

FARM AND DAIRY

RURAL HOME

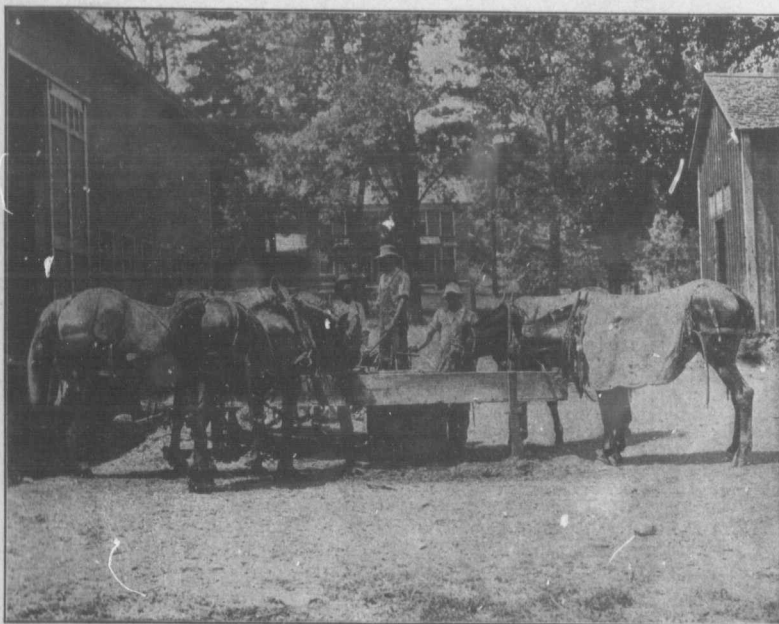


DEVOTED TO
BETTER FARMING
AND CANADIAN
COUNTRY LIFE



Peterboro, Ont., July 20, 1916

Dairy and Cattle Shows
at the
Dept. of Agr. Dec. 16



Noon

From Wage-Earner to Farmer

A Successful Back-to-the-Lander.

Clean Milk with a Machine

How to Keep a Milking Machine Sanitary.

Facts Concerning the Jersey

By a Jersey Fancier.

Activities of the U. F. O.

Successful Local Meetings Held.

God's Country and the Woman

Mystery Deepens at Adare House.

Many Practical Articles

On Timely Subjects.

In Times Like These



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 easier 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 1100-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. Milker

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. Milker, 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 on the Simplex Separator and B. L. K. Milker, 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.

In Union There is Strength

U. F. O. Activities

DURING the days that intervened between the district conventions President Halbert and Secretary Morrison of the U. F. O. and Mr. Kennedy, of the Ont. Growers' Grain Co., Winnipeg, found time to address several local meetings of Farmers' Clubs. On July 1st they attended a picnic held under the auspices and management of the several farmers' clubs recently organized in the vicinity of Forest, Ont. In spite of the rain of work in the hay fields, the attendance was large. The afternoon meeting was presided over by H. J. Pettepice, of Forest, who urged the farmers to continue their organization until they were able to put a stop to the robberies of the combines which were draining life out of the farming industry. Mr. Halbert urged his fellow farmers to lay aside all party politics and vote for their own interests. Party politics, he said, was the farmer's greatest weakness. Mr. Kennedy, in dealing with the work being done by the organized farmers of the West, stated that it was not the local manufacturers, but the big wholesalers and the manufacturing and transportation combines, that were the cause of the decline in agriculture. A free trade league had been organized in the West, which, it was hoped, would eventually wield such an influence in governmental affairs as to prove result in taking away of a protective tariff that gives three times as much to the combine as it did to the public treasury. Mr. Morrison, in speaking of the work of the U. F. O., said that a big education campaign was in progress, which would be of much benefit to the farmers.

Other Meetings.

On July 2nd, Mr. Kennedy and Mr. Morrison went to Brechin; Mr. Kennedy's old home, where an enthusiastic meeting was held, many of the ladies of the club were present. Similar gatherings were held later at Stonyville and Orilla. At the latter place they have a bumper crowd. Win. Lyness, of the Ditholt Club, was in charge and deserves great credit for the energy he displayed in making the occasion a success. Other surrounding clubs took an active part in this meeting. Mr. Kennedy spoke very ably and was listened to with deep interest and appreciation.

