed crops and the balance is spread in lighter dressings for the clover and timothy hay areas.

Where manure is applied for cultivated or hoed crops the importance of incorporating the manure thoroughly with the soil as near to the surface as practicable is closely observed.

The Profit of a Brood Sow

An Estimate by Prof. Trueman, Truro, N.S.

THE man who plans to respond to the strong appeal of Food Controllers Hoover and Hanna to speed up hog production by saving young sows this fall wisely considers the business as well as the patriotic side of the venture. Sows are worth high figures and the necessary winter feed is proportionately high. It is not to be wondered if doubts as to financial returns are entertained. With an aim to settle this question we obtained some data from Professor Trueman, of the N. S. Agricultural College, which we herewith set forth:—

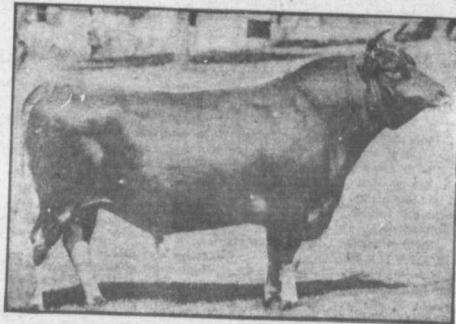
At the College Farm the breed sows are fed on an average of 2 lbs. of mixed meal and 2 lbs. of mangels per day up to the time of farrowing. The practise is to give them 4 lbs. of meal until they get in condition, and mangels alone after that. After farrowing the sows are fed much heavier. The whole process is set forth in the following table:—

Dec. 1 to April 1—121 days	2 lbs. of meal per day at \$50.00 per ton (121 days).....	3.05
	20 lbs. of mangels per day at 15c per bushel (121 days).....	4.8
April 1 to May 1—56 weeks	5 lbs. of meal per day at \$50.00 per ton (42 days).....	8.40
	20 lbs. of skim milk per day at 25c per cwt. (42 days).....	2.10
	20 lbs. of mangels per day at 12c per bushel (42 days).....	1.63
Service.....		1.50
		\$24.07

This may be regarded as an extreme figure, averaging as it does about \$4.60 per month. Before the war there were those who claimed to

have fed sows, at from \$1 to \$1.50 per month, and even lower figures were quoted when skim-milk, garbage and other waste material was used. Now for the returns.

An average sow will raise 8 pigs and frequently 10 to 12. Sucking pigs will sell next spring at \$5 or more a piece, which means a gross return from the sow of at least \$40 to be set against a cost of \$24 for maintenance. The sow herself will be worth as much as when the feeding began. No further figures are necessary to indicate profits to be derived from keeping sows, even with feeds at the present unheard of prices. Possibly some may doubt the market for young pigs next spring relative to which we should point out



A Study in Jersey Type and Masculinity.

Viola's Majesty's White Sox, here illustrated, is one of the greatest show bulls of the breed on the continent, being a grand champion at the National Dairy Show. Note the splendid bearing, the great depth, good length and superb dairy quality. The best judges have pronounced him an ideal dairy bull.

that the "Keep a Pig" movement, like the "Town Garden" movement of last spring, is sure to interest hundreds of suburban dwellers in feeding pigs next year, and this demand added to the normal demand promises a bigger sale for young pigs than the total available supply.

This is the business side of the story. There is no need to dwell on the patriotic, except to briefly state that the "Hog Line" offers the quickest route to making up for the tremendous shortage in most supplies, which is now one of the most critical features of the war. For further particulars read the advertisement elsewhere inserted jointly by the Dominion and Provincial Departments of Agriculture.

Feeding for Production

Methods Followed in Test Work

THE proper way to feed sows for milk production as seen by A. A. Hartshorn, a United States Holstein breeder, may be gleaned from the following extract from his address before the Minnesota Holstein Breeders' Association:—

"After the heifer has been bred and is three or four months along, then it will do no harm to feed some fattening food and get her in fine condition for testing when she drops her first calf, and this is necessary, if a large record is expected the first time she is in milk. And not only that, but the heifer is in a good strong condition to undergo the strain of having her first calf and beginning her life of milk production. After she has freshened, the heifer should be fed what she can digest and put into milk. Great care should be taken that she be not overfed, so as to cause garget or an inflamed condition of the udder.

"In feeding a heifer, a great many people think, because she is not doing quite as well as she

ought to, that they are not feeding enough and will increase the feed, when frequently a dropping off of the grain ration will cause a greater flow of milk. Some animals will stand much higher feed than others, and it is the man who knows his animal, that will make the most successful feeder; and not only that, but it is the grains agree with one animal may not agree with another.

"For instance, years ago, when I tested Mary R. Pieterle, I thought I had found just the right ration for testing, as she stood a great amount of feed and seemed in perfect condition when her 30 days expired, and a little later I tried the same mixture on another cow, Old Prilly, and it did not agree with her at all, while the feed that

she stood to do well on, was not the feed for Mary R. Pieterle, as I fed her that food the year before. So we cannot give any rule, or mixture, that will agree with all cows, but the mixture, which I fed my own herd, which gives me the most general satisfaction for a milk ration, has been: 300 pounds gluten, 200 pounds wheat bran, 100 pounds ground oats, 100 pounds cottonseed meal, 100 pounds oil meal, and 100 pounds hominy. This ration seems to agree with a greater part of my animals and is great ration for milk."

Weeding is one of the oldest occupations of the farm. Nowhere is it followed more profitably than in the dairy herd.

Where the Spreader Scores

Of Particular Value for Small Applications

EXPERIMENTS conducted at the New Jersey Agricultural Experiment Station have resulted in greater yields of corn from applications of one-half ton of manure per acre per year than from plots which receive no manure. This increase in crop cannot be attributed to the manure itself as the increase was no greater where one or two tons per acre were applied instead of the half ton. The station authorities attribute the increase to the vast numbers of micro-organisms, both bacteria and fungi, which grow multitudinously in barnyard manure and which work on the soil, breaking down organic material and liberating mineral plant food. The result of their work in the soil is to furnish available plant food from the unavailable supplies already there.

And here is where the manure spreader scores again. Even when there is manure enough to make a liberal application, the spreader, by breaking it up finely, gives the bacteria a maximum chance to work on the soil. Where the supply of manure is limited it can be spread evenly over a much larger area with the machine, than would be possible with the fork. Not only are succeeding crops then benefited in the actual fertility of the manure itself, but these micro-organisms are given a chance to work on the unavailable plant food of a greater area and increase crop production much more on the whole than would be possible were the same manure applied to a smaller area.

It costs no more to raise a good animal than a poor one. The good individual requires no more stable room and no more labor to feed and care for it. At the same time the returns are much greater. The day of the scrub is passing.—Jno. Guardhouse, York Co., Ont.

A Talk on Farm Profits and Farm Methods

A Story of Two Farmers Who Failed, Changed Their Methods, and Then Succeeded, as Told by Mr. S. McCrimmon

WHAT is the average profit realized by the dairy farmer on his investment? During a short visit with Mr. S. McCrimmon, manager of the Woodstock Dairy Company, last fall, this subject came up for discussion. I expressed the opinion that in any period of five consecutive years, the profits of even the best dairy farmers would not exceed five per cent. on their investment, did they pay themselves a reasonable wage and make proper provision for depreciation on buildings and implements. Mr. McCrimmon was disposed to consider my average a little low, and he was certain that in individual cases dairy farmers were doing and had done much better than my estimate allowed. He told me of some of his observations in Eastern Ontario.

"Some years ago," said Mr. McCrimmon, "I was talking with an Eastern Ontario dairyman, who was well known in his own section of the province as a successful farmer. He told me a little of his own history. He had inherited a good farm of 125 acres with the stock and implements. He followed along the lines established by his father, varying from his father's procedure in only one particular,—he kept accounts and his father did not. These accounts showed him that he was realizing only 85 cents a day on his own labor. He decided that he was worth more. He rented the farm and went into the cheese business. In that business he was highly successful. He owned several cheese factories, made a great deal of money and became known as the cheese king of the East.

"During the time that this man had been making money in the cheese business," continued Mr. McCrimmon, "he had seen many farmers go to the wall. He had seen business men go farming and fail. He had even seen scientific men make a financial failure of the business. He studied these failures and decided that what was needed was a combination of business and science. By that time he had lots of money and he had the time for experiments.

Takes Over Old Farm.

"He took over the management of the old farm. Three or four years were spent in getting it into shape. On it he went in for intensive dairying, keeping as many cows as he could, growing the roughage necessary to feed them and buying all the grain. After all expenses and wages were paid, that man realized as much as \$1,500 profit on one year's farming operations. This satisfied him that the system he was following was well adapted to Eastern Ontario."

"This man," said Mr. McCrimmon further, "had faith that his system was capable of general application. He had a neighbor with a 50-acre farm who came to him in trouble. This neighbor was afraid he would have to give up his farm. He had a mortgage of \$800 against him and couldn't make the place grow feed enough to pay interest and give him a living. Although unfortunate as a farmer, he was known as an honest man and the cheese king asked him if, in return for a loan, he would do exactly as he was told. The man agreed. I don't know what to do as it is," he said. The result was a further experiment.

The cheese king loaned his unfortunate neighbor \$1,800; \$500 of this was used to pay off the mortgage. Then they built a stable for 30 cows and filled it. That was in the days when building materials, labor and cows were all cheap as compared with prices to-day. Ten acres were rented for pasture across the road and the 50 acres were devoted to the growing of roughage. Grain was bought and the cows were fed the year round. Three years later the man who was willing to farm under directions, paid off the last dollar of his indebtedness. His financial gain, however, was the smallest part of his profits. He had discovered how he could keep on farming and make money.

"After these two experiments," concluded Mr.

A Portable Hog Cabin Cheaply Constructed

It Provides Ideal Quarters for Breeding Stock—G. B. Ruthell, Asst. Dom. Animal Husbandman

THE pig, more than any other class of breeding stock, benefits by fresh air and exercise.

The cheapest and simplest way of obtaining these requisites is to provide outdoor life for the sow and boar practically the year round. To what extent, then, should they be sheltered?

It has been amply proven by experiment that a single board cabin such as illustrated and described, and such as may be easily constructed by anyone fairly familiar with tools, affords sufficient shelter for breeding stock even in our more northern districts. In these small buildings, provided they are well supplied with bedding and in a sheltered location, stock boars and brood sows may be housed the year round with the exception, in the case of the latter, of that time spent indoors in the farrowing pen, shortly previous to and following the arrival of the litter.

Cheap Cabin vs. Expensive Pigery.

The farmer engaged in the extensive raising of hogs, will require a permanent building for farrowing sows and fattening pigs during the cold months. Such a building need not be expensive, however, and should be built with a capacity only sufficient for the above requirements. The man raising only a few litters each year, may, in many cases, avoid this expense and, if he can arrange for accommodation in other buildings at the time mentioned, depend mainly on

McCrimmon, "this cheesemaker and farm manager came to a few conclusions of his own. The principal one was that the Ontario farmer cannot afford to grow heavy grains. They take much out of the land, and as a general rule, they can be purchased for cost of production. When concentrates are bought and fed on the farm, they add to the fertility of the soil and make possible the growing of more roughage and the milking of more cows."

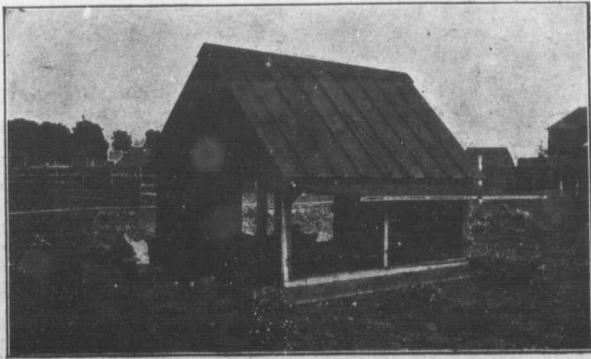
I agreed with Mr. McCrimmon that these two men had done exceptionally well and probably had beaten the five per cent. average. I cannot say that I was convinced, however, that conditions are such that the average good dairyman can make better than five per cent. on his money taking one year with another. I am convinced that, with prices of all grains and concentrates on a war basis, it would now be profitable to buy all feeds except roughage, good as the plan might be under normal conditions.—F. E. E.

the portable cabin as a shelter for his pigs. Compared with the latter, the permanent building is, relatively, very costly, both in the initial outlay and in the yearly charges, interest on investment, upkeep, depreciation, etc. Entirely aside from this aspect, the health of breeding stock is vastly improved by outdoor life with the consequent lessening of susceptibility to disease. These benefits far more than offset the fact that outdoor wintering entails an increase in cost of feeding of 20 per cent.

