

FARM AND DAIRY

RURAL HOME

DEVOTED TO
BETTER FARMING
AND CANADIAN
COUNTRY LIFE

Peterboro, Ont., July 27, 1916



Dairy and Cold Storage
The Corn
10th of April
Dec 16



LUNCH TIME FOR THE HAY MAKERS.

In Times Like These

when help is so scarce and duties are so many, the wise dairy farmer conserves his time and strength, recognizing that a saving of these puts dollars in his pocket. Probably never in the history of the dairy industry were prices so good for dairy products; and never was help so scarce for the reaping of this rich harvest. One of the surest labor savers and money makers on the modern dairy farm is the



Note the heavy compact construction and convenient height of supply can and discharge spouts. The top of the supply can is only 3/4 feet from the floor.

Simplex Cream Separator

It cuts the labor of skimming milk more than in two not only because it turns faster than most other hand separators, regardless of capacity, but because it does the work in half the time; and in these busy days, with labor scarce and expensive, a saving in time is a direct monetary saving to the dairy farmer.

The Simplex skims so clean and runs so light that the large 1,100-lb. size, when at speed and skimming milk, takes no more power than the ordinary 500-lb. Hand Separator of other makes. The Simplex, combined with the

B. L. K. Miller

on your farm gives a combination of labor-savers and money-makers unequalled. Space prevents us telling you all we would like to about the B. L. K. Miller, how it renders you independent of careless and irresponsible hand milkers, how one man and a boy are milking 50 cows in an hour and a half, and a hundred and one other points we cannot begin to mention. We have prepared some mighty interesting literature though the Simplex Separator and B. L. K. Miller, which is yours for the asking. Write us for it. It will help you to

SOLVE YOUR DAIRY PROBLEMS

D. Derbyshire & Co.

Head Office and Works BROCKVILLE, ONT.
Branches: PETERBOROUGH, ONT. MONTREAL and QUEBEC, P.Q.
WE WANT AGENTS IN A FEW UNREPRESENTED DISTRICTS

"East is East and West is West And Never the Twain Shall Meet"

So sang Kipling 20 years ago. However true that may have been then, it isn't so now. East will meet West, and the binding link of fraternity will be our special

Western Canada Edition---Out August 10

This is easily the finest edition we have yet put out. The contributors to this number are men who stand out prominently in the life of WESTERN AGRICULTURE. Their contributions are an indication of the scope and magnitude of this issue and the appreciation by our Western people of the work Farm and Dairy is doing.

YE MEN WHO SELL

make sure you are represented in this issue. Have your strongest copy go through to our readers. Make your reservations now. We can reserve you a special position to-day. We may not be able to do so to-morrow. First forms close August 2. Last forms August 4.

ADV. DEPT.

Farm & Dairy, Peterboro, Ont.

ITEMS OF INTEREST

Grain and Life Stock Estimates for 1916

A PRESS bulletin recently issued by the Census and Statistics Office at Ottawa, estimates that the areas sown to the principal field crops in Canada for the season 1916 and compares them with the areas for last year. The areas sown to wheat in Canada is now definitely estimated at 11,517,600 acres, which is 1,368,800 acres, 11.3 per cent, below the high record of last year, when 12,886,400 acres were harvested; but 1,323,700 acres, or 11.2 per cent, above the harvested area of 1914, which was 10,233,900 acres. The acreages estimated as sown to the other crops are as follows: Oats 10,444,900 as against 11,245,000 last year; barley 1,287,000 against 1,509,250; rye 159,625 against 11,200; peas 101,420 against 196,210; mixed grains 410,770 against 466,800; hay and clover 7,974,000 against 7,735,000; alfalfa 92,900 against 92,900. Of late sown crops the acreages are as follows: Buckwheat 355,500 against 242,800 in 1915; fax 723,000 against 906,500; corn for husking 182,700 against 252,500; beans 34,490 against 42,210; potatoes 448,800 against 478,600; turnips, etc. 156,200 against 172,700; sugar beets 15,000 against 18,000 and corn for fodder 287,070 against 343,400.

Taking 100 as representing the average condition on June 30 of the past eight years, 1906-1915, the condition becomes as follows: Fall wheat 99.2, spring wheat 100.2, rye 103.8, barley 102.5, and oats 84. The reports show that the prospects for grain crops are excellent throughout the West, but owing to the lateness of the season there will be a greater risk of damage from early frosts than last year.

Estimate of Farm Live Stock.

It is estimated from the reports of correspondents that the numbers of farm live stock in Canada on June 30 were as follows: Horses, 2,990,635; milch cows, 2,814,672; other cattle, 2,826,519; sheep, 1,965,101; swine, 2,514,672. As compared with 1915 these figures represent decreases of horses by 5,864; of milch cows, by 63,501; of sheep by 78,561 and of swine by 297,228; but an increase of "other cattle" by 427,564. The decreases apply principally to Eastern Canada; in the West all descriptions show increases over last year, except swine in all three provinces, and "other cattle" in Manitoba.

A Bulletin on Lime

"LIME and its Uses in Agriculture," a bulletin by Prof. Harcourt of the O. A. C., Guelph, is a concise treatise on a subject that has aroused considerable interest amongst the farmers of Ontario during the last two or three years. Experiments conducted by the college have shown that in many districts throughout the province the soil has been depleted of its lime to such an extent as to seriously decrease the yields of field crops, especially on legumes.

As an instance of how the application of lime may increase the returns from such soils, an experiment is recorded in which lime and manure applied to light, sand plots in Norfolk county, gave an average of two tons more potatoes per acre than plots on which manure alone was used. The importance of having soils sweet is due to the fact that only when it is in that condition can fertilizing materials, including manure, be used to good advantage. Full information is

given in the bulletin regarding the need of soil for lime. Its action in the soil, the different forms in which it may be applied, as well as practical hints regarding its application.

A New Potato Bulletin

A COMPREHENSIVE treatment of the whole subject of potato growing in Ontario, is found in bulletin No. 329 of the Ontario Department of Agriculture, written by F. J. Zavitz of the O.A.C. Potato growers and farmers generally will be interested in this bulletin, which is the outcome of 26 years experimental work on this valuable crop. The great losses from diseases occurring in the potato crop of the province last year, should also assist in making this bulletin welcome. Among the phases of the subject treated are cultural methods, selection of varieties, seed selection, protection against insects and fungus pests, organized agencies in connection with potato production and many other important aspects of successful potato growing.

The Country Life Movement

Rev. W. Conway, Huron Co., Ont.

IN no development of our national life is there more widespread general interest than in the Country Life movement. Its first stirrings on this continent, many years ago, were occasioned largely by the necessity for economic betterment arising from land waste and depletion. This need soon developed into a desire for agricultural science and the cry was for better farming and better business. The Federal Commission on Country Life in the U. S. in 1908, brought the country life problem to the attention of the people as a whole and in one sense it might be said that this was the rise of the movement as we have it.

Recent rural developments place strong emphasis upon the social phase of country life. Not only better farming and better business methods, but better living is now the slogan. The social side of farm life has been a secondary matter with colleges of agriculture, but is now beginning to attract their attention. Every agency for country life betterment recognizes this phase as one of paramount importance.

Warm Weather Shipping Hints

Do not overload.
Be sure you get a well ventilated car, and that top end doors are open.

Have car well bedded with sand, and in case of heavy wet sand, desirable and will save many deaths. Some drovers use blocks of ice to good advantage.

Do not bed with shavings or sawdust. It heats.

Live stock should be thoroughly cooled off and have plenty of water before loading, especially hogs.