After the Orilla meeting, Mr. Kennedy and Mr. Morrison motored to Bonaville, a distance of 25 miles, and in the evening addressed a meeting of Cedar Grove Grange, which had been called by J. G. Morrison, master, and Hillard McDonald, secretary. The meeting was enthusiastic and fairly well attended for Saturday night.

Cooperative Company Directors Meet. On Tuesday, July 11th, a meeting of the directors of the United Farmers' Cooperative Company was held in Toronto. Addresses were given by T. A. Crearer, president, and John Kennedy, vice-president, of the Grain Growers' Grain Company, Winnipeg. John Morrison, of Yellowgrass, Sask., one of the directors of the company, also spoke. Important matters referring to the business of the company were discussed and the decisions arrived at will be submitted to the consideration of the members of the company in due course.

Echoes From the Convention

THE U. F. O. aims to be a social benefit to the people. Such an organization is more necessary in rural districts than ever be-

fore. Even the telephone and the rural free delivery have been detrimental to social life in the country. We used to hitch up a horse and go and visit our neighbors when we wished to talk to them. Now we go up to the wall and take down the receiver. We need an organization where we can meet and discuss matters pertaining to our welfare.—R. H. Halbert.

We will never have a truly democratic country until we have direct legislation. As it is now we elect our so-called representatives and they run down to parliament. They do as they like there for the next five years or more, and we have no say whatever in the matter. They can vote away our property as fast as they like, and we are helpless. Under direct legislation we could demand that any measure be submitted to the people before it became law. We would then have a chance to veto any legislation by which the natural resource of our country would be given away to the interests.—John Kennedy.

Sometimes there is a run on a certain line that we are handling, and we find it impossible to keep up with orders. We do our best to fill orders as they come in. If an order comes in for goods that we are not sure that is owing to circumstances that are beyond our control.—Anson Groh.

Greater than any other question that could arise before you in the question of taxation. Our present system is based upon injustice. Any increase of income that may come to us as farmers will be of little use as long as it can be taxed away from us again. Land value taxation is the only just and scientific system. Our farmers' conventions in the west have repeatedly passed resolutions favoring taxation of land values.—John Kennedy.

The Late James Cottingham

QUEBEC'S oldest Ayrshire breeder, Mr. James Cottingham, of Ormatown, Que., passed away on July 5th, 1914, at the age of eighty-three years. Mr. Cottingham was born at Stony Creek, Chateaugay Co., Que., in 1833. His father moved from Stony Creek to near Ormatown, when James was six years of age, and when he grew to manhood succeeded his father on the farm.

Mr. Cottingham was a splendid farmer and his steading and farm was always a model of neatness. Farming was his business, and he aimed at perfection. He entered in various farm competitions, and three times won the first prize for the best farm in the county. In the Provincial Farm Competition he won a brown, a silver, and finally a gold medal. In 1875 he purchased his first Ayrshire cattle from Andrew Somerville, of Laehue, Que., and became one of Quebec's noted Ayrshire breeders. On the farm today may be seen one of the best Ayrshire herds in the Province of Quebec.

Each week there has been considerable milk and cream left at the office to be tested, but this quality was greatly improved the past week. A number of men are awakening to the value of having their cows tested, and in one case a gentleman brought in a sample of milk from each of his 14 patch cows. He is going to make another test very soon, and will dispose of those cows which do not show up favorably as regards percentage butting fat in the milk.—E. F. Ness, North County.

Trade inc

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FARM AND DAIRY



We Welcome Practical Progressive Ideas

& 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 20, 1916

No. 28

From City Wage-Earner to Successful Farmer

The Story of How an English Printer is Making Good on a Canadian Farm

WHEN a man leaves a paying trade to take up farming there must be good reason for it. He must see in his new vocation prospects of better conditions of living than in the old. Many men who had made this "back-to-the-land" move have met with disappointment, but there are many who have undertaken their new work with such zeal and intelligence that in a short time they have become conspicuously successful in it. One of these is Mr. Harry Barrett, Victoria Co., Ont., upon whom I recently called. After spending an hour or so talking with him, I was convinced of his wisdom in becoming a farmer, first, because of the independent living being derived from the farm by himself and family, and secondly, because he is building for himself a profitable and congenial business, and at the same time adding something of value to Canadian agriculture.