Realizing then, the value of fresh air, dry quarters and exercise, it will be seen that in the permanent building such features are difficult to insure. In such a structure, outdoor conditions can be approximated only by efficient ventilation. Unless the temperature of the building is sufficiently raised by the nature or number of the occupants, brisk air circulation is impossible. The result is shown by the fact that many piggeries are damp, with the air more or less impure and clammy. The opening of doors and windows, usually causes draughts and too rapid changes of temperature. Damp quarters, impure damp air and draughts are fertile causes of rheumatism, crippling and general unthriftiness. Lack of exercise also predisposes to the above diseases or to an over fat, flabby, constipated condition, and the cause of small or weak, poorly developed litters. A combination of all constitutes a serious menace to the successful raising of swine. In a well constructed, well ventilated building however, in which are housed considerable numbers of feeders, change of air is frequent. Further with such a class of stock, unlimited exercise is not advisable.

With the outdoor cabin, however, fresh dry air is available and with a yard adjoining, exercise is not only possible, but may be actually forced on the animal. With plenty of dry bedding and allowing four or five sows to each house, the rigors of northern winters apparently have the slightest ill effect. Sows

(Continued on page 6.)



A Hog Cabin That is Cool in Summer.

In this portable hog cabin used at the Central Experimental Farm, Ottawa, the sides are hinged and lift up, thus allowing good air circulation in hot weather. The sides when fastened up act as verandas in increasing the total amount of shade.

Studs, 14 pcs. 3' x 2" x 4".....	26
Raffers, 4 pcs. 4 1/2' x 2" x 4".....	12
Braces, 2 pcs. 4' x 2" x 4".....	5
Roof Boarding (1") 49 1/2 sq. ft. 49 1/2	
Wall Boarding (1") 110 sq. ft. 110	
Floor 2" plank 56 sq. ft.	112
Nailing Boards for roof boarding, 2 pcs. 8' 3" x 4".....	5 1/2
Battens, 16 pcs. 5 1/2' x 2" x 1".....	15
Battens for hinged part of roof, 2 pcs. 3' x 1" x 3".....	1 1/2
Nails, Paint, etc.	

Two coats of good paint would add considerably to the life of the structure.

For a building so simply constructed as the above, no further description is necessary. Chances in detail may be made by the builder, if necessary, provided the size is altered to suit the number of pigs to be housed therein. Another type known as the "A" shaped cabin is frequently built, in which the roof extends from the floor in the shape of an inverted V. Experience has shown, however, that this type is unsatisfactory in that the animals rub and scratch themselves against the inside of the roof, soon weakening the connection between the latter and the floor, causing the sides to burst out.

Why Bacon is Demanded

ANY reasons combine to make bacon an exceedingly important meat item in the war-time trade from this continent to Great Britain and the armies at the front. "Bacon," as a trade term, includes the entire hog when dressed and split into sides, either "green" or "cured." The Wiltshire side averages from 50 to 75 pounds, of which only seven per cent is bone. This means a great economy in space when packed for shipment, for Wiltshire bacon is practically solid meat, and can be packed flat in cases of convenient size and shape, 14 to 16 in a case without loss of space.

The superiority of bacon in this respect is shown by comparison of the average percentage of bone in the different meats.

Wiltshire side bacon.....	7 per cent. bone
Dressed beef	12 per cent. bone
Mutton	20 per cent. bone
Veal	25 per cent. bone

As a result of the present shortage of available ocean tonnage this point is of no small consideration.

Bacon is also high in food value. The following table shows the relative food values of the principal meats entering into domestic consumption expressed in "calories," the units of heat and energy fixed by dietitians in considering the use of different foods to the human body:

Bacon (cured and smoked).....	2,250	Calories
Mutton (including tallow).....	1,250	"
Side of beef	1,150	"
Lean beef	650	"
Veal	640	"

These figures show that more vital heat and energy are concentrated in a pound of bacon than a pound of beef, veal or mutton. The fat constituent of bacon is of particular advantage to men working and fighting in the open air, especially in a cold, wet climate. And the shortage of fats in Europe is acute.

The dressed percentage of hogs is high—that is, a high percentage of meat in relation to the weight of the animal.

Hogs will dress out about 50 per cent., butcher cattle will average about 53 per cent., and sheep and lambs about 56 per cent. Bacon, once cured, runs no immediate danger of spoiling, and can be handled with less care and expense than meat shipped as fresh or frozen. In England the cured Wiltshire is smoked, cut up into shoulders, sides and hams, repacked in smaller boxes and sent to the front. Every part of the side therefore reaches the soldiers.

Canada to the Front at International Show

CANADIAN sheep and cattle breeders carried off many honors at the International Live Stock Exposition held at Chicago. Robt. McEwan of London, Ont., won most of the prizes in the Southdown sheep division.

In the fat Lincoln sheep division, H. M. Lee took first and second places in the class one year and under two; first and second in the wether lamb class; first in champion wether lamb class, and first in the pen of three wether lambs class.

Canadian cattle also excelled. The prize Shorthorn herd of T. S. Russell of Downsview, Ont., took seventh place in the steer, spayed or Martin heifer class, calved between January 1 and September 1, 1915; second in the senior yearling steer or heifer

PROF. DAY RESIGNS.

PROF. GEO. E. DAY has resigned the position of Professor of Animal Husbandry and Farm Superintendence at the Ontario Agricultural College and has accepted the office of Secretary of the Canadian Short-horn Breeders' Association. Prof. Day has been the staff of the College for more than twenty-four years, and has the deserved reputation of being one of the best authorities in America on beef cattle and bacon hogs.

class; third in the senior calf steer, spayed or Martin heifer class, calved between September 1, 1915, and January 1, 1917; fifth in the junior calf steer or heifer class, calved since January 1, 1917; fourth in the junior yearling cross-bred class, steer or heifer, and first in the Little New Year's Gift in the steer or heifer cross-bred class, calved since January 1, 1917.

Among the Herefords the prize bull of the Curtice Cattle Company of Shepard, Alta., took third place.

Saving the Situation

THE geographical position of Canada and the United States in relation to the Allies, makes it imperative that this continent should provide the food which must be forthcoming during the next few months, and that we clearly understand the situation. The essentials are:

1. The Allies must be fed.
2. They have in their own countries only a fraction of the food required for their own people.
3. Until the shipping shortage is relieved, several months hence, the Allies must depend upon Canada and the United States to make up their deficiency of essential food supplies, including wheat.

4. CANADA AND THE UNITED STATES CAN ONLY SPARE THE NECESSARY SUPPLIES BY REDUCING THEIR OWN CONSUMPTION BY AT LEAST 20 PER CENT.

5. If Canada and the United States should fail to make up the Allies' deficiency of food, the soldiers would have to go short, and the whole Allied cause might be endangered.

6. Individual effort, individual saving of individual spoonfuls of flour, individual economy in the use of bread and flour and individual substitution of other cereals for wheat, alone can save the situation, and give to the men at the front the support which they must have.

There is no advantage so far as we can see from duck as compared with light colored clover seed.



Final Appeal Judge Gives Ruling on Exemption of Farmers

Mr. Justice Duff (the Final Court of Appeal) Declares it is Essential that there shall be No Diminution in Agricultural Production.

(Published by authority of Director of Public Information, Ottawa.)

Hon. Mr. Justice Duff gave judgment on December 6th, in the first test case brought before him, as Central Appeal Judge (the final court of appeal), for the exemption of a farmer. The appeal was made by W. H. Rowntree in respect of his son, W. J. Rowntree, from the decision of Local Tribunal, Ontario, No. 421, which refused a claim for exemption. The son was stated to be an experienced farm hand, who had been working on the farm continuously for the past seven years, and ever since leaving school. He lives and works with his father, who owns a farm of 150 acres near Weston, Ontario. With the exception of a younger brother, he is the only male help of the father on the farm. The father is a man of advanced years.

In granting the man exemption "until he ceases to be employed in agricultural labor," Mr. Justice Duff said:

"The Military Service Act does not deal with the subject of the exemption of persons engaged in the agricultural industry; and the question which it is my duty to decide is whether the applicant being and having been, as above mentioned, habitually and effectively engaged in agriculture and in labor essential to the carrying on of agricultural production, ought to be exempted under the provisions of the Military Service Act.

"These two propositions are indisputable:

"(1) In order that the military power of the allies may be adequately sustained, it is essential that in this country and under the present conditions, there should be no diminution in agricultural production.

"(2) The supply of competent labor available for the purpose of agricultural production is not abundant, but actually is deficient.

"The proper conclusion appears to be that the applicant, a competent person, who had been habitually and effectively engaged in labor essential to such production, ought not to be withdrawn from it.

"It is perhaps unnecessary to say that such exemptions are not granted as concessions on account of personal hardship, still less as a favor to a class. The sole ground of them is that the national interest is the better served by keeping these men at home. The supreme necessity (upon the existence of which, as its preamble shows, this policy of the Military Service Act is founded) that leads the State to take men by compulsion and put them in the fighting line requires that men shall be kept at home who are engaged in work essential to enable the State to maintain the full efficiency of the combatant forces, and whose places cannot be taken by others not within the class called out."

Ottawa, Dec 8, 1917.



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 The Guelph show
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Pictures from Home

Over there, with thousands of miles of sea and land between them and home, are Our Boys, smiling and fighting—fighting with bullets, against a dogged foe; with smiles, fighting homesickness and dread monotony.

It's a part of the nation's job to-day to keep those boys cheerful, to hold fast the bonds between camp and home, to make light hearts and smiling faces—and these things pictures can help to do—pictures of the home folks and the home doings, pictures of the neighbors, pictures that will enliven their memories of the days before the war—simple Kodak pictures, such as you can make. These can help.

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Letters to the Editor

Is There a Profit in Sheep?

EDITOR, Farm and Dairy.—What is the true situation in regard to sheep raising? Can they be raised profitably, or can't they? We farmers are being asked by the Ontario Department of Agriculture to raise more sheep. We read from time to time articles painting glowing pictures of the profits which can be made from sheep, but when we come to look at the results secured by our experimental stations, where presumably accurate records are kept, we are as much at sea as ever for the results are not consistent.

Maine Losses Money.

In Bulletin 260, the Maine Agricultural Experiment Station gives the results of an experiment carried out in 1915. This \$200 should not be counted in as profit in sheep raising. It is purely speculative. Next year the market might drop their value 100. But such reckoning characterized the optimistic mathematicians who "work out" profits in the experiments carried on by the Dominion Experimental Farms.

The two reports I have cited are probably the extreme. One is characterized by the pessimism of the East and the other by the optimism of the West. What we need to back up the Government's appeal for more sheep is not sheep will, make a profit after they have been charged with labor, feed and overhead expenses. If sheep will pay a profit, we need to know. If they will not, why dangle our eyes with reports of 130 per cent. profits. It is time Ananias resigned as Government statistician. His reports are so much interesting, but they are not of the character of action. We would like a few facts for a change.—Oxford.

Fifteen Hundred Dollars Profit.

But perhaps Maine has a grudge. They are only "down-Easters" after all. Let us look at what has been done with sheep on our own Dominion Experimental Farm at Lacombe, Alta. From a flock of 100 ewes, purchased a year ago, our Experimental Farm has figured out a profit of \$1,587, on a total investment of \$1,217, or a profit of 130 per cent. By comparison, Favelle's 50 per cent. profit looks sick. Here is the way the statistician has figured out the year's returns:

Total cost, 106 ewes.....	\$1,098.50
Cost of 1 ram.....	11.50
Cost of 120 lbs. of grain.....	12.25
Cost of shearing.....	11.40
Wool, 500 lbs.....	4,517.70
22 ewes (present value).....	1,349.00
1 ram.....	10.00
12 lambs (present value).....	918.00
Profit.....	1,587.61
	\$2,355.76 \$2,455.74

I had read statements of profits secured in experiments carried out by our Dominion officials before. I, therefore, restrained myself from at once rushing out and purchasing all the sheep in sight, until I had looked a little deeper into the statement. This is what I found.

No labor was charged against the flock. The reason for this, I presume, is that the officials on the farm have their salaries paid by the Government and they might as well be looking after the sheep as loafing.

No charge was made for pasturage. Twenty-five acres were utilized for this purpose, but presumably no taxes are charged against government farms. The land is, therefore, worth nothing (?). What a pity the ordinary farmer is unable to pasture his sheep so cheaply. It might be easier for him

to make a profit had his land cost him nothing.

Did They Eat Only Grain?
The entire flock of sheep was wintered on 375 worth of grain. This is the only thing charged against the sheep. It is usually considered that the return for wool will pay for a sheep's keep. In this experiment, however, \$517 was received for the clip of wool, while the keep of the sheep cost but \$75. Were they fed no hay? Or, yes, a few cows' tails, but nothing worth counting. And then if the sheep hadn't got it, something else might. Roots? Well, yes, the sheep were fed alfalfa turnips daily for most of the winter, but these turnips were grown on the farm, and, therefore, cost nothing.