The all hulls, partition off stags, heavy hogs and mixed loads, so all animals will arrive quiet and comfortable, and eliminate overheating.

If live stock is unattended in transit, notify competent agent, so that prompt action can be taken in case of delay.

I can't help thinking that we will never increase production of dairy products until we get milking machines that will be successful and can chime that will get barn with 10 cows--be had in every barn with 10 cows--Geo. H. Barr, Dairy Branch, Ottawa.



We Welcome Trade Increase VOL. XXX

WITH the owned can and more list so as to reach horse and suggest take advantage and have not been pose of visiting order to gain finer and breeding developed the most the two or the breeders are representative for the who recognizes his supervisory organized, with of his county an many of the Belleville district famous as the battle, especially over three days able and enjoyable Farm and Dairy unity of sharing rited from it, at which it was on and by the owner

On Friday, June persons, left list of places during Representative M the party in the then through the was that of Mr. Tolsten breeder, Canada to give 2 also a number of the 20,000-lb. man these animals were ber of the party thought my boy animals of this purchase pure-bred from Mr. O'Reilly's road and had a meals were made benches were good and told stories, ladies arranged. The presence of this adds much who on the farm of this kind than

We next passed and on to the fa



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 country; but its real strength and stamina are to be looked for among the cultivators of the land.—Lord Chatham

VOL. XXXV

PETERBORO, ONT., JULY 27, 1916

No. 29

Victoria County Breeders Tour the Belleville District

Many Prominent Breeders are Visited on an Automobile Excursion

By W. G. ORVIS, Associate Editor,
Farm and Dairy.

WITH the increase in the number of rural-owned cars comes the opportunity for more and more farmers to extend their visiting list so as to include many whom they would never be able to reach if they had to depend on the horse and buggy. Breeders have been quick to take advantage of the automobile in this regard, and have not been slow in utilizing it for the purpose of visiting their fellow-breeders' farms in order to gain first-hand knowledge of their farming and breeding methods. Out of this has developed the motor excursion, which generally lasts two or three days, and on which several breeders are visited. Mr. Knight, district representative for Victoria Co., Ont., is one of those who recognizes the value of such trips. Under his supervision an auto excursion was recently organized, with the object of giving the breeders of his county an opportunity of visiting in a body many of the most prominent breeders of the Belleville district, a district that is becoming famous as the home of many herds of pure-bred cattle, especially of Holsteins. The trip extended over three days and proved to be a most profitable and enjoyable outing. As representative of Farm and Dairy on this excursion I had an opportunity of sharing in the pleasure and benefit derived from it, and can testify to the manner in which it was enjoyed, both by the excursionists and by the owners of the farms visited.

All Absard!

On Friday, July 13, five autos, containing 22 persons, left Lindsay, scheduled to visit a long list of places during the next three days. District Representative McRae, of Peterboro county, met the party in the city of Peterboro and escorted them through the county. The first farm visited was that of Mr. Joseph O'Reilly, the well known Holstein breeder. Here we saw the first cow in Canada to give 30,000 lbs. of milk in a year, and also a number of others who have since crossed the 30,000-lb. mark. The type and capacity of these animals were briefly discussed. One member of the party was heard to remark: "If I thought my boy would take as much interest in animals of this class as Mr. O'Reilly does, I would purchase pure-breds to-morrow." A few miles from Mr. O'Reilly's we camped on a shady cross road and had a picnic luncheon. These picnic meals were an enjoyable feature of the trip. The lunches were packed, and while the men joked and told stories, or oiled and fixed the cars, the ladies arranged the meals in a tasty manner. The presence of the ladies upon such a trip as this adds much to its enjoyment, besides, who on the farm is more deserving of an outing of this kind than the farmer's wife?

We next passed through the village of Norwood and on to the farm of Mr. G. A. Brethen. We

found the owner of Hillcrest busy drawing in hay, but a shower of rain coming almost at the time of our arrival stopped this part of his farm operations. Mr. Brethen very kindly spent a half-hour with us, explaining the breeding and type of his high class Holsteins. Among the fine animals seen was Rawwood Count DeKol Lady Pauline, who, a year ago, completed the wonder-

ful record of 29,000 lbs. milk and 1,113.25 lbs. butter in a year. The new champion four-year-old, Hill-Crest Pontiac Vale, is also a member of this herd. The herd sire, Hill-Crest Ormsby DeKol, called forth favorable comment from the breeders of pure-bred Holstein cattle present. Before we left Mr. Brethen served each of us with a dish of ice cream, which was very much appreciated. "This is not city ice cream," said one. Nor made from three per cent. milk," remarked another.

From Norwood to Picton.

Our route from Mr. Brethen's was through Marmora to Mr. B. Hagerman's, Minto. Mr. Hagerman has a very fine all-steel barn and some exceptionally fine Holsteins. These were favorably commented upon, and we passed on over road roads into the city of Belleville, where we arrived at the late hour of 10 p.m. Excellent hotel accommodation was secured in this city.

On Friday morning we passed over an arm of the beautiful Bay of Quinte upon the bridge which connects Prince Edward county with the city of Belleville. A three-mile run up the shore of the bay brought us to the farm of Mr. A. E. Phillips, where we inspected his 16-acre orchard. Many questions were asked regarding the cultivation and management of apple trees. These were readily answered by our host. A cement block silo was also inspected and a walk to the shore much enjoyed. Mr. Phillips' herd of pure-bred black and whites was some distance away in the pasture, so we did not take the time to go and see them.

Our next stop was at Mountain View cheese factory. This is one of the most up-to-date factories in the province. Two large vats of milk were being converted into cheese, and the clean, tidy appearance of everything bespoke much for the quality of the product. Stepping down three steps into the curing room, we found ourselves in an atmosphere the temperature of which was about 52 degrees F., while the thermometer outside stood around the 90 degree mark. Some one of the company shivered. Mr. J. Hall, the genial cheesemaker, explained the system of cooling, and later gave each a sample of the cured product. This was done at the request of the ladies.

A delightful 20-mile run over roads that must be travelled to be appreciated brought us to the town of Picton. Oh, those roads! Every one declared that they had never seen their equal, they were so smooth, hard, and free from dust. We simply glided along, sometimes much beyond the speed limit—some said nearly 40 miles an hour. About 11 a.m. we reached Picton, where the district representative, Mr. MacVaneil, with Warden Ed. Purteile and Mr. B. Leavena, were awaiting us. After introductions all around, they



The Ideal Country School

THE TEACHER.—Fond of the country and believing in its possibilities; country-born and rural minded; specially trained for rural leadership; not changing frequently; well paid and well supported.

THE PUPILS.—In good health; well trained at home; regular in attendance; completing the public school work provided by the school; respecting the teacher and his work.

THE SCHOOL PATRONS.—Anxious to have a first-rate school in their midst; sympathetically interested in the work of the school and the problems of the teacher; not expecting too much of the teacher, not critical and fault-finding.

THE TRUSTEES.—Having a proper conception of the meaning of their trusteeship in education; with a vision of the possibilities of education as a good investment; not permitting truancy; backing up the teacher and helping where help is needed.

THE SCHOOL.—An attractive building; well situated, well built, well kept, well furnished, well lighted, well heated, well ventilated and well equipped; having a library, good pictures and possibly a piano or organ.

THE SCHOOL GROUNDS.—At least an acre, levelled and well drained; a neat, substantial fence, a good well and pump, convenient and sanitary closets; planned and planted as the local "beauty-spot," a front lawn and flower beds, experimental plots in a small school farm; playground for all pupils and the young people of the community, play equipment, such as swing, taster, glant stride and basketball.

avored and prices are low from an over-production. Taking chances against weather odds and market variations by staking all on field crops is a practice that brings ruin sooner or later to the farmer and community.