Getting Experience.

Eleven years ago Mr. Barrett came to Canada as a young man with seven years' experience in the printing trade as his only asset. He was directed for employment to a dairy farm in Victoria county. On this farm cows were kept, not for consumption of food and the privilege of attending to them, but for profit. The hired men were expected to earn their wages, and at the same time to learn as much as possible about the business. If they proved worthy of the opportunities presented to them they were welcome to remain as long as it was mutually agreeable. For a year and a half Mr. Barrett worked upon this farm. By careful, persistent application to his work, and by the study of all available agricultural literature, he learned the fundamentals of the dairy business. This knowledge consisted not only of how to milk and feed cows and to clean stables, but included also the growing of crops for fodder purposes; the handling of these crops to insure the best quality of feed; the treatment of the soil to get the largest returns, and other subjects of equal value to the practical farmer.

During the next two and a half years Mr. Barrett went out West twice, worked one year at his trade in Toronto, and spent some time on the farm with his first employer. "As for the West," he said, "I have no fault to find with it, but I decided that Ontario was the best place for me, so I got married and settled in Toronto. For the next year and a half I worked steadily at my trade, and at the end of that time was getting \$17 a week. We saved a little, because we made ourselves do it. It would have been easy to have spent it all, far easier than to save. All the time we kept planning for the future. Finally we decided that, at the end of 10 years, we would be

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

further on the road to prosperity on a farm than in the city."

A Start Made.

Mr. Barrett came back to work for his old employer for one year so that he could rent a farm and get some stock together. He was fortunate in securing a hundred acre farm directly across the road from where he worked, and at auction sales in the fall he bought three horses, six grade

cows and the necessary implements. A brother of Mr. Barrett's, who had been in Canada for several years, joined forces with him in this venture, their combined capital being \$1,500 cash. This money paid for most of the things purchased and tided them over the period until they reaped their first harvest. Seed grain was high, as they had to pay \$1 a bushel for barley and prices for other grains were correspondingly high.

The brothers planned to follow the same line of farming as that followed by their former employer, and they also adopted some of the methods they had seen worked out so successfully on his farm. They cherished the hope, still unrealized, that some day they would own a farm where they could practise with full liberty the line of farming which they wished to follow. Another ambition was to have a high class utility herd of Guernsey cows. This has been almost realized, for as soon as some of the younger animals reach maturity the most critical will be satisfied on this point. After three years of harmonious work, the brother, who was a reservist and unmarried, left for the front, and Mr. Harry Barrett was left to continue the work they had begun.

The Herd Founded.

The first cows bought were not of the kind desired, and Mr. Barrett gradually disposed of them. Meanwhile he bought a Guernsey heifer, three years old, from his neighbor, and a year later a Guernsey cow for \$112.50 and a two-year old heifer for \$75 from the same man. These are the foundation cows of the present herd of high testing Guernseys.

When I asked him why he liked the Guernseys, he said: "Because they are bigger than the Jerseys and give a richer colored milk. I like the breed for the cream trade, and that is the trade in which I intend to specialize. The Guernsey cow will give me good returns for food consumed and for labor expended and then—I like them." These last words are surely true. His cows show it: They did not run from me when I went into the pasture field as cows do on many farms, but crowded around in an interested manner, showing that they had not been ill-treated, but were well used by their owner.