The sheep market advanced during the year. It advanced so much that the 92 ewes left after the dogs and coyotes had taken their toll, were worth \$500 more than the original 106 ewes, although they were older and would ordinarily have depreciated. This \$500 should not be counted in as profit in sheep raising. It is purely speculative. Next year the market might drop their value 100. But such reckoning characterized the optimistic mathematicians who "work out" profits in the experiments carried on by the Dominion Experimental Farms.

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A Letter of Thanks

EDITOR, Farm and Dairy.—I am glad to thank you for placing pictures and notices of "Homes Wanted" by wards of our Society, in your paper, as requested directly by us and through Mr. Kelso.

The circulation of your paper seems to be wide enough as we have had applications from several Provinces before our own. Moreover, the results have been most satisfactory as the last placeable child has been sent to an approved foster home.

Furthermore, we had better results from your kindness than from our advertisements in the various local papers of our district.

Again thanking you for your kindness, I am, Yours sincerely, C. A. Winfield, Agent, Brockville, Children's Aid Shelter.

Need Guarantee of Stability

SPEAKING at the Gushwinton Fair, recently, Prof. G. E. Day, stated that an average high price for hogs is no satisfaction to the man who, when his hogs are ready, and when they must be sold, finds the price low. In the United States the Government has guarded against this by arranging to buy meat when the packers' cellars are full, and when hog prices usually go down. That will tend to prevent extremely high prices at one time and unduly low prices at another.

"Here farmers have no guarantee of stability," said Prof. Day, "but still they are responding to the demand for increased production in hogs. They are doing this on patriotic grounds alone, and I believe they are the only class who would do that."



It Will Soon Be Too Late !

Thousands of our readers have already taken advantage of our Special Christmas bargain offer and renewed their subscription for two or three years. There is still time for you to attend to this and get Farm and Dairy for:

**Two Years
for \$1.50**

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for \$2.00**

No matter when your renewal is due, whether now or several months from now—send in \$1.50 or \$2.00 during December and we will extend your subscription for two years, or three years, from whatever date it becomes due.

This is your one chance during the year to get Farm and Dairy at a cut price. The offer expires on December 31st. Send in your renewal promptly.

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Send Farm and Dairy to your friend. It is a welcome Christmas gift that repeats every week throughout the year.

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Farm and Dairy

AND
Rural Home

"The Farm Paper for the farmer who milks cows."
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The paid subscriptions to Farm and Dairy approximate 20,000. The actual circulation of each issue, including copies of the paper sent to subscribers who are not strictly in arrears, and sample copies, varies from 20,000 to 25,000 copies. No subscriptions are accounted for less than the full subscription rates.
Sworn detailed statements of circulation of the paper, showing distribution by counties and provinces, will be mailed free on request.

OUR GUARANTEE.

We guarantee that every advertisement in this issue is reliable. We are able to do this because the advertising columns of Farm and Dairy are as carefully edited as the reading columns, and because to protect our readers, we turn away all unscrupulous advertisers. Should any advertiser herein deal dishonestly with you as one of our paid-in-advance subscribers, we will make good the amount of your loss, provided such transaction occurs within one month from date of this issue, that it is reported to us within a week of its occurrence, and that we find the facts to be as stated. It is a condition of this contract that in writing to advertisers you state: "I saw your advertisement in Farm and Dairy."

Regus shall not pay their trade at the expense of our subscribers, who are our friends. Through the our subscribers; but we shall not attempt to adjust trifling disputes between subscribers and honorable business men who advertise, nor pay the debts of honest bankrupts.

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"Read not to contradict and to contrive, nor to believe and take for granted, but weigh and consider."—Bacon.

The Pure Bred Sire

TWO splendid illustrations of the value of the pure-bred sire have come to our attention in the past month, one of them afforded by the dairy test at Guelph, the other by some experimental work conducted in the State of Iowa.

At Guelph, four of the six cows that stood highest in general standing in the three-day public tests were grades. In all cases these grade cows came from sections where good pure-bred sires were available. It is possible that the winning grade cow was a pure-bred whose papers have been neglected, but the others, who stood almost as high, were genuine grades with just one or two top crosses of Holstein blood. As a result of this infusion of strong producing blood, however, the grand-daughters of very ordinary cows competed successfully with the pick of the pure-bred producers of the country. Their merit was due altogether to the merit of their sires.

At the Iowa Experiment Station, a start was made with scrub cows. The first cross of pure blood resulted in increased production in the daughters of 84 per cent. for milk and 62 per cent. for fat, while in the second generation the increase amounted to 245 per cent. for milk and 168 per cent. for fat. The daughter of one scrub cow that gave 161 lbs. of fat produced herself a total of 251 lbs. of fat, while the grand-daughter produced 451 lbs. of fat. This increase can be attributed only to the sires.

We do not wish to be understood as arguing for the grade cow as against the pure-bred. Without the presence of pure-bred herds in the country, good grade herds would not be possible. The man who is fitted by nature to handle pure-bred cattle should have them. They are the source of all herd improvement, and successful breeders are the salt of the dairy industry. But for the average

FARM AND DAIRY

dairy farmer the safest and surest road to greater production is by way of the pure-bred sire and a grading up of the herd already on hand.

Chinese Labor

THE labor problem will bulk larger and larger in the public eye as the war goes on. The demand for cheaper labor is becoming insistent. Manufacturers, contractors, transportation companies, and even farmers, are now turning their eyes toward the Orient and asking why the great surplus of labor there cannot be utilized in our factories, mines and fields. This demand is usually equipped with a rider to the effect that of this imported oriental labor should be transported back to their own country immediately the war is over.

Such a solution of our labor difficulties should not be considered seriously until the whole problem has been given the most mature consideration. On its very face, the introduction of oriental labor looks dangerous. The United States once solved the difficult labor problem in the cotton fields of the south by importing negroes from Africa. She solved the labor problem, although because of it she has passed through a civil war which, up to August, 1914, was the bloodiest in all history. Even at present, the Asiatic problem is causing much heartburning on the Pacific coast, where Chinese and Japanese laborers are most numerous and come into strongest competition with white labor. We already have a racial problem in Canada. Would it be wise to add another problem of the kind, but with an Asiatic flavor?

A Real Danger

M. R. E. C. DEURRY has called attention to a very real danger which confronts the food producer in connection with the fixing of maximum prices on feed products. Maximum prices come as a result of the demands of city people who find their voice through the city press. The granting of their demands in one direction is an incentive to them to redouble their efforts to secure maximum prices on still other food commodities. It is safe to say that once maximum prices have been secured on all of the leading articles of food, the same influence will then be directed to securing reductions in the prices already established. Should there be a period of depression and unemployment after the war, this demand for cheaper food would grow in intensity and there is a very real danger that maximum prices might be reduced below the level of cost of production.

This reasoning is in line with all human experience. The more we get the more we want. Every surrender of the food controller and his advisors to the demands of the city public, far from satisfying the consumer, will merely cause him to continue his demands for still further favors. For this reason farmers should exert themselves to the utmost in opposing every infringement of their right to sell their goods on a free market. Failing this, we would be justified in demanding that price fixing be extended to goods of city manufacture and to the wages of labor.

Safeguarding the Show Herd

THE fair has long been recognized as a possible source of tubercular infection. Every cattle breeder who exhibits at fall and winter fairs runs a risk of his best animals becoming infected when on the show grounds with tuberculosis. In recent years a few fair boards in the United States have recognized the danger and have ruled that no cattle shall be shown at their fairs unless the exhibitor can guarantee that all his animals have successfully passed the tuberculin test.

December 20, 1917.

These Fair Boards are pioneers in a movement that will soon be general among fair exchibitors. Breeders themselves will soon be demanding the protection that such a ruling gives them. Already there are instances on record of exhibitors who keep their herds clean by using the tuberculin test regularly, finding that some of their best animals have reacted on the return from the show circuit. Others are wary of exhibiting their animals at public fairs because of the increasing demand of buyers that their whole herds be clean and because of the ever narrowing market for the tuberculin animal due to provincial and state regulations such as have been adopted in British Columbia and several states of the United States. We believe we are safe in predicting that it will not be many years before an 'open' fair will not be tolerated by exhibitors. Fair Boards will be wise to cooperate with breeders when the demand comes for them to "clean up."

Saskatchewan's Suggestion

IN Saskatchewan the people believe that land which is held vacant is a detriment to the community and country, and that this is especially true in times such as these when it is important that every possible acre shall be placed under cultivation. Three years ago the Province of Saskatchewan placed a tax of six and one quarter cents an acre on vacant land. In 1914 this produced a revenue of \$756,000, in 1915 \$719,000, and last year a revenue of \$659,000. The decline in the annual returns to the Government was due to more and more land being placed under cultivation and thus there was less idle land to tax.

Food Controller Hanna is anxious that the people of Canada shall increase production. If he could only realize it he could do more to accomplish this result by inducing the Government to remove the tariff taxes on agricultural implements and machinery and on the other articles farmers must buy and substitute instead a tax on vacant land. This would be a fundamental reform that would do much more to accomplish results than any step the Government has yet taken.

Why Rural Depopulation

IN a recent circular, issued by the Toronto Milk and Cream Producers' Association, the following paragraph may be taken as indicative of the farmers' attitude toward the economic problem of the day:

"For many months there has been a campaign urging farmers to increase production. If the returns from the farm were made more profitable so that the farmer should receive fair wages for himself and his family and a reasonable percentage on his investment there would be no such need to urge an increase in production, because in such case the farmer could afford to pay more and secure more and better labor by increasing wages and lessening the hours of labor. The reasons so many leave the farms may be summed up as follows: Long hours, hard work, and lower wages than are paid to labor in other employments."

It is refreshing to find the executive of such an extremely practical organization of farmers as the Toronto Milk and Cream Producers' Association, giving voice to sentiments such as these. Not so many years ago we can all remember when every ill of the farming industry was attributed to poor methods of farming and small production. Now we know that the trouble lies deeper and that the rural problem is not to be solved by installing bath tubs in farm homes, growing bigger crops, improving country roads or by any other of the score of palliatives that once found so many advocates. Rural depopulation would never have become a fact and the present plea for greater production would never have been necessary, had the farmer been given a square deal and a fair field along with the other industries of the land.

The Makers' Corner

Butter and Cheese Makers are invited to send contributions to this department, to discuss matters relating to cheese making, and to suggest subjects for discussion.

Western Butter in Competition

SOMETHING new is being undertaken by the dairy interests of Western Canada to further improve the high quality of butter, that already has been established in the provinces of Manitoba, Saskatchewan and Alberta. At the Manitoba Dairy convention to be held in Winnipeg, January 31st and February 1st, there will be held an inter-provincial butter competition among the creameries of the three provinces. Alberta and Saskatchewan will hold competitions at their dairy conventions earlier in the month, and three winning lots from these provinces will meet the three winning lots from the Manitoba competition, which will be judged at the beginning of the convention. Each creamery will have five samples of 14 pounds each, which have been made respectively in June, July, August, September and October, and shipped into cold storage. In the Manitoba competition there are 200 samples, and the other provinces will have fully that number. This is the first competition of this kind to be held in Manitoba or Saskatchewan. Alberta held a provincial competition at its last dairy convention. The inter-provincial competition is, however, the first that will be held in the Dominion. Through the grading of cream, better handling methods have been adopted on the farms of Western Canada, and a high average quality of cream is delivered to the creameries. Through the grading of butter the best methods of butter-making are adopted in practically every creamery in the West, including the pasteurization of the cream to ensure its keeping qualities. The result has been that these three provinces are now turning out a quality of butter second to none in the Dominion.

Cheese Business Handicapped

EDITOR, Farm and Dairy: I am taking up the outside on behalf of the patrons of cheese factories. According to my way of thinking, and in this I am backed by a good many others, it is high time that some change was made if the cheese factory is to remain with us. It may be already condemned to an early death through lack of timely aid at the hands of those to whom we should look for help.

Last spring, 1917, the farmer was asked to produce more. Some put forth every effort in order to do so, even at considerable expense. This increased the number of cows on the strength of obtaining help from the cities. In some cases they could not get help, in other cases the farmers would have been better off without what they got. Factory patrons got together and engaged their cheese maker for the season, paying in most cases a marked increase over the previous year. The cheese maker claimed he could not make a living on the old wages, with the high cost of material, and hired help necessary to operate a cheese factory. Everything looked rosy for a big year for cheese, when suddenly a government order put the ban on cheese-making by fixing the price without consulting the interests of the farmer; at the low price of 21 1/4 cents a pound. This sounded the death-knell on cheese-making. Some few farmers stood by the cheese maker, and took their medicine like men.