There is practically no element of speculation in dairy farming wherever practised. Dry years and crop failures do not mean failure to the dairy farmer, who practises modern methods of harvesting by the use of the silo, and who has kept over a good store from years more plentiful. In this way there can be no loss. The certainty of returns by dairy farming appeals to the man of limited capital who does not want to take chances. The returns are not large at any one time, but they are constant the year around, and certain. Such steadiness of income makes for thrift and independence by not having to depend upon the credit system. Credit is built by habits of independence and reliability. Market prices of dairy products are not subject to large rises and falls as are most other farm products. This fact in itself makes it safe for the farmer of small capital, as well as for the larger investor.

Cooking Injures Milk*

It Destroys Valuable Properties

PASTEURIZATION, that is, heating to a temperature of 155 degrees F., destroys the antibodies of milk. When the milk is heated to a temperature of 175 degrees F. the digestive ferments which it contains are destroyed. The boiling of milk modifies, in a harmful way, nearly all its ingredients, and considerably reduces its nutritive value. Rats fed on boiled milk grow to only half their normal size. Scurvy sooner or later appears in babies exclusively fed on pasteurized or boiled milk. The subtle alchemy by which milk is prepared in the laboratory of Nature is upset by the crude process of cooking. Boiled milk will sustain the life of rats, but it will not enable them to grow to full development, and reproduction fails altogether. Science is teaching us every day that the fine adjustments and adaptations of Nature cannot be safely ignored. We are gradually learning, through the loss of millions of lives which have perished through our ignorance, that the foodstuffs which Nature designed for our use are not the hazardous products of wild and incoherent forces, but are wrought out by a subtle and infinite wisdom, which fits them to our needs so perfectly as to transcend our highest knowledge and defy the profoundest analysis.

Man a Cooking Animal.

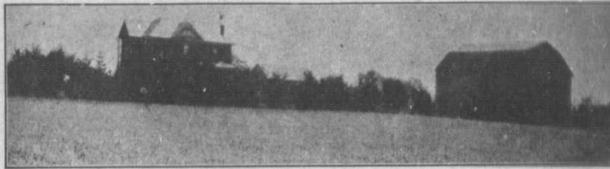
Man has been defined as a "cooking animal," and for ages the culinary art has been highly cultivated and made the means not only of utility but of harmful luxury. Through modern science

* From a paper presented at the meeting of the Holstein-Friesian Association in Detroit.

tific research we are coming to know that, notwithstanding its great service to the human race, the art of cookery has associated with it many perils, one of the greatest of which, though the

in wholesome and attractive ways the pure products of Nature's great food laboratories—garden and the farm.

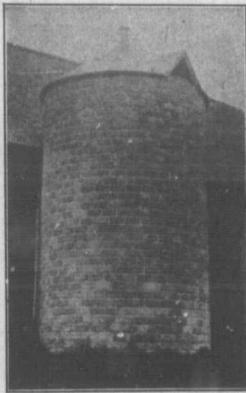
Milk, fresh from the bovine fount, with its r



Windbreak on the Farm of John E. Cantfield, Oxford Co., Ont. It will soon be effective.
—Photo by an Editor of Farm and Dairy

most recently recognized, is the destruction of its vital elements, which so modify the food as to greatly impair its nutritive value. The beasts of the forest, and to a large extent also, the primitive savage, take their food directly from the hand of Nature, unsophisticated and uninjured, and as a result enjoy an immunity from disease

store of vitamins and enzymes, with the fine quality of protein for brain and muscle building salts to stiffen the bony frame work, and fate brighten the vital fires of the body, is a natural product, which not only is not improved by art of cookery, but is actually damaged by it rendered incapable of supplying in the high degree these subtle elements which are, we now know, so essential to good nutrition.



A Cement Block Silo in Prince Edward Co., Ont.

and acquire a vigor and toughness of constitution which are unknown to the civilized man. The chef of the future will display his finest talents, not in the compounding of complex combinations of foods with non-foods and poisons into disease-producing entrees and dyspepsia-breeding desserts, but in selecting and serving

Summer Care of Calves

Comfort as Necessary as Good Feed

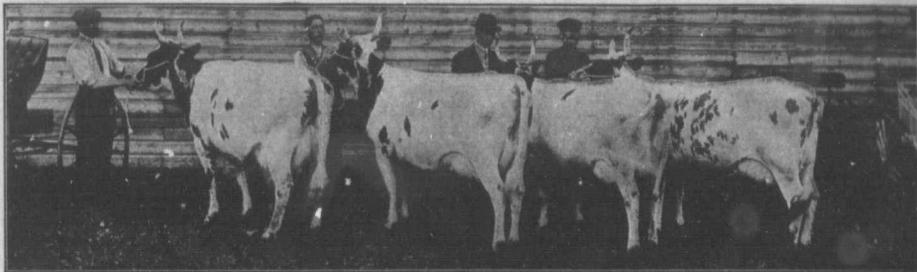
J. M. Creighton, Huron Co., Ont.

OF late I have noticed considerable information published about feeding dairy calves, but not so much about their care. Now, in my opinion, care is almost as important as feed. We certainly can't expect the little fellows to well if they are not made comfortable, no matter how we may feed them. Everyone who has raised calves must have noticed that when hot weather and flies come on they do not do well as when it is cooler. A little extra care does not cost money as feed does, but it yields a valuable return.

Thirsty calves are never comfortable. If milk they get is not enough to quench their thirst, and if they have access to water they begin to take it early in life. In hot weather they will drink considerable water, and whenever possible they should have free access to whenever they need it. If this is not possible they should be given a drink two or three times a day out of a clean pail or bucket.

Calves should not get either milk or water from filthy wooden troughs. I have seen milk poured over a fence into a trough from which six or eight calves drank. The wood was soaked with the milk, and with the sun poured down on it all day the trough became an ideal

(Continued on page 6.)



The Four Best Ayrshire Cows at the Ormstown Fair. Lochfergus Charry, Champion Female on the left. All owned by Hector Gordon, Howick, Que

Victoria Breeders Tour Belleville District

(Continued from page 4.)

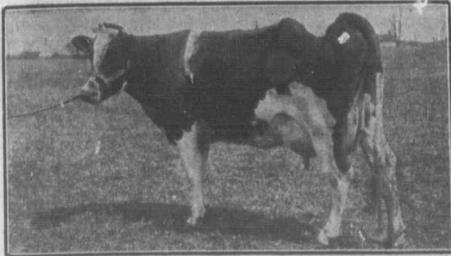
ants of the famous May Echo. We found his animals to be all of good type and splendid producers. Four two-year-old heifers were under test at the time of our visit. They were ideal specimens of the Haolstein breed, and no doubt will be heard from later. The route from Mr. Mallory's farm led through the village of Frankford and Wooler to Brighton and thence via the Kingston Road to Cobourg.

One mile from Cobourg, Mr. D. B.

opinion of all who took advantage of the trip that it was a most profitable and enjoyable one. Not only had it fulfilled the expectations of those who had looked forward with anticipation to gaining an insight into the methods of some of our most successful breeders, but it had also furnished a delightful summer outing.

Machine Increased Milk Flow

OWING to shortage of help, one of our dairymen had either to sell some of his cows or buy a milking machine. He ordered a machine and had it installed, at a cost of \$247, including gasoline engine, three



Hill-Crest Pontiac Vale, the New Canadian Champion Four-year-old.

In May this great young cow completed a record of 23,785 lbs. milk and 184.25 lbs. butter. This makes her the champion for Canada in the four-year-old class. Owned by G. A. Brethen, Norwood, Ont.