I do not wish to be considered un-

patriotic. There are many ways of showing patriotism, even if they are not brought to light. But I must say right here that unless some radical change is wrought before next season by the "patrons" that be, that there will be a number of idle cheese factories in Eastern Canada, the centre of the dairy industry. Farmers will certainly take to something easier and with more remuneration than supplying the cheese factory, and you cannot blame them, either. In localities where condenseries are established these will be patronized to a large extent.

While the government is busy watching the farmer, for fear he, above all others, should get away with too big a profit, it might be well to look into the methods of manufacturers, for instance, those with whom the farmer comes in contact, and from whom he has to buy to keep body and soul together, the clothes, boot and shoe men, the feed dealer, the machinery men. All these have raised their prices from 150 to 300 per cent. within the last three years. Do you think that the government were warranted or justified in putting such a paltry price on cheese, and letting everything else go as it likes? I do not believe in making fish of one and flesh of another.

It might be well for the Food Controller to look into the dealings of the middleman and retailer at Montreal, for instance, where cheese is being retailed to the consumer at 40 cents to 60 cents a pound for the finer grades. Then he could find out who is getting the long end in the cheese business—"Live and Let Live," Vars, Ont.

Shortage of Cheese and Butter-makers

H. H. Dean, Professor Dairy Husbandry, O. A. College.

THE importance of dairy products in connection with the present world shortage of food, cannot be over-estimated. Dairy farmers are being urged to produce to the limit, which is quite important, but we need to remember that dairy farmers, in most cases, prepare raw material in the form of milk and cream, which must be further changed or manufactured into concentrated food products like cheese, butter, and condensed or powder milk. Without this manufacturing process, the great dairy industry of Canada would be seriously handicapped—in fact would be almost crippled. In order to manufacture these food products, a factory properly equipped and skilled operators are necessary. The season of 1918 is likely to see a great shortage of cheese and butter makers, and something must be done to increase the available supply of trained persons, men or women, before the opening of next season.

To meet this shortage, the Dairy School, in connection with the O. A. College, Guelph, will admit those without factory experience to the Factory Dairy Course, which opens Jan. 2nd, 1918. Any person not fit for immediate Military Service will be allowed to take this course and those passing the examinations at the end of the twelve weeks' course are practically sure of a job at good wages for next season.

Some good friends of the dairy industry of Canada, who were wise enough to see the threatened menace to the business, have furnished cash scholarships to the value of \$125 to be given to successful students of the Dairy School Class, 1918. An extra effort must be made before the spring of next year, to secure a larger supply of competent butter and cheese makers, or matters will be in a serious condition for manufacturing milk products and the world will suffer accordingly.

When The Factory Closes

In a few weeks course of the Cheese and Butter Factories over Ontario and Quebec will be closing for the season. At that time hundreds of the patrons of these will desire to form new connections for the shipping of their milk to the creamery. The following list of firms are in a position to handle large quantities. We suggest that you patronize them.

MR. MILK PRODUCER

If "pigs is pigs" it don't necessarily follow that cows are just cows. A cow is the product of "care", plus feed and attention. A calf which gets its nourishment from sucking its comrade's ear will bring poverty, not pride to its owner. The milk-fed calf is the kind from which 10,000 lbs. of milk and many other blessings will flow later on. "Ship the cream and feed the milk" is the up-to-date slogan of the successful dairyman.

Let us look after the cream end of it for you. We pay highest prices for good cream because we have a market for high-grade butter and cream.

Write us at 319 Sparks Street, Ottawa, Ont.

THE VALLEY CREAMERY OF OTTAWA, L'mited

The Guelph Creamery

Needs More Churning Cream

Write for a five or an eight gallon can. Full statement returned with can each delivery. Cheques payable at par, issued twice per month.

This is the Creamery for Satisfaction. Guelph Ont.

CREAM WANTED

We are in the market for Cream, both for churning and table use. Our guarantee assures you of:—

HIGHEST PRICES, ACCURATE RECORDS, PROMPT RETURNS AND SATISFACTION.

ALL EXPRESS CHARGES ARE PAID AND CANS SUPPLIED.

Toronto Creamery Co., Ltd.

9 Church St., Toronto

50c. Cash Given for This Ad.

Worth \$5.00 Special at \$1.50 TODAY ONLY \$1.00

PATENT PENDING The Duplex Automatic hair cutter Price to introduce only \$1.00

NORTH \$5.00 COSTS \$1.00

If you can comb your hair you can cut it. The slanting teeth prevent pulling.

Sectional view showing interior of hair cutter.

The Duplex Automatic Hair Cutter has four times the cutting power of any hair cutting machine ever placed on the market. It is four times the size, and will do the work four times as well and four times as fast as any other machine. We have been buying filling wholesale orders that we haven't been able to offer this wonderful tool direct to the public before. We now have a large supply on hand, and for a very short time we offer the Duplex direct by mail at wholesale price. Some people will wait until it is too late, and they will have to pay the full price. Get yours now at the wholesale price of \$1.00.

THE SLANTING TEETH PREVENT PULLING

This special patented comb with the slanting teeth and the handle to fit the hand is the only one of its kind. It costs four times as much to produce as the ordinary comb, but it is worth it. It directs the hairs on to the cutting blades at exactly the correct angle to get a perfectly smooth and even hair cut. You can't go wrong with a Duplex. It won't let you down.

The Duplex is made of the very best quality steel and silver plate. The blades are double edged, oil honed and double tested. You can comb your hair any style you wish and the Duplex will cut it smoothly and evenly. It cuts while you comb. Cuts Figure out how much you can save. We allow you 50c cash for this ad. Cut it out and send it to us with only \$1.00 and we will send you the Duplex complete attached to the comb. Five minutes after you receive the Duplex you can have your hair cut better than it was ever cut before. Remember, none genuine without the slanting teeth.

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TRUE greatness is to fulfill faithfully the duties of your station.
—F. B. Meyer.

The Heart of the Desert

(Continued from last week.)

"I've waited for the others to get busy," he said, "but they act foolish. Half the trouble with you is mental. You need a boss. Now, you don't eat enough, in spite of the eggs and beef and fruit that that dear Mrs. Jack sets before you. See how your hands shake this minute!"

Rhoda could think of no reply sufficiently crushing for this forward young Indian. While she was turning several over in her mind, Kut-le went into the house and returned with a glass of milk.

"I wish you'd drink this," he said. "Rhoda's brows still were arched haughtily.

"No, thank you," she said frigidly; "I don't wish you to undertake the care of my health."

Kut-le made no reply but held the glass steadily before her. Involuntarily, Rhoda looked up. The young Indian was watching her with eyes so clear, so tender, with that strange look of tragedy belying their youth, with that something so compelling in their quiet dew, that once more her tired pulses quickened. Rhoda looked from Kut-le out to the twisting sand-whirls, then she took the glass of milk and drank it. She would not have done this for any of the others and both she and Kut-le knew it. Thereafter, he deliberately set himself to watching her and it seemed as if he must exhaust his ingenuity devising means for her comfort. Slowly Rhoda acquired a definite interest in the young Indian.

"Are you really civilized, Kut-le?" she asked one afternoon when the young man had brought a little white desert owl to her hammock for her inspection.

Kut-le tossed the damp hair from his forehead and looked at the sweet wistful face against the crimson pillows. For a moment Rhoda felt as if his young strength enveloped her like the desert sun.

"Why?" he asked at last. "You said the other day that I was too much civilized."

"I know, but—" Rhoda hesitated for words, "I'm too much civilized myself to understand, but sometimes there's a look in your eyes that something, I suppose it's a forgotten instinct, tells me means that you are wild to let all this go—" she waved a thin hand toward cultivated fields and corrals—"and take to the open desert."

Kut-le said nothing for a moment, though his face lighted with joy at her understanding. Then he turned toward the desert and Rhoda saw the look of joy change to one so full of unutterable longing that her heart was stirred to sudden pity. However, an instant later, he turned to her with the old impassive expression.

"Right beneath my skin," he said, "is the Apache. Tell me, Miss Rhoda, what's the use of it all?"

"Use?" asked Rhoda, staring at the blue sky above the peach-trees. "I am a fit person to ask what is the use

of anything? Of course, civilization is the only thing that lives. I can't get your point of view at all."

"Huh!" sniffed Kut-le. "It's too bad Indians don't write books! If my people had been putting their internal mechanism on paper for a thousand years, you'd have no more trouble getting my point of view than I do yours."

Rhoda's face as she eyed the stern young profile was very sympathetic. Kut-le, turning to her, surprised upon her face that rare, tender smile for which all who knew her watched. His face flushed and his fine hands clasped and unclasped.

"Tell me about it, Kut-le, if you can." "I can't tell you. The desert would show you its own power if you would give it a chance. No one can describe the call to you. I suppose if I answered it and went back, you would call it regression?"

"What would you call it?" asked Rhoda.

"I don't know. It would depend on my mood. I only know that the ache

living as a white, I may live. Up till recently I have worked blindly and hopelessly, but now I see light."

"Do you?" asked Rhoda with interest. "What have you found?"

"It isn't mine yet," Kut-le looked at the girl exultantly and there was a triumphant note in his voice. "But it shall be mine! I will make it mine! And it is worth the sacrifice of my race."

A vague look of surprise crossed Rhoda's face but she spoke calmly: "To sacrifice one's race is a serious thing. I can't think of anything that would make that worth while. Here comes Mr. DeWitt. It must be dinner time. John, come up and see a little desert owl at close range. Kut-le has all the desert at his beck and call!"

Kut-le persuaded Rhoda to change the morning ride, which seemed only to exhaust her, to the shortest of evening strolls. Nearly always DeWitt accompanied them. Sometimes they went alone, though John was never very far distant.

One moonlit night Kut-le and Rhoda stood alone at the coral bars. The whole world was radiant silver moonlight on the desert, on the undulating peaches, filtering through the peach-trees and shimmering on Rhoda's drooping head as she leaned against the bars in the weary attitude habitual to her. Kut-le stood before her, erect and strong in his white flannels. His handsome head was thrown back a little, as was his custom when speaking earnestly. His arms were folded across his deep chest and he stood so still that Rhoda could see his arms rise and fall with his breath.

"It really is great work!" he was saying eagerly. "It seems to me that a civil engineer has tremendous opportunities to do really big things. Some of Kipling's stories of them are bully."

"Aren't they?" answered Rhoda sympathetically.

"There is a big thing in my favor too," she said. "The whites make no discrimination against an Indian in the professions. In fact every one gives him a boost in passing."

"Why shouldn't they? You have as good a brain and are as attractive as any man of my acquaintance!"

The young man drew a quick breath.

"Do you really mean that?"

"Of course! Why shouldn't I? Isn't the moonlight uncanny on the desert?"

But Kut-le did not hastily attempt to change the subject.

"There are unlimited opportunities for me to make good, now that the government is putting up so many dams. I believe that I can go to the top with any man, don't you, Miss Rhoda?"

"I do, indeed!" replied Rhoda sincerely.

"Well, then, Miss Rhoda, will you marry me?"

Rhoda raised her head in speechless amazement. "You are not surprised!" he exclaimed a little fiercely. "You must have seen how fit has been with me ever since you came. And you have been so—so bully to me!"

Rhoda looked helplessly into the young man's face. She was so fragile

that she seemed but an evanescent part of the moonlight.

"But," she said slowly, "you must know that this is impossible. I couldn't think of marrying you, Kut-le!"

There was a moment's silence. An owl called from the desert. The night wind swept from the fragrant orchard. When he spoke again, Kut-le's voice was husky.

"Is it because I am an Indian?"

"Yes," answered Rhoda, "partly. But I don't love you, anyhow."

"But," eagerly, "if you did love me, would my being an Indian make any



Rising Dairymen.

The two boys here shown are the sons of Sir G. P. Moore, President, Co. Ont. Unfortunately we are unable to have a look at the face of one little chap, but it is easily seen that they are interested in their father's Ayrahims. The call they are holding is a son of Mr. Mode's famous champion cow, Bileen.

—Photo by an editor of Farm & Dairy.

difference? Isn't my blood pure? Isn't it old?"

Rhoda stood still. The pain in Kut-le's voice was piercing through to the shadow world in which she lived. Her voice was troubled.

"But I don't love you, so what's the use of considering the rest? If I ever marry any one it will be John DeWitt!"

"But couldn't you," insisted the tragically deep voice, "couldn't you ever love me?"

Rhoda answered wearily. One could not, it seemed, even die in peace!

"I can't think of love or marriage any more. I am a dying woman. Let me go into the mist, Kut-le, without a pang for our friendship, with just the pleasant memory of your goodness to me. Surely you cannot love me as I am!"

"I love you for the wonderful possibilities I see in you. I love you in spite of your illness. I will make you well before I marry you. The Indian will have strength to make you well. And I will cherish you as white men cherish their wives."

Rhoda raised her hand commandingly and in her voice was that boundless vanity of the white, which is as old as the race.

"No! No! Don't speak of this again! You are an Indian but one removed from savagery. I am a white! I couldn't think of marrying you!" Then her tender heart faltered and her voice trembled. "But still I am your friend, Kut-le. Truly I am your friend."

The Indian was silent so long that Rhoda was a little frightened. Then he spoke slowly.

"Yes, you are white and I am red. But before all that, you are a woman of exquisite possibilities and I am a man who by all of nature's laws would make a fitting mate for you. You can love me, when you are well, as you could love no other man. And I—dear one, I love you passionately! I love you tenderly! I love you enough to give up my race for you.

(Continued on page 17.)



A Group of Busy Red Cross Workers.

The illustration shows a number of the members of the Women's Institute at Linden Valley, Victoria Co., Ont. This is one of the many Institute branches which are doing splendid Red Cross work. The snapshot was sent to us by "Aunt Beth," one of our Home Club members.

is there." His eyes grew somber and beads of sweat appeared on his forehead. "The ache to be there—free in the desert! To feel the hot sun in my face as I work the trail! To sleep with the naked stars in my face! To be— Oh, I can't make you understand, and I'd rather you understood than any one in the world! You could understand, if only you were desert-taught. When you are well and strong—"

"But why don't you go back?" interrupted Rhoda. "Because," replied Kut-le slowly, "the Indian is dying. I hope that by

I can go to the top with any man, don't you, Miss Rhoda?"

"I do, indeed!" replied Rhoda sincerely.

"Well, then, Miss Rhoda, will you marry me?"

Rhoda raised her head in speechless amazement. "You are not surprised!" he exclaimed a little fiercely. "You must have seen how fit has been with me ever since you came. And you have been so—so bully to me!"

Rhoda looked helplessly into the young man's face. She was so fragile

THE UPWARD LOOK

God's Handwork

BEHOLD, God is great and we know Him not, neither can the number of His years be searched out.—Job. 36: 26.

An afternoon was spent lately in studying God's marks on His earth. We were taken down to a narrow ledge of land; on one side the river; on the other a great rocky cliff. For a long distance, and as far up as one could see, the rock was set in wonderfully regular, even layers, one above the other, each one representing a different epoch in our world's creation. Though one could estimate faintly the number of years by millions which it represented, yet all knew it was but an approximation. As one looked one could not but have an overmastering feeling of awe at the thought of God's power and the regularity of His laws. Those even seams and regular layers were His work.

What was really went to see was a fault in the rock. At one spot all regularity was broken. The layers were twisted and distorted, some running almost perpendicularly. Ages ago an earthquake must have taken place. That was also God's work. So both were His, those twisted, distorted seams, as well as the regular, uniform ones.

So are our lives His work. It is His when life is a glad song of happiness, just the same as when that song is changed into a minor one of deep tragedy. When our plans are going pleasantly and successfully they are His; and when to us they seem to be shattered and broken, they are His also.—I. H. N.

Missions in the Sunday School

In the subject of missions receiving the attention in our rural Sunday Schools which its importance warrants in all probability many of our Sunday School workers are willing to admit that missions are not being taught as widely as they should be; even in many of our city churches where conditions are probably more favorable than in the country, missions are oftentimes neglected. I dropped into one of the sessions of the Provincial Sunday School convention which was held in Peterborough recently and found Mr. H. C. Priest, of Toronto, who is an enthusiastic believer in missions in the Sunday School, speaking on this subject. It occurred to me that some of his ideas might be helpful to our folks who are interested in Sunday School work.

The question of missions in many of our Sunday schools is being tackled on to our sessions, instead of being an important part of them. Mr. Priest was reminded of a building in the course of erection. Provision has not been made for some particular feature and it is finally tackled on somewhat after the style of a loan-to. The same might be said of missions in many cases. They have not been incorporated in our Sunday School structure, while in the true order of things, missions should be at the very heart of our Sunday School's life.

In order to accomplish this, we as Sunday School workers must first of all get a new recognition of the Sunday School as a missionary agency. "Our opportunity as Sunday School workers is simply enormous" said Mr. Priest. "If we have the opportunity of sending forth into the next generation a multitude of young people who will be seized with a great missionary passion, then that opportunity im-

poses upon us the obligation to do so."

How are we going to incorporate the study of missions into our Sunday School sessions? If we can devote five minutes each Sunday to missions, it will carry much more weight than by devoting one whole session to missions once a year. Devoting one Sunday every quarter to missions, is also a good plan. Then again, why can the teachers not aim to use missionary illustrations in connection with their lessons on Sunday and in this way keep the subject of missions ever before the minds of the children. If it is planned to teach missions from the platform sometime during the session, it is essential to have a variety of ways in which to present the subject. Have special prayer for some missionary about whom the children have been told or about certain conditions in the foreign field. The subject might well be dealt with in some way every Sunday without labelling it as missions, so that the children may not become tired of hearing "missions." The ideal would be to have the Sunday school atmosphere so filled with missionary spirit that pupils would not go through the school without being enthused with the cause of missions. Every Sunday School should have a special missionary superintendent or

THE CHRISTMAS SEASON.

Charles Dickens.

IHAVE always thought of Christmas time, when it has come round again from the veneration due to its sacred name and origin, if anything belonging to it can be apart from that—as a good time; a kind, forgiving, charitable, pleasant time; the only time I know of, in the long calendar of the year, when men and women seem by one consent to open their shut-up hearts freely and to think of people below them as if they really were fellow-passengers to the grave and not another race of creatures bound on other journeys. And therefore, I believe that it has done me good and will do me good; and I say, God bless it!—From "A Christmas Carol."

secretary, who will take missions as his special line of Sunday School work. There is a danger to guard against when we have such a superintendent or secretary and that is, that we must not leave all the responsibility on him. The idea is rather to have him as a leader, but not to carry the whole burden.

One missionary superintendent in a Sunday School started out with the idea of having 10 to 15 minutes devoted to missions once a month. Different countries were taken and about eight were covered during the season. The idea was that as far as possible every exercise in connection with those programmes would be taken up by a member of the school. The programmes were marked by variety and aroused interest. For instance, one Sunday two boys and one girl were dressed in costume to represent China. Three little Canadians were also on the platform and they went through a short dialogue. One of the Canadians asked a Chinese boy how it was he did not now wear a pig tail and the Chinese boy explained the reason. The Chinese girl was asked why she was lame and this brought out the question of foot binding. After this dialogue, one of the older girls told something of missionary work in that country.—R. M.

For Cleaning Milk Pans Old Dutch

quickly dislodges milk clots, grease, and grime in half the time. It lengthens the life and wearing quality of your utensils.



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A Review of the Work Done*

Food Controller Hanna. I T is entirely beyond me to cover all the points which might be taken up. I will run over in brief outline just what it is that we have done. It's a fairly long list; there are things which have certainly come to the notice of all of you, but there are certain other things which may not have come to all and some not to the notice of any.

The first general proposition that came up on assuming the duty of Food Controller was the fixing of the prices. Man after man and woman after woman, either man and woman or department and said "fix the prices." We got busy on the question of fixing prices with regard to specific problems that were before us. When we first took up this work there was a general complaint over the Dominion that we were paying altogether too much for bread and should therefore fix the price of flour. Until such time as the price of wheat was fixed it was impossible for us to fix the price of flour. After consultation with those who had been considered would familiarize us with the problem, which meant advice from experts of various kinds, we passed an order that the millers of Canada should not hereafter make more than 25 cts. on any barrel of flour that is, that no barrel of flour should be sold at more than 25 cts. of the actual cost of that barrel to the miller. Arrangements further provide that no profit whatever shall be made on the by-products from that flour, but that it shall go back to those who require it for foodstuffs. This arrangement is an improvement over the United States plan, and where there can be made a profit of 50 cts. on by-products. Paying \$2.21 for wheat means that a loaf can be produced that is somewhere in the neighborhood of the price that is being paid in Canada today. The United States Food Administration says that if they can arrange to sell bread over there at the price now being paid in Canada they will be doing great things.

In connection with the milk problem, this had phases concerning which the people of this country know nothing. Before the war the milk went to the cheese factories, butter factories or to supply our cities. Now, however, condensed milk and powdered milk is being put up in large quantities, as this is the only way in which it can be sent overseas. With the submarine menace and the food animals in the countries of Europe growing lean and less, the milk supply was shortened up. The idea then was to get as much milk as possible on this side of the Atlantic. French and Italian buyers came across and offered to pay for milk. This reckless and ruinous way of bargaining presented us with problems not of our making, but problems with which we had to deal. We went to Washington to consult with Food Controller Hoover, with the result that we put those allied buyers practically out of business so far as the excess supply was concerned, so that now you are paying \$2.50 for your milk instead of more.

What is the sugar situation? The sugar situation as presented down to last August was not acute and a shortage was not threatened until summer was well on. Great Britain relies on Java for a large supply of sugar. Early last summer the British government placed an order with Java for 100,000 tons of sugar. This meant 200,000,000 lbs. of sugar—upwards of five lbs. for every

man, woman and child in the United Kingdom. Every pound of this left Java, but not a pound reached England on account of submarines. This meant that the supply which had been counted on for the United States and Canada had to be drawn on for Great Britain and other allies. While there is a shortage of sugar, there is no valid excuse why any man should charge more for sugar than there were no shortages, because we have made arrangements with refiners that there should not be an increase. There will be a shortage until the new crop comes in, probably in early January.

We will have to speed up in the fields of production so as to contribute to the support of the armies at the front and the men and women behind those armies. The thing that meets the needs more than any other at the front is bacon. The United States supply of hogs during the past year has been depleted 10 per cent below normal. They have started out to overtake that 10 per cent within the next 12 months, and also 15 per cent of Canada's production, which is 25 per cent of the normal production of the United States. We have a hog production campaign on here. The women of the Institutes can do much in helping this campaign, and am sure they will go back determined to put in a share as possible they will do their share.

You have heard cooperation until you are tired, but we still want your cooperation—even at times when our ideas and yours do not entirely agree.

COOK'S CORNER

The war menu which comes from the Food Controller's Office, recipes are given for making various war dishes, and the following are some which we have received:

Baked Heart of Beef.

Wash a beef heart, remove veins, arteries and clotted blood. Stuff with a dressing made as for fowl. Sprinkle with salt and pepper. Put in a covered baker with two cups boiling water and bake slowly two hours, basting every 15 minutes.

Fish Chewer.

Two cups potatoes (sliced), one cup onion (sliced), one cup fish. Cook potatoes, onion and fish separately. Combine, season and reheat with white sauce.

Oatcakes With Date Filling.

Three cups flour, three cups oatmeal, one cup beef dripping, one cup sugar, one cup sweet milk, one teaspoon salt, one level teaspoon soda, two level teaspoons cream of tartar. Roll thin and cook.

Date filling: One pound dates, one-half cup sugar, juice of a lemon.

Bran Gems.

One and one-half cups flour, three-quarters of a cup bran, one cup sour milk, one-third cup molasses, three-quarters of a teaspoon soda, one teaspoon salt, two tablespoons melted butter.

Brown Bread.

One cup rye meal, one cup granulated cornmeal flour, one and one-half teaspoons soda, one teaspoon salt, one cup molasses or corn syrup, one and three-quarters cups sweet milk. Cover closely and steam.

War Cake.

Four tablespoons dripping; one-half cup sugar, one-half cup milk, one cup flour, one-half cup Graham flour,

two and one-half teaspoons baking powder, one teaspoon cinnamon, one teaspoon cloves, one tablespoon molasses, one egg. Mix sugar, drippings, beaten egg and molasses. Add to the flour the baking powder and spice. Add the milk and flour alternately to the first mixture. Bake 30 minutes in a shallow pan.

Realize Purpose in Life

"Aunt Fanny," Peterboro Co., Ont. I HAVE read the article by our household editor on "Mending Bags and Carpet Rugs," which appeared in a recent issue, and his suggestions are requested; it occurred to me that I might devote some of my "spare time" in the evenings to jotting down a few of my ideas.

I am heartily in accord with the ideas voiced in the article in regard to spending our evenings in resting and recreation, rather than laying out more work for ourselves after tea which will be a waste of time. I have been troubled with the old mountaineer, who said: "There's a whole day to-morrow that ain't tached yet," and what is not done one day can wait till the next. There is an environment in which life creation question also. People who take the evening off for rest and recreation, come to their tasks next day refreshed and full of enthusiasm, and are able to do more work in a reasonable number of hours than those who plod along wearily after the tea hour.