Tracey has a fine farm home and an excellent herd of cows. His stables are up-to-date in every particular. A roomy, clean box stall is provided for each cow under test. Here we saw the two sisters, Lulu Keyes and Lulu Darkness, each having a record of over 30 lbs. in seven days to their credit. Alice Tensen, the \$1,500 cow purchased at Mr. Hardy's sale last spring, is also a member of this herd. Mr. Tracey believes that it pays, when working for big records, to have everything that will contribute to the comfort of his animals.

The run to Port Hope over the Kingston Road was a pleasant one. Mr. E. S. Duncan, district representative of Durham county, had planned a visit to hand, had taken to the machine quite readily."—G. B. Curran, Lennox & interesting places, but the afternoon was Addington County.

units and four milking pails, besides the shafting. With this outfit one man can milk the twenty cows in less than an hour. By using the extra pail, three pails are always milking, while the other pail is being carried away and emptied.

This dairymen is very much pleased with his machine, and told me his remarkable experience. When he installed the machine, his nineteen cows were averaging around 75 pounds of milk, but as soon as the machine was installed there was a steady increase in the number of pounds of milk from the herd, and in a week it had risen nearly 100 pounds. One cow in particular, which was hard to milk by hand, had taken to the machine quite readily."—G. B. Curran, Lennox &



Lulu Darkness, the 30-lb. Sister of Lulu Keyes.

At nine years of age this cow gave 53.7 lbs. milk and 39.25 lbs. butter in seven days; 267.5 lbs. milk and 154.71 lbs. butter in 30 days. This record is the more remarkable in that it was made with only three quarters. Lulu Darkness is owned by Mr. D. B. Tracey, Cobourg, Ont., who has now four 30-lb. cows in his herd.

nearly gone, and the distance home was so great, that we had no time to visit them. The run home, though not over such good roads as are found in Prince Edward county, was soon over, and the party disbanded to their several homes. It was the unanimous

When turning the cows into a new pasture it is well not to leave them in except while they are feeding. In standing around in the shade and laying down cows will soil and crush over, and the party disbanded to their several homes. It was the unanimous not feeding turn in poor pasture.

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Preserves Roads
Prevents Dust

An ideal roadway---

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The use of Tarvia is an actual asset to any community as the experience of many Canadian towns will prove.

There are various forms of Tarvia to satisfy varying road conditions. We do not try to make one compound do for all situations, but as a result of ten years' experience, we have found that one or another of three kinds of Tarvia will solve every macadam road problem.

For road construction where heavy traffic is expected, we recommend "Tarvia-X", a very dense and sticky grade which fills the empty spaces between the new broken stone and holds it together in a vice-like grip.

For resurfacing work, where the spaces are smaller, we recommend the less dense "Tarvia-A".

For surface applications, to sup-

press dust and protect the surface, we recommend "Tarvia-B".

The road illustrated is a macadam road treated with a double coat of "Tarvia-B". In consequence, this roadway is protected against raveling and washing, caused by heavy rains, an important matter on a steep grade like this. It will resist automobile traffic, will be free from dust and mud, and will need no sprinkling with water. It makes a handsome, smooth, quick-draining surface with a very modest maintenance cost.

If you want better roads and lower taxes, our Special Service Department can greatly assist you. Write to nearest office regarding road conditions or problems in your vicinity and the matter will have the prompt attention of experienced engineers. This service is free.

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ST. JOHN, N.B. HALIFAX, N.S. SYDNEY, N.S.



Summit Crescent, West Crescent Heights, Westmount, Quebec. Treated with "Tarvia-B".

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The work is pleasant, keeps you out in the open air and your time is only bounded by your energy. You can make lots of pocket money during the holidays by giving us a few hours of your time each week. Write us tonight for particulars.

CIRCULATION DEPARTMENT

FARM & DAIRY

PETERBORO, ONT

FARM AND DAIRY

AND RURAL HOME
PUBLISHED EVERY THURSDAY

47

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STOCKWELL'S SPECIAL AGENCY
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The paid subscriptions to Farm and Dairy exceed \$1,000. The actual circulation of each issue, including copies of the paper sent subscribers who are but slightly in arrears and sample copies, varies from 21,000 to 23,000 copies. No subscriptions are accepted at less than the full subscription rate. Detailed statements of circulation of the paper, showing its distribution by counties and provinces, will be made free on request.

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We guarantee that every advertiser 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 that such transaction occurs within one month from date 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."

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

The Rural Publishing Company, Ltd.
PETERBORO, ONT.

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

Another Domestic War Loan

FINANCE Minister White is soon to launch another domestic war loan. The amount of this loan is still conjectural, but those who specialise in forecasting government activities say that it will be \$100,000,000. There is no doubt about the ability of the people to take up a loan of this size. Savings deposits in the Canadian banks now total \$700,000,000. Since the war began they have increased by an amount equal to that for which it is expected that some months ago, when \$50,000,000 was asked for, about twice that amount was subscribed. There is every reason to expect, therefore, that the new loan will be fully subscribed for when placed upon the market.

Three years ago it was estimated by the Ontario Department of Agriculture that the farmers of the province had \$100,000,000 on deposit in the banks at three per cent. The interest allowed by the government on its war loans amounts to about five per cent. Why should farmers who have money to place out not take advantage of this higher rate? If they do not invest some of the money in their savings accounts in the government securities, when the opportunity offers, the banks will likely do it for them and reap the advantage of the increased rate of interest. They will simply turn the farmers' money over to the government and realize two per cent. profit on the transaction. The offerings of the small investor are accepted before those of financial institutions. These domestic loans afford a safe and profitable investment at a rate more in accord with the annual value of money than that now paid by the banks through their savings departments.

FARM AND DAIRY

O.P.V. Silage

THEY have been having great success with a mixture of oats, peas and vetch as a silage crop at the Nova Scotia Agricultural College. In 1914 sixty-five tons of this mixture was secured from less than six acres. Last year twenty-nine tons was raised on three acres, although part of the land was low and wet and did not yield a full crop. This field was sown on May 15, and cut with a mowing machine and run through the ensilage cutter on August 25th and 26th. It was found that the silage was much relished by the cows. The college authorities are very favorably impressed with the possibilities of O. P. V. silage, and find that under their conditions it is more easily secured than corn.

One of the characteristics of this mixture as a silage crop is the small amount of labor that is entailed in raising it. With the present condition of the farm labor market this is no small consideration. Another thing in its favor is that in some districts it is a surer crop than corn. This has been the experience in Nova Scotia, where in the two years it has been grown it has given more dry matter per acre than the corn crop. In order to make a success of it, however, it must be sown on good land, where, with proper care, it will yield from ten to fifteen tons of green matter per acre. Corn is the king of silage crops where it can be grown with uninterrupted success. Where difficulty is met in securing a good crop every year the O. P. V. mixture appears to be worthy of a fair trial as a substitute.

The Local Fair

"EXPOSITIONS are the time-keepers of progress," said President McKinley, in his speech at the opening of the Pan-American Exposition at Buffalo in 1891, a speech that proved to be his last public utterance. This has been true of the larger exhibitions. There the improvements that have been made in agriculture, the industries and almost every other line of human activity have been faithfully registered from year to year. It should also be true of the local fairs. If the quality of the live stock, field crops and dairy and other products of the community is improving, the improvement should be shown in the quality of the exhibits at each succeeding township or county fair of the district.