Here is a mistake which many of us make, at least it seems a mistake to me. It is to sit down and spend our evening in the kitchen after we have resolved to take it easy. We see enough through the kitchen window the day, and if we spend the evening there, unfinished tasks, if there are any, will be more apt to loom up and claim our attention, thus spelling to a certain extent a restless period of time. If on the other hand we go into the living room, shut the door on the kitchen and all the duties which await us on the morrow, we will find it restful. We will be in an environment which will cause us to think of higher things and to realize that life is for the purpose of soul growth as well as for physical living, and the work which it entails. There would be time to talk over current events with "hubby," and to help him plan ways and means of making the farm pay. The children too will enjoy having mother spend a play hour with them when they retire. It is my opinion that the happiness of the children in the home depends very largely on the cheerfulness of the mother.

By spending many evenings together in a comfortable living room, the family will really have a chance to become acquainted, there will be an opportunity of enjoying music together, reading, etc. All of all these will lead to more interest in outside social life and recreation which is a desirable adjunct to life.

Candy Without Sugar

SHUT down on candy eating" is the advice we frequently hear nowadays on account of the scarcity of sugar. There are times, however, when we crave a small quantity of candy at least. The economic division of the Department of Agriculture of the University of Minnesota, has solved this problem to some extent by suggesting that corn syrup be used in making taffy, instead of sugar.

Their recipe is as follows: one teaspoon two cups corn syrup, one teaspoon grated or scraped lemon-rind, three tablespoons lemon juice, one teaspoon vanilla. Boil syrup to the hard-rack stage, as for taffy. Remove from fire and add in rapid motion rind, lemon juice and vanilla. Pour out on well buttered plates, and when cool enough to handle, pull until light and break into pieces.

Do We Buy Judiciously or Otherwise?

TWO girls were one day found busy with timetables and maps, who when asked what they were doing said, "Planning a trip to Europe."

We might apply the above to our own conditions in connection with our supply of kitchen utensils. Some of our dishes are not of as convenient shape or size as we would like, nor are we as fully equipped as we might be. While none of us can afford to throw away our present outfit and buy a new one, we can all afford to plan how we shall add one article at a time as the opportunity presents itself. In fact, we cannot afford not to plan. If we drift along until confronted with some immediate need, the chances are we will take a hurried trip to town and buy something which seems to fill our present need, but if we had carefully planned beforehand what we wanted, in probability our choice would have been different.

Successful buying depends on knowing whether the work that a given utensil is best fitted for is the work that we want done, and on choosing the utensil that will do that work satisfactorily for the longest time. We too often forget that good buying is a duty we owe others as well as ourselves, since by killing the demand for inferior things we will force unscrupulous manufacturers to raise their standards.

In buying new utensils, the following are points which might well claim our attention: Is the utensil durable? Is it convenient to handle? A utensil with the handle, or handle, in just the right place, even though it may be fairly heavy, is oftentimes easier to handle than a lighter article inconveniently balanced. Shall we choose a utensil with a ball, or one with a handle? This depends on how we intend using the article, on its size and on our available stove and storage space. For a utensil of moderate size, especially fitted with one handle, convenient little handles are intended for use on top of the stove only, a fairly long handle is best. It is convenient at times to have a utensil that may be transferred from the top of the stove to the oven. Those with very short handles or with two handles of the sugar bowl type are then convenient. The half-handles metal ball, reaching from one side of the utensil to the other is best regarded as a device for use in themselves as to prevent much stove and storage space and needing two hands to lift them. In choosing handles, another point to bear in mind is the selection of a type that will not get uncomfortably hot.

Is the lin of the utensil in the right place. Is another point to be observed. Most utensils are designed to be held in the right hand while pouring one liquid into another. This necessitates either stirring with the left hand, which is an awkward and difficult operation, or alternately pouring and stirring. We should watch for a type with a lin on either side or with the lin designed so that we can hold the saucepan or whatever it may be in the left hand and stir with the right.

Business of cleaning and safeness as a food receptacle. As a result of other notes. We avoid the use of an iron utensil in cooking and preserving, because we know that iron and fruit acids together form a harmful compound in an enclosed bottle become poisonous. It is the iron foundation and the acid can combine,

It is best not to use it for cooking acid foods. While the danger to health may be slight, there is a danger of food spoiling more easily where the enamel is chipped off, as well as the chance that pieces of enamel may find their way into the food.

The Heart of the Desert

(Continued from page 14.)

I am an Indian, Rhoda, but first of all I am a man. Rhoda, will you marry me?" A thrill, poignant, heart-stirring, beat through Rhoda's veins. For one unspoken moment there swept through her spirit a vision of strength, of beauty, of gladness, too wild and sweet for words. Then came the old sense of race distaste and she looked steadily into the young man's face.

Kut-le said nothing more. He stood staring at the fir desert, his fine face somber and with a look of determination in the contracted eyes and fringed lips that made Rhoda shiver, even while her heart throbbed with pity. Tall, slender, inscrutable, as alien to her as the desert wind or the moon-drenched desert haze, she turned away and left him standing there alone.

She made her slow way to the ranch-house. Kut-le did not follow.

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moccasins and a magnificently decorated loin-cloth. The man looked down at her with the smile of good fellowship that she knew so well. It was Kut-le, standing like a young bronze god against the faint pink of the after-glow. "Hello!" he said nonchalantly. "I've been watching for you." "What do you want?" gasped Rhoda. "What do you mean by coming before me in—"

"You mean when I'm dressed as a chief on the warpath? Well, you said you'd be keen about me this way; here I am. I tried all the white

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Make Somebody Glad. ON the night before Christmas your heart will be sad. If you know that you've failed to make somebody glad with a gift, or a letter, or a token of love, And you'll think, though too late, what you'd give just to prove that you care as you'd have them believe that you care; And you'll gaze in the fire with a long, empty stare, And resolve that next Christmas you will try to forget. The hearts that are bowed and the eyes that are wet. Next Christmas! Ah, yes, if it found us the same, The vow you make now might be more than a name; But maybe the eyes that now sparkle so bright May be closed by next Yuletide forever in night So, do it to-day—the deed that you feel In your heart to be best for humanity's weal; Help the weary to-day with the loads that they bear, For, maybe, next year they will need your care.—Selected.

Rhoda went to bed at once. Yet she could not sleep, for through the silence Kut-le's deep voice beat on her ears.

"I love you passionately! I love you tenderly! I am an Indian, but first of all I am a man!" The next day, and for three or four days following, Kut-le was missing. The Newmans were worried. The ditch needed to be dug, and never before had Kut-le been known to neglect his work. Once a year he went on a long hunt with chosen friends of his tribe, but never until his work was done.

Rhoda confided in no one regarding her last interview with the Indian. She missed Kut-le, but DeWitt was frankly relieved. For the first time since Porter's warning he relaxed his vigilance. On the fifth evening after Kut-le's disappearance, Jack and DeWitt rode over to a neighboring ranch. Katherine was lazy with a headache, so Rhoda took her evening stroll alone. For once she left the orchard and wandered out into the open desert, moved by an uneasy desire to let the full horror of the desert mystery sweep over her.

How long she sat on a rock, gazing into infinity, she did not know. It seemed to her that her whole shivering, protesting body was being absorbed into the strange radiance of the afterglow. At last she rose. As she did so, a tall figure loomed silently before her. Rhoda was so startled to scream. The figure was that of an Indian, naked save for high

Methods I knew to win you and fall in. Now the only thing left is the Indian method."

Rhoda moved uneasily. "Kut-le went on: "As a white man I can no longer pester you. As an Indian I can steal you and marry you."

Rhoda struggled to make him and his words seem real to her. "You aren't going to be so absurd as to try and steal me, I hope!" she tried to laugh.

"That's just what I'm going to do!" answered Kut-le. "If I use Apache methods, no white on earth can catch me."

Rhoda gasped as the Indian's evident sincerity sank in on her. "That's just what I'm going to do!" she pleaded, fighting for time. "You can't want to marry me by force! Don't you know that I shall grow to loathe you?"

"No! No!" answered the Indian earnestly. "Not after I've shown you life and have seen life."

"Nonsense!" cried Rhoda. "Don't you realize that the whole county will be after you by morning?"

Kut-le laughed, deliberately walked up to the girl and lifted her in his arms as he had on the morning of the first meeting. Rhoda gave one scream and struggled frantically. He slid a hand over her lips and tightened his hold. For a moment Rhoda lay motionless in abject fear, then, with a muffled cry of utter helplessness, she uttered a cry that would have driven a white man mad with pity, she slipped into unconsciousness. Kut-le walked

Toronto Fat Stock Show

THE Eighth Annual Fat Stock Show, held at the Union Stock Yards, Toronto, brought out a greater number of entries than last year, but the average quality was not quite so good. Attendance was greater than ever before and it would seem that if the fair is to be continued better accommodations must be provided for those desiring to watch the judging and inspect the exhibits. The grand championship beef animal was "Black George," owned by Jas. Leask and Son, that had won the sweepstakes at Guelph. This steer sold for \$1 a pound at the auction sale on Saturday. This is a record price, the champion last year selling for 50 cents a pound and the previous year for 46 cents. Numerous of the prize winning steers sold at from 20 cents to 30 cents. Lambs sold as high as 26 cents a pound.

Jas. Leask and Sons, Searrove, carried off a number of prizes, besides the grand championship. J. D. Ferguson and Son, of St. Thomas, and John Brown and Sons, of Galt, were also well represented among the winners.

Investigating the situation, stated that there is considerable good seed in the Southern States.

Many varieties of potatoes seem to be "running out," whereas the real trouble is that they are infested with diseases. Prof. J. E. Howitt of the O.A.C., mentioned a case in which a diseased plot of potatoes gave 25 bushels to the acre, while a disease free plot, under the same conditions, gave 297 bushels. Leaf roll, mosaic and curly dwarf are the three diseases which have developed in the last few years and which are working havoc with the potato crop.

Eradicating Tuberculosis

A BRIEF statement of the excellent results that are being accomplished in British Columbia, in the matter of eradicating tuberculosis from the herds of the province, was given to an editor of Farm and Dairy last August, while in Victoria, B.C., by Mr. A. Knight, V.S., an official of the Department of Agriculture. Four years ago it was found that 16 per cent. of the herds in south-

ern British Columbia, including Vancouver Island, were affected by tuberculosis. To-day the percentage is estimated at 3 per cent. The Government when it decided to eradicate this disease, appointed inspectors, and sent them from farm to farm. Five men were engaged besides Mr. Knight. Dairy herds only were visited, largely because it was from these herds that milk was being produced. Animals found to be affected had to be slaughtered. In such cases an allowance ranging as high as \$10, was made in the case of grade animals, and as high as \$200 for purebreds. At first many herds were found to be infected. In one instance in a herd of 15, all had to be disposed of. In another case 53 out of 80 purebreds were slaughtered.

As high as 1,000 animals were slaughtered in one year. Owing to the decreased percentage of infection, not nearly that number are being slaughtered to-day.

The breeders of British Columbia are determined not to let this disease get the best of their herds, and are emphatic in saying that Ontario breeders, if they desire to sell stock

in the West, must take steps to see that their live stock is free from this disease. All stock imported into the province has to be tested.

Cold Weather Hints for Autoists

IF a water-cooled engine is not carefully guarded in cold weather, and the water is allowed to freeze, pipes or radiators will break or a water jacket will crack. To prevent such damage, the safest plan is to drain the water from all parts of the system when the car is left for the night or for a long time during the day, according to the agricultural engineering department of the State University. The engine may then be allowed to run a few minutes to make sure that all the water has been removed.

If the car is used a great deal in cold weather, it may be advisable to use a non-freezing solution. A mixture containing 20 per cent. of denatured alcohol will freeze at 10 degrees above zero; a 30 per cent. solution will freeze at five below zero; 40 per cent. at 20 below; and 80 per cent. at 35 below.

To Investigate Serum Treatment

THE Canadian Swine Breeders' Association has appointed a committee of three to investigate conditions in the United States where immunization against cholera by the double serum treatment is practised. The personnel of the committee commands respect. They are J. P. Brethour, Burford; Prof. G. E. Day, O.A.C. and R. W. Wade, secretary of the association.

This committee will investigate the simultaneous treatment, which permanently immunizes hogs against cholera, with a view to proving that it treated hogs does not transmit the disease. If their reports are favorable to the treatment an effort will be made to modify the regulations prohibiting its use in Canada.

Seed Supply Short

GOOD seed in certain lines will be extremely scarce in Canada next year. This fact was emphasized again and again, at the Seed Grower's meeting held in Guelph during the Winter Fair. Next year Canada will produce most of the root seed required for the 1919 crop, but the seed for the 1918 crop will be scarce and farmers who buy early will get it at a low price. As high as one dollar a pound for mannel seed and \$1.75 for turnip seed were figures mentioned at Guelph by Mr. A. McMeans, who has been going into the matter for the Dominion government.

Dr. C. A. Zavitz emphasized the importance of keeping the very best of the grain crop of 1917 for seeding purposes next spring. Fanning mills, he said, should be used extensively. For general cultivation in Ontario, the following varieties were recommended: Marquis spring wheat, O.A.C. No. 75 oats, and O.A.C. No. 21 barley.

Dr. Zavitz predicted further that good seed beans would be scarce next spring. Not only is the Ontario supply short, but weather conditions were not more favorable in the seed centres of the United States. He suggested that growers of seed beans forward samples to the official seed laboratory at Ottawa for germination tests, which information will be forwarded free of cost.

P. L. Fancher, corn specialist, sized up the seed corn situation as the worst in 50 years. Mr. Fancher suggested that the ensilage growers of Ontario rely on the United States for their supply of seed corn next spring, that they buy it early and test the seed. Mr. J. O. Duke, who has been

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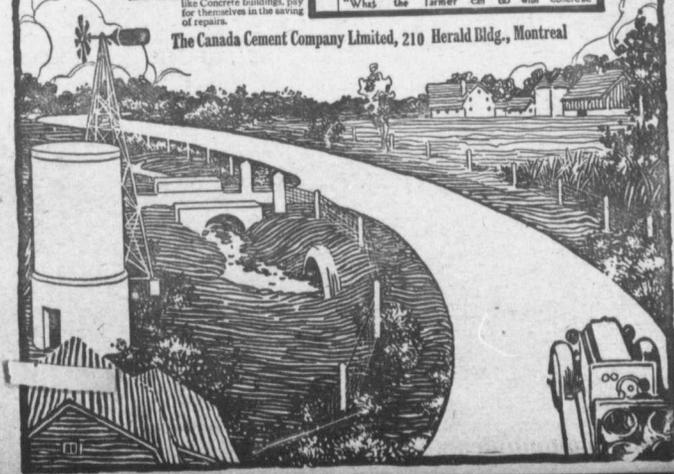
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FARM CHATS

Up Against It

H. Percy Blanchard, Hants Co., N.S.

THE fall of 1916, as you will remember, was very dry. The ground we planned for roots and oats, about an acre was plowed shortly after haying. With the drying, and tended to very heavy weeds, and other things intervening, the rest had to wait the plow until later in the season.

The result last spring was that the first dale would work up like ashes, while the rest was still a tough, rough sod. Balancing different advice against and for cross-plowing, I decided in favor of the latter, partly because of some bad water-washes. So I cross-plowed all except one dale of nicely laid over, but tough sod. It was disked up and down, back and forward, until the disc could do no more. I dared not touch it with the spring-tooth. Instead, I spent a day or two with the Acme. It was like harrowing a lot of fat sponges in a bed of cornmeal.

In due time the potatoes were put in with a potato planting machine; and I was surprised how well it handled the stuff. We usually seed turnips in drills, broadcasting the fertilizer on the harrowed level, throwing up into drills with a light plow, and then using a one-horse seeder that straddles two

secrecy. But there is no longer a necessity to keep silence. The turnips in those last 10 drills were just as good as the others.

Now, if you were me, would you put in your whole turnip crop next spring, top sown and rolled in? Well, for my part, I am so pig headed that I would stick to the old ways of our fathers, even if it twice the trouble. Those roots. Let the tooth catch the edge of a sod domiciled in a drill, and down came the whole structure; matter; as I used a one-horse hiller that they call in Old Ireland a "soddie." The two moid boards would gently draw the earth up, adding to the side of the drills and at the same time compacting them down.

Now, "the proof of the pudding is in the eating." We are digging our potatoes. The few hills I dug up were full of potatoes of good size, and there is no reason to assume the rest of the crop is below the sample. The turnips are coming well. But on they are visibly not so good as on the other. It should be a great piece of ground for wheat next year; and on a three-year rotation a better crop of roots hereinafter. At times though, it was disastrous.

Controlling Contagious Abortion

ABORTION is one of the greatest enemies of the dairy farmer, be it a many-farmer or one now giving their

What Single Tax Will Accomplish

THE taxation of all land values up to the full amount of the rental value is the aim of those who believe in the single tax. It is a means of freeing the land to the freest man as well. This would end tenancy; it would end all land speculation; it would end land monopoly forever. It would mean that no land would be impossible for owners to hold them either as tenants or as agricultural workers. It would mean that no man would own their own farms and as agricultural workers. Moreover, the untaxing of all kinds of farm improvements would encourage men to build, to make their places snug and comfortable. The taxing of land values would be America like the discovery of a new continent. It would open up hundreds of millions of acres, it would greatly increase production. It would solve the food problem, solve the high cost of living. And what is true of agricultural land is true of the mineral resources, timber-land, and city land as well.

rows at once. But this method was impossible. I have a little seeder that works on the level and does one row at a time. This, too, I tried, but it clogged in no time. Then I called to the rescue the potato planter, and with it drilled up the ground, sowing the fertilizer, but no seed.

So there was nothing but to hand sowing. To do it, I went ahead and opened the rows with a hoe, while my small boy followed with the bottle, later closing the seed-bed with the hoe. Perhaps some of the juniors don't know how to bottle-feed a turnip field. The cork of a quart bottle is pierced, a goose quill stuck through, and the bottle filled with turnip seed. It is through the quill that the seed drops in about the right quantity in the opened drill. My small boy had a way of giving the bottle a shake at every nine inches or so, with the result that less seed dropped between these spaces, and so less thinning was needed.

We had finished sowing all but about ten rows, when I started to quit. For some important purpose reason the lad had made a sort of wheelbarrow, the wheel or roller being a round piece of wood about eight inches in diameter and the same long. So, without opening the drill, the lad so, without opening the drill, the lad so continued to sow the turnip seeds on the peak of the ridge, while I followed with the "monocycle" aforesaid, and rolled them in.

There is a modesty which refrains from disclosing such a heterodox method of seeding as these ten drills got; and we two were pledged to

cows regular treatment, even when the disease is not present, as a measure of prevention. Here is a plan followed with good success by many stockmen:

At the drug store buy a pound or two of a mixture of 75 per cent potassium chlorate and 25 per cent sodium chlorate. Mix intimately. To each pound of this mixture add as much potassium permanganate as can be held on a dime. Dissolve a teaspoonful in warm double-boiled water. Use this vaginal water at the cow is bred. If there are brown-colored discharges indicating an unhealthy condition of the organs, douche every day until the discharges cease.

A convenient way of douching is to take a yard or so of half-inch rubber hose, add a funnel to one end, and insert the other end in the vagina. Hold funnel up above the cow and gradually pour the water into the vagina. Disinfect the hose in using between each cow, so that infection, if present, will not be distributed.

This method calls for eternal vigilance. "Every day is a new day," we can do," remarked one extensive breeder, who follows the method conscientiously.

Bean Straw Valuable

FARMERS who raised a crop of beans this year have at hand a valuable feed for horses, cattle, and sheep. The bean crop is a leguminous one, and the straw can be used

as a substitute for alfalfa hay or clover. The threshing, of course, destroys some of the leaves and finer particles, but these can be used by cattle or sheep if they are saved. The pods are probably fully as valuable as alfalfa hay, especially related to the breeding or fattening flock. It should not be fed as an exclusive roughage, but, like alfalfa hay, should be fed along with other roughage. The proportion of one part of bean straw to three or four of hay, corn stover, cane hay, or feeds of like character.

OXFORD DISTRICT HOLSTEIN CLUB SALE

THE Oxford District Holstein Club sale at Woodstock on December 12th, will rank among the best yet held. Possibly 300 farmers attended and the bidding has been the total receipts for the 62 head sold were \$12,665; average per head, \$194.60. Forty-five head over two years averaged \$211, and 17 head over two years averaged \$151.17. The following are the names of three or more head and their receipts:—
M. H. Haley, 3 head, \$590; A. Dunn, 3 head, 1495; M. L. Leitch, 2 head, 1,045; J. C. Currie & Son, 3 head, 501; W. S. Thomson, 1 head, 200; D. Smith, 2 head, 390; T. G. Greig, 4 head, 916; M. Melwood, 3 head, 480; J. P. Fraser, 1 head, 750; O. W. Wallace, 5 head, 950.

The following are the animals which sold for over \$100 by their buyers:—Daisy Payne 2nd, sold to G. D. Montgomery, Woodstock, \$115; E. B. D. Morrison, sold to W. C. Houck, Black Creek, \$120; Baron Korydake, sold to J. D. Dunn, Ingersoll, \$120; Grousel Keyes Baron, sold to W. B. Poole, Ingersoll, \$100; Fabron Tates Walker, sold to J. B. Shaver, Copetown, \$100; Korydake Baron, sold to R. G. Hoxall, Mossburn, \$100; Baroness Channah Payne, sold to G. E. Brown, Copetown, \$154; Lady Payne, sold to J. B. Bain, Thamesford, \$120; Lady Grace, sold to J. E. Brown, Copetown, \$126; King Midnight Ormsby, sold to J. W. Kania, Woodstock, \$120; Liddle, Copetown, \$190; Sir Regis Walker, sold to J. B. Bain, Thamesford, \$120; \$165; Bonney DeKol Poch 2nd, sold to Geo. T. Hewitt, Bright, \$190; Earl Beal, sold to J. E. Downham, Thamesford, \$195; Sir Zorra Walker, sold to Geo. Bishop, Norwich, \$145; Victoria DeKol Beauty, sold to J. J. Fox, Guelph, \$226; Princess Netherlands DeKol, sold to Jas. Liddle, Copetown, \$165.

Bessie's Clearena, sold to W. J. Fraser, Streetsville, \$260; Irene Dewdrop DeKol, sold to Jas. Liddle, Copetown, \$200; Winnie Dewdrop Copetown, sold to T. H. Dent, Woodstock, \$200; Jennie Coutance, sold to W. J. Fraser, \$220; Pausette, sold to W. J. Fraser, \$200; Marpo, \$195; Tidy Jean Colton, sold to Geo. Hart & Son, Woodstock, \$130; Rebecca Winnie Colton, sold to Geo. E. Hester, Mitchell, \$115; Pearl Butter Baroness, sold to W. C. Houck, \$110; Matthes, Putnam, \$110; Josie DeKol Butter Baroness, sold to W. C. Houck, \$110; Sir Mary's, sold to T. Wilcox, \$110; Millicent Walker, sold to T. Wilcox, \$110; Aunt Mary, sold to T. Wilcox, \$110; Victoria Walker, sold to M. Wilcox, Burgessville, \$120; Daisy Queen Colton, sold to Jas. Liddle, Copetown, \$200; Ensign Lady DeKol 4th, sold to L. Wilson & Son, Caledonia, \$120; Mrs. Sprague, sold to Jas. Liddle, Copetown, \$115; G. P. Adams, Bronte, \$115.

Maple Grove Beauty Colton, sold to Geo. Hart & Son, \$115; Daisy DeKol, Mechlidge, sold to C. P. Wilcox, Chatham, \$145; Pioneer Mechlidge, sold to J. E. Downham, \$145; Colton, sold to J. E. Downham, \$145; Alleana Maroons Mechlidge, sold to W. J. Inks, Woodstock, \$145; Alleana Maroons, sold to Geo. Hart & Son, \$145; Charlotte, sold to W. C. Houck, \$145; Ormsby, sold to W. C. Houck, \$145; Hoyle Ingersoll, \$120; Centre View Ormsby, sold to J. B. Bain, \$120; Forewick by Lad sold to J. B. Bain, \$120; Netherlands Agrie Belle, sold to G. D. Montgomery, Woodstock, \$120; Belle, sold to Jas. Liddle, \$110; Finnerde Valdeas Ormsby Payne, sold to Alex. Duff, Dundas, \$110; Belle, sold to J. B. Armstrong, Tillsonburg, \$110; Jennie Calamy Poch, sold to J. C. Bryden, Copetown, \$110; Miss Wayne DeKol, sold to J. P. Griffin, Burgessville, \$110; Alleana Maroons, sold to J. P. Griffin, Burgessville, \$110; Alleana Daisy Pesterie, sold to Walter Wilson, Barford, \$110; Mrs. Hartog Mercedes, sold to T. J. Lamsman & Sons, Currie, \$226; Hlanke, \$200; sold to H. H. Merrens, \$200; Oakley, \$200; Hienna Canary Fairy, sold to Jas. Liddle, \$200; J. J. Fox, Guelph, \$160; Heimeke Pontiac, \$160; J. J. Fox, Guelph, \$160; Alleana Childie, sold to S. H. McEee, Woodstock, \$255.