It is maintained that many of our local fairs are not improving, but that with them a high water mark has been reached that is difficult and impossible to maintain. There is a danger, however, of judging a fair by its attendance rather than by the quality or number of its exhibits. In many districts the rural population is decreasing. This, with the introduction of other attractions throughout the year, may account for a decrease in the attendance even if the fair were improved. It is necessary, of course, for the attendance to be kept up to a certain point in order to secure the financial success of the fair. If to secure the financial success of the exhibits there is a falling off in the quality of the exhibits the fault may lie in the farming methods of the district. Where agriculture is progressing the local fair should be found to be improving. The local fair making the local fair better is closely connected with the work of improving the farming methods of the district in which it is held. Progressive farmers are usually keen exhibitors.

The Scarcity of Teachers

TIME was when, if the trustee board of a rural school wished to hire a teacher they had not far to look. They could generally find one in their own or adjoining school section. In fact, it was frequently a mere case of selecting a name from a list of unsolicited applications. Teaching was about the only profession that was crowded. Times have changed, however, until now it is the least crowded of the professions.

A glance at the "Teachers Wanted" columns of any city daily shows that hundreds of vacancies will have to be filled in the next few weeks if our educational system is to be in full running order after the midsummer holidays. The teachers who scan the long lists of advertisements are sure to have their attention attracted by a statement of the advantages that a community has to offer. Modern equipment in the school, convenient accommodation, telephone or radial service, such considerations as these have much to do with securing good teachers. Progressive communities have the first choice of the teachers who desire positions.

Where Will He Go?

WITH a view to preventing the further settlement of districts that are unsuited to agriculture the Conservation Commission is making a classification of government lands. Only those that are capable of a certain amount of agricultural development will be thrown open to the settler. By pursuing this policy it is hoped to prevent a repetition of such unfortunate situations as that which has arisen in some parts of the Trent watershed where the difficulties of making a decent living from the soil have proved to be so great as to result in the intellectual and moral deterioration of whole settlements.

Under existing institutions it has proved to be unwise to leave the taking up of inferior lands to the judgment of the settler. While speculators are allowed to gobble up millions of acres of the choicest land and to hold it at such prohibitive prices that the poor man is denied access to it he can only satisfy his land hunger by settling on land that is so poor as to offer no inducement to the speculator. At first he may be able to eke out an existence by securing employment at certain times of the year in the lumbering industry. When that source of income fails, he may find that his holding will not support him, even with the low standard of living to which he has become accustomed. He may be reduced to such a state of poverty that even with the advantages of open country life he becomes degenerate. It is found expedient therefore to withhold such inferior land from him. But nothing is done to bring better land within his reach. His most probable course is to drift to the city where he can find a market for all he has to sell—the labor of his hands. The taxation of land values, which would make it unprofitable to hold land for speculative purposes, and therefore bring it into the hands of those who wish to use it for productive purposes would give him an opportunity to settle on land that would respond to his work and give him a decent living.

No man should allow himself to believe that he has passed the time when he can learn from others engaged in the same line of work. Education may be acquired in more ways than one. Experience is the best teacher, but life is too short to learn much without some assistance from others. Some of the best men never miss an opportunity upon calling out that which is good and discarding the poor. The sifting process is necessary, but there is little hope for the man who tries to place himself above all others.

Dry sows not bred for fall litters may be roughed through the summer on alfalfa or rape pasture. Sows carrying a litter should receive some grain with the pasture, but not enough to cause them to become fat. Good condition is desired, but excessive fatness often results in small litters and weak pigs.

Rotation of crops is essential to right farming; but rotation of farmers and teachers and ministers is no good.

July 27, 1916.

July 27, 1916.

Wayside Gleanings

By W. G. Orvis, Farm and Dairy Representative, Field and Dairy

The Mechanical MILK

ONE of the farmers who made good in Victoria was telling me the other day that he visited a neighboring morning and found the mechanic who had repaired his machine. He explained that this man had cows and delivered the milk at the railway station some distance in one and one-half hours. He stated somewhat faintly that when the milk was separated, the cows were chewing their cud, but that the milk was fit for use. The kindness was of the cows of his neighbor. He admitted to the mechanical nature of the machine, but he convinced my Victoria countryman that it was not injuring their own way.

Neglected Weeds.

While travelling on the Port Hope to Peterboro a very good I noticed a number of bladder campion growing on the property of way. Bladder campion is said to be a very bad weed on farms. The neglect of raising weeds to cut these weeds is said to be so good in giving the adjoining land a square deal of battling them. The weeds should be strictly enforced to be better able to look after the soil than the railway company should be made to do.

A Community Lesson

While eating luncheon at Lindsay a short time ago I had a conversation with one of the school inspectors. We were discussing the schools with which he was acquainted. In his inspection mentioned a certain school distant from Lindsay, situated in his opinion, one of the schools of that district. A few days ago, he said, this school was most neglected. At one of the school meetings the only one of the best in the county secretary of this school section, he is a good farmer, and the same business principles school work as in his farm. They put in a report on the school a few days and shortly after, this section is in a store in the town where a hardwood floor had been laid. He was discussing the kind of oil, cut, etc., going home purchased a enough to give the school two coats. "Since then," he said, "that school has kept in A1 condition, and visit it, it is always clean and striking contrast to my other schools in my district. The instance shows clean shrewd business man can manage, and how much conditions may become a part of his work.

A Valuable Mind

On a certain farm in Michigan, Michigan county, is a man who lives along the shore of Lake Michigan. These trees are about the owner of this farm representative of Farm and Dairy that a year ago received a message over that district most of his neighbors' ground. It looked almost

Wayside Cleanings

By W. G. Orvis, Field Representative, Farm and Dairy.

The Mechanical Milker.

ONE of the farmers who have made good in Victoria county was telling me the other day that he visited a neighbor early one morning and found him busy milking the cows with a mechanical milker. He claimed that this man milked 19 cows and delivered the milk at the railway station some distance away in one and one-half hours. He stated, somewhat facetiously, that when the milker was put in operation, the cows were contentedly chewing their cud, but that when the milking was finished, they were milking. The kindness with which the cows of his neighbor have submitted to the mechanical milker has convinced my Victoria county friend that it is not injuring their udders in any way.

Neglected Weeds.

While travelling on the train from Port Hope to Peterboro a week or so ago I noticed a number of patches of Bladder Campian in bloom. In connection with the property of the railway, Bladder Campian is now known to be a very bad weed on Ontario farms. The neglect of railway companies to cut these weeds before they grow to seed is not giving the farmers an adjoining land a square deal in combating them. The weed law should be strictly enforced. No one should be better able to look after their property than the railway companies, and they should be made to do so.

A Community Leader.

While eating luncheon in the town of Lindsay a short time ago, I had a conversation with one of the school inspectors. We were discussing the different schools with which I was acquainted in his inspectorate. He mentioned a certain school a short distance from Lindsay, stating that it was, in his opinion, one of the model schools of that district. A few years ago, he said, this school was one of the most neglected. At one of the annual school meetings the entire school board was changed, new trustees appointed, and since then there has been a continued improvement in the school and surroundings, until to-day it is one of the best in the county. "The secretary of this school section," said he, "is a good farmer, and he applies the same business principles in his school work as in his farming operations. They put in a new hardwood floor in the school a few years ago, and shortly after, this secretary was in a store in the town of Lindsay where a hardwood floor had been recently sold. He made enquiries about the kind of oil, coat, etc., and before going home purchased a supply large enough to give the school floor one or two coats. "Since then," said the inspector, "that school floor has been kept in A1 condition, and whenever I visit it, it is always clean and tidy, a striking contrast to many of the other schools in my inspectorate." This instance shows clearly what one shrewd business man can do in a community, and how much better local conditions may become as a result of his work.