GLENBOLLE JERSEYS.

DURING a visit to Oxford county this past autumn, an editor of Farm and Dairy dropped in to see Mr. D. C. Hoyle, of Jersey and his champion Jersey herd. We found that Glenbottle Jerseys are few in number, but of our visit 16 females, 10 of them being of more noted quality. The average of milking age. We went to say that there are more noted Jersey cows in herd than in any other Jersey herd of similar size in Canada. The average of all other bred on this farm or bought in Ontario," remarked Mr. Hoyle. He believes in the quality of his Jersey people that there is the banner county of the province.

The most notable individual in the herd is Beauty Maid, with an R.O.P. record of 872 lbs. of butter fat on a four-year-old. This is the greatest record for butter fat in Canada compiling his record last year. Made by any cow, any age or any breed. Another champion of her breed in Florida is Beauty Maid, with the best three-year-old Glenbottle, with the best three-year-old heifer gave birth to three half-bred calves in 14 months. At the time of our visit

Representative Wanted Good Salary Paid

WE are looking for several men to become permanent district representatives for Farm and Dairy in various parts of Ontario and Quebec.

Each man will be paid an excellent salary; also a good commission in addition on all business turned in.

As the nature of the work involves the handling of considerable sums of money for us, we expect each man to be bonded and to carry a bond or security for a reasonable amount.

Applicants are also requested to furnish references of four testimonials of character and integrity, from responsible men.

Representatives will be given exclusive territory, consisting of several counties.

The work will consist of securing new readers for Farm and Dairy among the district, and setting up and maintaining present subscriptions.

The district representative will be permitted to appoint local agents on a commission basis, and to see these local agents in all business turned in by them. A full commission will be given on all sales.

A member of the regular staff of Farm and Dairy will accompany the district representative at first for the purpose of assisting him in getting started, and giving him suggestions and training in the best methods of business getting.

The men we engage as staff representatives will have permanent jobs, and the opportunity of building up a profitable income for themselves by their chosen territory.

Write us at once. You may be the man for our territory.

THE FARM AND DAIRY, PETERBORO, ONT.

There were only two cows under test, Fontaine's and a record of about 10,200 lbs. of milk and over 600 lbs. fat. This is the highest production for a Jersey cow starting her test at 100 or over of fat. The highest production of milk and fat by a Jersey cow in Canada that has beaten 1,000 lbs. of milk.

Glenbottle Jerseys are his producers and they look to him for the larger and they are being in conformation than any other Jersey cow. This is the most of the imported cattle in Canada. Another notable female in Springside is Beauty Maid, with the best three-year-old heifer that has beaten 1,000 lbs. of milk. Beauty Maid, with the best three-year-old heifer that has beaten 1,000 lbs. of milk. Beauty Maid, with the best three-year-old heifer that has beaten 1,000 lbs. of milk. Beauty Maid, with the best three-year-old heifer that has beaten 1,000 lbs. of milk.

A CALL TO ACTION
Is sounded in this issue of Farm and Dairy. See page 13.

Hog Prices 12 Months Hence

Canada and the United States are asked to increase their hog production as greatly as possible in order to help meet the grave shortage of meat in Great Britain, France and Italy.

The shortage in Europe is the best guarantee of the stability of the hog market during the next twelve months. There are 115,000,000 fewer stock animals in the herds of Europe than before the war. The hog shortage alone is 32,425,000 animals—about ten times the total number of hogs in Canada to-day.

In the United States, there are to-day ten per cent. less live hogs than there were a year ago. Further, the American Packers' cellars have never been so bare of hog products at the inception of a winter packing season as this year. During October, 31,000,000 pounds of meat were taken out of Chicago warehouses alone, and a similar raid was made at other points.

Hog Receipts Decreasing

Another indication of the decrease in hog production is in the receipts of hogs at Stock Yards in the United States:—

To the end of October, 1916, they were 33,036,831 hogs.

To the end of October, 1917, they were 28,314,698 hogs.

This shows the great decrease in 1917 of 4,721,233 hogs.

Taking the month of October alone the receipts in 1916 were 3,692,016 hogs. For the month of October, 1917, the receipts were 2,498,244 hogs. This shows a decrease of 1,093,772 hogs for the last month for which we have figures.

In Canada, the receipts at Stock Yards from the first of January to the end of November, 1916, were 996,131 hogs. For the same period in 1917, the receipts were 868,196 hogs. This shows a decrease in Canada of 127,935 hogs.

While the supply of hogs in Europe and America has been rapidly decreasing, the consumption of bacon and hams overseas has in-

creased enormously since the beginning of the war. Here is the statement of the British Imports:—

In 1913 they were . . .	638,000,000 lbs.
In 1914 they were . . .	664,000,000 "
In 1915 they were . . .	896,000,000 "
In 1916 they were . . .	1,006,000,000 "

With the enormous shortage of hogs and other stock animals in Europe, and a marked decrease in the number of live hogs in North America, there appears to be no reason why there should not be high prices and a stable market for hogs during the next twelve months and longer.

Government Action

The Government's announcement of control and limitation of Packers' Profits will establish confidence and further stabilize the hog market. The official announcement in brief is as follows:

"1. No packer shall be entitled to a profit of more than 2 per cent. of his total annual turnover, that in his total sales during any one year.

"2. If the 2 per cent. on annual turnover exceeds 7 per cent. on the actual capital invested in the business, the profits shall be further restricted as follows:

"(a) Up to 7 per cent. on capital the packer may retain the profits.

"(b) If the profits exceed 7 per cent. and do not exceed 15 per cent. one-half of the profits in excess of 7 per cent. shall belong to the packer and one-half to the Government.

"(c) All profits in excess of 15 per cent. shall belong to the Government."

United States Action

In addition to the action of the Dominion Government, Herbert Hoover, the United States Food Controller, states in a Government Bulletin:—

"I therefore wish to make this positive statement: that, so far as the United States Food Administration is able, through its influence on the purchase of pork and its products for exportation, it will do all within its power to see that prices of pork are

maintained in a ratio to feed prices that will cover not only costs of production, but proper remuneration to the producer.

"By a system of license control of manufacturers and distributors the Food Administration will further help the producers. This system will tend toward the abolition of speculation, the punishment of profiteering, and the assurance that the consumer receives the product at a fair ratio of the producer's price, and that, vice versa, the producer receives a fair interpretation of the consumer's payment."

This decision of the United States Government to support the American hog market will have a stabilizing effect on the Canadian hog market, because whatever influences the American live stock market will act to pretty nearly the same extent on the Canadian market.

The action of the Dominion and United States Governments, considered in association with the figures showing the tremendous decline in the European and American hog production, and the figures showing the vast increase in British ham and bacon imports since the war, establishes confidence in the stability of the hog market for the next year.

Save the Young Sows

Young sows which are slaughtered now only produce about 150 lbs. of meat per sow. By breeding them, many times that quantity of meat can be produced ready for market in ten to twelve months. Every pound of pork that can be raised will be needed.

Bacon is a military necessity. It is the most compact form in which meat can be supplied to the armies. It is about 60 per cent. fat, and fat is worth twice as much as starch as a producer of energy and stamina.

Bacon is the great "fighting" food. The armies of the Allies must be supplied with hundreds of millions of pounds of it, and they look to Canada and the United States to supply it. That means a tremendous increase in hog production in 1918 is a vital necessity.

Dominion of Canada Department of Agriculture

**LIVE STOCK BRANCH
OTTAWA**

Clearing Sale, Jan. 3rd

35 Pure Bred Holstein Cows 35 HEAD Heifers and Bulls HEAD

Also Farm of 150 Acres. 1-4 mile from C.P.R. Station, Millbank

John Knox, Prop. Millbank, Ont. Perth Co.

SUNNYSIDE STOCK FARM HOLSTEINS

BCHO SEGHS PAYNE, our herd sire, is by a brother of the world's 10-lb. cow, Segs Payne Johanna. He is a grand bull in every way and is also not yet 4 years old. To avoid in-breeding would sell him at a price. Also have bulls from one month to seventeen months old for sale, sired by Segs Payne and out of grand producing cows. If you need a well backed bull, write or come and see them.

JOHN M. MONTLE, Prop. Sunnyside Stock Farm, STANSTEAD, QUE.

PEDIGREED HOLSTEINS

Will sell some pedigreed Holstein cows and heifers, freshening from Xenias to the middle of June. We HAVE BOME FINE YOUNG BULLS born last spring, which we will sell at a very low figure—name testing as high as 56. Also better calves born last spring. Bulls and heifers have 44-lb. breeding on both sides.

R. R. No. 3. CHAS. E. MOORE, Preston Station, Ont.

Backed by the Blood of Champions

We offer our entire crop of 1917 calves, 6 males, 10 heifers, a splendid lot, sired by a son of what Harold McAllister stamps as the world's greatest transmitting, reproducing cow. This is a breeder's lot, a magnificent start or addition to any herd. Drop a line to

JAS. A. CASKEY R.R. No. 2 Madoc, Ont.

AYRSHIRES

LAKESIDE AYRSHIRES

A choice selection of young bulls for sale from Record of Performance Sires; Auchincroft Sea Foam since dam, imported and Canadian (imp.), 25788; many three grand champion, Fairfield Maine Triumph (imp.), 61137; a son of the noted Hobland Perfect Piece. Write for catalogue.

Proprietor: GEO. H. MONTGOMERY Dominion Express Bldg., Montreal. Manager: D. FICHAIR, Hill, Phillipsburg, Que.

The Old Original Summer Hill Farm

Where you find the pure bred Oxford. We have for sale 150 head of registered ewes, 75 head of yearling rams, 50 ram lambs and 10 ewe lambs, some tered ewes, 75 head of yearling rams, 50 ram lambs and 10 ewe lambs, some tered ewes, 75 head of yearling rams and ewes, all first class individuals and guaranteed pure bred.

PETER ARKELL & CO., Box 454 TEESWATER, ONT.

CHOICE YORKSHIRE HOGS FOR SALE

at right prices. Bours and Bows, all ages, from best prize winning strains. Sow bred and ready to breed. Several litters of suckers, the best lot we ever raised, good growthy fellows of good type and breeding. Also Truss, louse, Embden, African, white and brown Chinese Cheese, Mammoth Bronze, White Holland and Blue Turkeys. See winnings at Toronto Exhibition, 1916. Write your wants, we can please you.

T. A. KING MILTON, ONTARIO



Rich milk—high in butter fat—docile and good feeders.

WRITE W. STEPHEN Secretary CANADIAN AYRSHIRE BREEDERS' ASSOCIATION BOX 508—HUNTINGDON, QUE.

AYRSHIRES AT A BARGAIN 7 quality cows—Ottawa prize winners for 3 years. Agec from 3 to 7 years. Due to freshen now and 3 in January. Also bulle any age. Address: ROBERT DOUG, R. R. No. 3, Lachute, Que.

OFFICIAL RECORDS OF HOLSTEIN-FRIESIAN COWS, OCT. 1 TO NOV. 30.

- Mature Class. 1. Johanna Jemima Beach, 24655, 5y. 6m. 284. 62.3 lbs. milk, 33.43 lbs. fat, 23.90 lbs. butter. 2. ... 3. ... 4. ... 5. ... 6. ... 7. ... 8. ... 9. ... 10. ... 11. ... 12. ... 13. ... 14. ... 15. ... 16. ... 17. ... 18. ... 19. ... 20. ... 21. ... 22. ... 23. ... 24. ... 25. ... 26. ... 27. ... 28. ... 29. ... 30. ... 31. ... 32. ... 33. ... 34. ... 35. ... 36. ... 37. ... 38. ... 39. ... 40. ... 41. ... 42. ... 43. ... 44. ... 45. ... 46. ... 47. ... 48. ... 49. ... 50. ... 51. ... 52. ... 53. ... 54. ... 55. ... 56. ... 57. ... 58. ... 59. ... 60. ... 61. ... 62. ... 63. ... 64. ... 65. ... 66. ... 67. ... 68. ... 69. ... 70. ... 71. ... 72. ... 73. ... 74. ... 75. ... 76. ... 77. ... 78. ... 79. ... 80. ... 81. ... 82. ... 83. ... 84. ... 85. ... 86. ... 87. ... 88. ... 89. ... 90. ... 91. ... 92. ... 93. ... 94. ... 95. ... 96. ... 97. ... 98. ... 99. ... 100. ... 101. ... 102. ... 103. ... 104. ... 105. ... 106. ... 107. ... 108. ... 109. ... 110. ... 111. ... 112. ... 113. ... 114. 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