A Valuable Windbreak.

On a certain farm in Mariposa township, Victoria county, is a close row of maple trees along the west side. These trees are about 40 feet high. The owner of this farm told a representative of Farm and Dairy recently that a year ago a severe wind storm passed over that district and fattened most of his neighbors' grain to the ground. It looked almost as if a steel

roller had passed over the fields. "My grain, however, was unharmed," he said, "not a stem of it being broken. The row of maple trees broke the force of the wind just enough to prevent any damage to my crop." In these days of forest depletion, would it not be wise to start a campaign for the encouragement of tree planting on every farm. Besides providing shelter from wind storms, etc., they give a very agreeable shade to farm animals during the hot summer weather.

The Sire to Buy.

While talking over breeding problems with Mr. A. J. Phillips, Prince Edward Co., Ont., who has been in the pure bred business for some years, he says "If I had purchased a sire of good type and the best of breeding years ago, even if that animal had cost me \$1,000, I would have been many dollars ahead at the present moment." That this would likely be true, I learned later when I found that his foundation cow was more than a half-sister of old May Echo. Many men have had a similar experience since they buy the cheap sires. The good sire pays no matter what the price.

Growing Alfalfa in Ontario Co.

R. W. Walker, Ontario Co., Ont.

UNTIL recent years alfalfa was grown by most farmers in this district only as an experiment. They generally sowed a few acres to try how it would do. Some of them succeeded very well, and they sowed more the next year. Others, who did not succeed the first trial, gave it up and still they buy the alfalfa that was not much good.

We find that the best success in growing alfalfa requires the land to be very clean as it made rich with plenty of barnyard manure. There must be a dry bottom or subsoil. Any land that is inclined to heave with the spring frosts will not be a success for growing alfalfa.

I have never used any culture for treating the seed before sowing. Some of my neighbors have used it, and as far as I am able to judge, those who used it had no better success than those who did not. It may do good on some kinds of soil.

We think it serves a good purpose to top-dress alfalfa late in the fall, after the ground freezes up. Such top-dressing seems to protect the alfalfa roots from the severe winter frosts, and also serves to force an early growth in the spring.

When alfalfa begins to come in blossom, or, say, when not more than one-fourth of the blossom is out, it should be cut, if the weather is at all favorable. We find it best to start the mower in the morning after the dew is gone, and let it sit for about two hours, then rake it in windrows and coil it up, and leave it for two or three days; then turn out the coils and draw it in. We think the hay-loader should not be used with alfalfa as the leaves drop off very easily when dry, and are wasted. With good weather conditions and careful handling, you will have the best feed for dairy cows and other stock that the heart could desire.

True Enough

An Arkansas stock raiser was showing his friend from the North the splendid plantation which he owned.

After they had returned to the house and were sitting on the veranda, puffing contentedly on their cigars, the Northerner said:

"Instead of letting those razorback hogs run wild as you do, why don't you put them in a pen and feed them some of the corn you raise? Do you think they'd get fat much quicker?"

"They might," replied the planter; "but what is time to a hog?"



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FARM & DAIRY

Peterboro



COMRADESHIP is one of the finest facts and one of the strongest forces in life.—Hugh Black.

God's Country and the Woman

(Continued from last week.)

IN the same breath Jean had told him that he could never possess Josephine, and that Josephine loved him. This in itself, Jean's assurance of her love, was sufficient to arouse a spirit like his with new hope. At last he went to bed, and in spite of his mental and physical excitement of the night, he fell asleep.

John Adare did not fall in his promise to arouse Philip early in the day. When Philip jumped out of bed in response to Adare's heavy knock at the door, he judged that it was not later than seven o'clock, and the room was still dark. Adare's voice came booming through the thick panels in reply to Philip's assurance that he was getting up.

"This is the third time," he cried. "I've cracked the door trying to rouse you. And we've got a caribou portehouse, two inches thick, waiting for you."

The giant was walking back and forth in the big living-room when Philip joined him a few minutes later. He wore an Indian-made jacket and was smoking a big pipe. That he had been up for some time was evident from the logs fully ablaze in the fireplace. He rubbed his hands briskly as Philip entered. Every atom of him disseminated good cheer.

"You don't know how good it seems to get back home," he exclaimed, as they shook hands. "I feel like a boy—actually like a boy, Philip. Didn't sleep two winks after I went to bed, and Miriam scolded me for keeping her awake. Bless my soul, I wouldn't live in Montreal if they'd make me a present of the whole Hudson's Bay Company."

"Nor I," said Philip. "I love the North."

"How long?"

"Four years—without a break." "One can live a long time in the North in four years," mused the Master of Adare. "But Josephine said she met you in Montreal."

"True," laughed Philip, catching himself. "That was a break—and I thank God for it. Outside of that I spent all of the four years north of the High Land. For eighteen months I lived along the edges of the Arctic trying to take an impossible census of the Eskimo for the Government."

"I knew something of the sort when I first looked at you," said Adare. "I can tell an Arctic man, just as I can pick a Herschel dog or an Athabasca country marmoset from a pack of fifty. We have much to talk about, my boy. We will be great friends. Just now we are going to that caribou steak." Out in the hall, through another door, and down a short corridor, he led Philip. Here a third door was open, and Adare stood aside while Philip entered.

"This is my private sanctuary," he said proudly. "What do you think of it?"

Philip looked about him. He was in

a room almost as large as the one from which they had come. In a huge fireplace a pile of logs were blazing. One end of the room was given up almost entirely to shelves and weighted down with books. Philip was amazed at their number. The other end was still partially hidden in gloom, but he could make out that it was fitted up as a laboratory, and on shelves he caught the white gleam of scores of wild beast skulls. Comfortably near to the fire was a large table scattered with books, papers, and piles of manuscripts, and behind this was a small iron safe. Here, Philip thought, was the adytum of an ordinary man; it was the study of a scholar and scientist. He marked the absence of mounted heads from the walls, but in spite of that the very atmosphere of the room breathed of the forests and the beast. Here and there he saw the articulated skeletons of wild animals. From among the

"Such things could never tire me. I only ask that I may be your companion in your researches, and learn something of the wonders which you must already have discovered. You must have studied wild animals—for twenty years!"



A Modest Home, Made Beautiful by Trees. The Farm Home of Mr. Chas. R. White, Ontario Co., Ont.
—Photo by an Editor of Farm and Dairy.

books themselves the jaws and ivory fangs of skulls gleamed out at him. Before he 'ad finished his wondering survey of the strange room, John Adare stepped to the table and picked up a skull.

"This is my latest specimen," he said, his voice eager with enthusiasm. "It is perfect. Jean secured it for me while I was away. It is the skull of a beaver, and shows in three distinct and remarkable gradations how nature replaces the soft enamel as it is worn from the beaver's teeth. You see, I am a hobbyist. For twenty years I have been studying wild animals. And there—"

He replaced the skull on the table to point to an isolated shelf filled with books and magazines. "—there is my most remarkable collection," he added, a gleam of humor in his eyes. "They are the books and magazine stories of nature fakirs, the

'works' of naturalists who have never heard the howl of a wolf or the cry of a loon; the wild dreams of fictionists, the rot of writers who spend two weeks or a month each year on some blazed trail and return to the cities to call themselves students of nature. When I feel in bad humor I read some of that stuff and laugh."

He leaned over to press a button under the table.

"One of my little electrical arrangements," he explained. "That will bring our breakfast. To use a popular expression of the uninformed, I'm as hungry as a bear. As a matter of fact, you know, a bear in the lightest case of all brute creation for his size, strength, and fat supply. That row of naturalists over there have made him out a pig. The bear's a genius, for it takes a genius to grow fat on poplar buds!"

Then he laughed good humoredly. "I suppose you are tired of this already. Josephine has probably been filling you with a lot of my foolishness. She says I must be silly or I would have my stuff published in books. But I am waiting, waiting until I have come down to the last facts, I am experimenting now with black and the silver fox. And there are many other experiments to come, many of them. But you are tired of this."

"Tired?" Philip had listened to him without speaking in this room John Adare had changed. In him he saw now the living, breathing soul of the wild. His own face was flushed with a new enthusiasm as he replied:

"I only ask that I may be your companion in your researches, and learn something of the wonders which you must already have discovered. You must have studied wild animals—for twenty years!"

is not well. I had hoped that the forest in Montreal would help her, but they have failed. They say she senses no malady, no sickness when they can discover. And yet she is not the old Miriam. God knows, I hope the tonic of the snow will bring her back to health this winter."

"It will," declared Philip. "It signs point to a glorious winter, and dry—the snow will be deep when you can hear the crack of whiplash half a mile away."

"You will hear that frequently enough if you follow Josephine's chucked Adare. 'Not a trail in the forests for a hundred miles, she does not know. She trains all the dogs and they are wonderful.'"

It was on the point of putting his tongue to ask a reason for the silence of the fierce pack he had seen the night before, when he caught the woman appeared through the doorway with a laden tray. Adare helped her arrange his breakfast on a small table next the fire.

"I thought we would be more general here than alone in the dining room, Philip," he explained. "I am mistaken the ladies won't be until dinner time. Did you ever see a male caribou? The horns of the Marie, you are a treasure. I mentioned Philip to a seat, and he was serving. 'Nothing in the world is better than a caribou portehouse, it roasts it, but broil it. An inch and a half is the proper thickness, thick enough to hold the heart of it with juice. See it ooze from that caribou heat it.'"

"Not with anything I have seen along the Arctic," confessed Philip. "A steak from the cheek of a walrus is about the best thing you find up in the 'Big Iceberg'—that's first. Later, when the walrus has got into his marrow, you can seal blubber and narwhal fat and call it good. As for me, I'd pickles to anything else in the world, so with your permission I'll help myself. Just now I'd eat pickles with cream."

It was a pleasant meal, Philip could not remember when he had known a more agreeable host. But until they had finished, and Adare produced cigars of a curious hue and almsness, did the older man ask the question for which Philip had been carefully preparing himself.

"Now I want to hear about you," said. "Josephine told me very little, said that she wanted me to get impressions first hand. We'll smoke and talk. These cigars are from Havanna. I have the tobacco imported by the bale and we make our cigars ourselves. Reduces the cost a minimum, and we always have supply. Go on, Philip, I'm listening." Philip, reminded of the old woman's telling him to narrate the events of his own life to her father, except that he was to leave open, it were, the interval in which he supposed to have known her in Montreal. It was not difficult for him to slip over this. He described his coming into the North, and Adare's eyes glowed sympathetically. Philip quoted the passing of Mrs. Raddison. But what struck deep with him was Philip's physical and mental fight for new life, and the splendid way in which the wilderness had responded.

"That you wouldn't go back now," said, a tone of triumph in his voice. "When the forests once claim you they hold."

"Not alone the forests, Mon Per (Continued next week.)"

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Light on Scriptural Prophecy

Effect on Christian Living.

In the questions and answers relating to the second coming of Christ which have appeared in Farm and Dairy it has not been shown what effect this revelation in the second coming is supposed to bear on Christian living. Is it important? If so, what passages are there to show this?

The fact that the early Apostles all laid great emphasis on the second coming of Christ is clearly revealed throughout the New Testament. It was held up as an incentive to watchfulness in Matthew 24: 42-44; 25: 13; Mark 13: 32-37; Luke 12: 35-38; Revelations 19: 15. To repentance in Acts 3: 19-21; Revelations 3: 3. To fidelity in Matthew 25: 19-21; Luke 12: 42-44; 19: 12-13. It was given as a warning against worldliness in 1st Timothy 6: 18-21; as an incentive to moderation or mildness in Philippians 4: 5; to patience in Hebrews 10: 36-37, and James 5: 7-8. It was mentioned as an incentive to practical sanctification of the entire being in 1st Thessalonians 5: 23; to encourage obedience to the Apostle's injunction in 1st Timothy 6: 13-14; as an encouragement to Christians to purify themselves in 1st John 3: 3; as a reminder of our Christian citizenship in Philippians 3: 20-21; as a comfort to the Apostles in view of Christ's departure from them in John 14: 3 and Acts 1: 7. A practical faith in the Second Coming is mentioned as a crowning grace in 1st Corinthians 1: 4-8. The event is mentioned as something for which the believer waits in 1st Thessalonians 1: 10. Many other passages might be quoted. It is marvellous that so many earnest Christians, in the reading of their New Testaments, pass over these numerous references without understanding the things they mean just what they say; that the Saviour is to return in just the manner indicated in the Scriptures, and that we should be watching and ready for that event.

Closed Boiler Fruit Canning

By Mrs. R. J. Deachman.

In Closed Boiler Canning some form of sterilizer is necessary, and as we deem it poor judgment to advocate expenditure for commercial canners at a time when every item of economy is necessary on account of the war needs, we wish to point out the fact that the utensils which every farm and home already have on hand may be converted into a satisfactory sterilizing vat. An ordinary tin wash boiler is admirably adapted for this purpose, provided it has a tight fitting cover which will keep in the steam. When canning only two or three jars, a large pan or lard can with a cover will be found more convenient than the cumbersome wash boiler, which is necessary for a day's canning.

A **FASE BOTTOM** is absolutely necessary. This is made to fit the bottom of the sterilizer and may be made of a piece of board full of holes or a piece of heavy wire netting, or pieces of lath nailed together. This is placed in the bottom of the boiler to keep the jars from direct contact with the heat of the stove.

Canners must now realize that it is folly to attempt canning milk jars with imperfect sealing tops or jars. The type is immaterial so long as it seals tight and has a sanitary top. Pay particular attention to the rubbers as they guard the door against the approach of bacteria from the outside air. See that they are competent to perform this important duty. Run your finger round the rim of each jar. If it has the slightest chip in it,

reject it. Try on the rubbers. If they are nicked or bulge use others. Perform these tests before commencing your day's canning. The principle of canning are always the same. The product must be sterilized until all bacteria is killed, and then sealed to keep out the unsterilized outside air.

Syrups in fruit canning are made by boiling pure sugar with water until it is clear, skimming off impurities as they rise. The density of syrups must be largely governed by the individual tastes of families, although a fair standard may be arrived at as follows:

One pound sugar added to 12 gallons water gives a syrup of one percent of one degree density. The syrups most needed in fruit canning are as follows: For preserving cherries, strawberries, etc., use a syrup made in the proportion of one pint of sugar to one-third pint of water. For preserving currants, peaches, plums, quinces, etc., use a syrup made of one pint of sugar to one-half pint of water, or one of equal parts of sugar and water. For canning these fruits a thinner syrup will be found correct. Make it in the proportion of one pint of sugar to one and one-half pints water, or if a really thin syrup is desired use one pint of sugar to two pints of water. Remember that if your product is properly sterilized and sealed the richness of the syrup forms no part whatever in their keeping.

Jars, tops, and rubbers should be placed in the boiler to sterilize while preparing the fruit. Bring the water to a boil and allow the jars to remain there until needed. Lift out one jar at a time and empty it, but do not wipe it. The water in the boiler should be warm, but not hot when the jars (filled) are put in, and should come three quarters of the way up the jars. If the lid fits snugly the steam which collects in the upper portion of the boiler will assist in the sterilization. The jars may be covered with water if desired.

Canning Soft Fruits.

To can strawberries, blackberries, loganberries, dewberries, sweet cherries, huckleberries, blueberries, peaches, apricots, wash the fruit by pouring water over them in a strainer. Peaches and apricots may be blanched in boiling water for one minute to remove the skins. Stones may be removed if desired. Berries should be hulled and stemmed and cherries pitted. Pack immediately into glass jars, being careful not to crush or bruise the fruit. Make a syrup, using one pint sugar to one and one-half pints water, and pour it boiling hot over the fruit to completely fill the jars. Put on rubbers and tops and partially tighten tops. Place jars in the boiler on the false bottom. Bring water to a boil and sterilize for 15 minutes. Soft berries will sterilize in a much shorter time. Do not let the fruit break up by too long boiling. Remove boiler lid, tighten tops and remove jars from boiler. Invert to cool and test the seal. Store in the dark or wrap jars in paper to preserve the color.

When canning currants, gooseberries, cranberries, sour cherries, stone, hull and wash the berries. Pour boiling water over them and allow to blanch in it for one minute. Drain and plunge quickly into cold water and out again immediately. Pack in sterilized jars, and pour in to completely fill them, a syrup made of one pint of sugar to two-thirds pint water. Put on rubbers and tops and partially tighten tops. Place in the boiler and sterilize for 25 minutes. Tighten tops and remove.
 To can apples, pears, quinces, plums, and cold pit them. Remove skins and of desired core, quarter or slice them. Pack in sterilized jars, and pour over



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Devonshire Clotted Cream*

A Delicacy Little Known in Canada, But in Which are Good Possibilities—By Wilfrid Sadler, B.S.A., Macdonald College, Que.

EVER since coming to Canada I have been impressed with the opportunities existing for the establishment of a new industry which would be a sound financial undertaking for the dairymen, and one which would be welcomed by the consumer. In the Niagara peninsula, in the city of Ottawa, in Toronto and elsewhere, a constant supply of a first-class clot of cream would, especially during the hot season, rapidly create its own demand, returning an adequate profit to the farmer of dairy men who undertake to pioneer and substantiate the production.

Equipment.

In the main, the equipment for making clotted cream consists of a long clove or galvanized tank, some three to four feet from the floor. This tank, about three feet wide and one foot deep, is to accommodate water and is fitted with steam connections whereby the water may be heated. The tank is fitted with a cover hinged in such a way as will admit of the pans being superheated and at the same time surrounded by the water. These pans used for the milk are preferably made of aluminium or block tin. They are 20 to 24 inches in diameter at the top, 12 to 14 inches diameter at the bottom, and are 8 inches deep. A cool room is required, fitted with latticed metal shelves. Small strainers, resembling a culinary strainer, palette, or similar one perforated metal skimmers, complete the essential apparatus. It will be seen that the whole of the equipment is such that a local iron or hardware manufacturer, if unskilled or inexperienced, can install without much difficulty; and, apart from the room set aside for cooling purposes, the amount of floor space required is not large.

The Process.

Having the necessary equipment, the prime essential is a bacteriologically clean milk. The milk, on being received, is poured into the pans, using for each pan from 6 to 8 quarts. The pans are set aside in the cool room and left for 10 or 12 hours for the cream to rise. When operations are to begin the steam is turned on and the water in the tank heated to a temperature of about 200 degs. F. The pans of milk are placed in the tank, the greatest care being observed in the heating, so that the layer of cream shall not be disturbed. The steam heating continues, and the contents of the pans reach a temperature of 180 to 190 degs. F. This operation usually taking about 20 to 30 minutes.

When the heating or "scalding" is completed, the layer of cream in the pan is crinkled, and appears as a blanket or "head" of cream on the surface of the milk, from one-quarter to one-half inch thick. The pans are now removed, placed on the shelves in the cooling room and allowed to remain for 20 to 24 hours. We now have the "clotted cream." It is lifted with the skimmer and placed in the perforated strainer. This part of the proceeding calls for considerable skill, for excessive stirring and mixing of the cream is liable to destroy the texture—a highly important consideration.

Marketing.

The cream is ready for sale at once, and for marketing purposes is packed in small earthenware jugs or wood pulp cups similar to those in vogue as receptacles for cream. Clotted cream is sold by the pound, and when reduced under good conditions can be perfectly sweet and typical after at

least 48 hours in transit, using no preservative whatever. I have found that the average weight obtained from many trials was 10.39 ozs. of clotted cream from 15 lbs. of milk; or 1 lb. of clotted cream from 23 lbs. of milk. The price at which the cream finds market varies, but in general it compares favorably with the price obtainable for whole milk shipped to the city.

The unique flavor of clotted cream is no doubt due in some degree to the scalding process; but I have reason for believing that both the flavor and the keeping properties of the cream are largely problems of a bacteriological nature. Regarding the qualities required in a typical sample of clotted cream, it must be granular in texture, firmer than the thickest of cream obtained from the separator, but not so firm as a freshly made cream cheese. The color should be golden. Too much moisture indicates an excess of scald milk incorporated and a consequent impairing of the keeping qualities. The cream has a so-called "nutty" taste, and is decidedly pleasing to the palate.

*From an address before the E. O. D. A. Convention at Renfrew last January.

Cheese Box Specifications

A NEW order has been issued by the Board of Railway Commissioners, stating that headings for cheese boxes may consist of four pieces, if tongued and grooved. This order is in response to the submissions made by the dairy interests and backed up by deputations from cheese and cheese box manufacturers, as well as from other bodies engaged in the produce trade. As it now stands, paragraph (a) of Supplement No. 5 to the Canadian Freight Classifications No. 16, giving specifications for cheese boxes, reads as follows: "Tops and bottoms (headings) to be not less than five-eighths inch in thickness and to consist of not more than three or four pieces if tongued and grooved."

Directions for Using Pepsin

TWO drachms of Soluble powdered Pepsin (1 to 3,000 test) are sufficient to coagulate 1,000 pounds of milk. Dissolve the pepsin in water in the proportion of three ounces of water for each two drachms of pepsin, using preferably a round-bottomed pot or bowl as a container. The water must be at a temperature of 105 degrees F. When the water is added it must be stirred immediately and continuously, or it will become a sticky mass, very difficult to dissolve. After being thoroughly stirred it is well to

pour the liquid from one vessel to another to see that there is no undissolved pepsin adhering to the vessel. It is a good plan to add at first only enough of the water to make a creamy paste. Stir until smooth and then add the full amount of water. A few drops of hydrochloric acid added to the water helps to dissolve the pepsin.

Dilute the above in the same quantity of water as is used with rennet extract before adding it to the milk. It is advisable to dissolve the pepsin at least half an hour before using. The acidity and temperature of the milk should be the same as when rennet extract is used. If rennet extract is available it is recommended to use half the usual quantity with half the above quantity of pepsin, mixing the pepsin solution with the rennet extract before diluting with water.

Scale Pepsin of the same strength (1 to 3,000) may be used according to these directions, and in the same proportion. If either Soluble Powdered Pepsin or Scale Pepsin is of different strength the quantity used must be varied accordingly. For instance, if the strength is 1 to 6,000, only half the quantity should be used.

Great care must be observed to keep the stock of pepsin from the slightest dampness. Store in a dry place and keep tightly covered. If it gets damp it will cake and become insoluble and useless.—Dairy Division, Ottawa.

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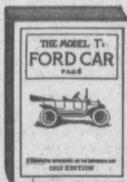
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