As proof of the producing ability of Mr. Barrett's herd I secured the following information from the local recorder of the Dairy Division:

The average per cent. of butter fat of the milk produced since the first of the year by this herd is 4.93. One cow, named Cherry, gave 3,575 lbs. of milk in three months, with an average test of 4.5 and yielding 161.5 lbs. of butter fat. Another, named Dairymaid, gave 9,260 lbs. milk in six and one-half months, with an average test of 5.3



The War on Weeds

THE cooperative experimental work in weed eradication, carried on by the Ontario Experimental Union for the last four years, has been valuable as a source of data from which definite statements can be made regarding the best methods of controlling some of our worst weeds. The practical farmers who carried on the work demonstrated to their own satisfaction the effectiveness of the methods used. The following information has been gained from these cooperative weed experiments:

That good cultivation, followed by rape sown in drills, provides a means of eradicating both perennial sow thistle and twitch grass.

That rape is a more satisfactory crop to use in the destruction of twitch grass than buckwheat.

That rape gives much better results in the eradication of twitch grass and perennial sow thistle when sown in drills and cultivated than it does when sown broadcast.

That through deep cultivation in fall and spring followed by a well cared for hoed crop will destroy bladder campion.

That mustard may be prevented from seeding in oats, wheat and barley by spraying with a twenty per cent. solution of iron sulphate without any serious injury to the standing crop or to the fresh seedlings of clover.

per cent., yielding 463.8 lbs. butter fat. These two cows were four-year-olds. A two-year-old, named Dese, gave 2,381 lbs. milk in four and one-half months, with an average test of 4.6 per cent., yielding 109.4 lbs. butter fat, a truly remarkable record for a two-year-old grade heifer.

The Farming Methods Followed.

I was anxious to learn something of the farming methods followed, and so questioned Mr. Barrett on this subject. He said: "We always plan to seed down as much as possible and to keep one-quarter of the cultivated land under grass." This virtually meant a four-year rotation. It has often been said that under this rotation there is little fear for the fertility of any farm. Upon further enquiry, I found that emmer was quite extensively grown, and was fed with confidence and with good results to all classes of stock. Speaking of this, Mr. Barrett said: "I have nothing but emmer and barley sown in the grain line this year. It was so late before we could get our land in shape that I did not think it wise to risk oats. Emmer will yield equally as well as oats, and is a good safe feed for all classes of stock. I believe in growing clovers. In fact they are essential in the dairy business. I am trying sweet clover this year, and an almost convinced it is just what we need. I haven't the slightest doubt about the animals eating it. It is growing four feet high and is as thick as a mat over there on the stoniest piece of ground on the farm. The biggest trouble, in my opinion, will be in curing it. Corn is one of our mainstays for fodder. Seven acres have been sown this year, although there will be no silo to receive it in the fall. This means work and careful handling, but corn is one of the factors of success in dairy cattle feeding."

When I was leaving, Mr. Barrett said: "I do not believe in these high sounding stories that are written of what big men, who have plenty of money and need not care how they spend it, are doing in the farming business. What we want is something inspiring from men who are in much the same position as ourselves. One thing I am sure of, however, is that a good cow pays well for her feed and attention, and for the small men like myself she can be depended upon to lift us out of the mire of debt and mortgages."

Mr. Barrett's experience proves that no matter what a man's financial condition may be, if he applies himself and possesses the ordinary allowance of common sense, he can succeed in the dairy business on a Canadian farm.

Efforts for the bettering of rural conditions and for the maintenance of a desired standard of farm life have mainly been in three directions: first, the removal of obstacles; secondly, the increase of individual efficiency; thirdly, the increase of community efficiency. The ideal result of all these efforts is not to make rural life easy, but to make it noble. All obstacles need not be smoothed away, but enough of them to make conquest possible. It is not effort and struggle that deprive farm life of satisfaction, but continual and ignominious defeat. A sense of mastery is necessary to any degree of satisfaction and to the growth of noble character.—President J. B. Reynolds, Manitoba Agricultural College.

Horses are very susceptible to mold poison, and great care should be given to their grain feed if the previous summer has been very favorable for the development of molds, especially on oats. Some forms of mold act quickly and in a similar way to ptomaine poisoning in the human family, while others require a considerable period of feeding to develop the symptoms.

Getting Clean Milk With a Machine

Care, Cleanliness and Chloride of Lime Will Keep a Milking Machine Free From Germs

By T. H. LUND, B.S.A., Dept. of Bacteriology, O. A. C., Guelph.

ONE of the newer problems confronting a number of dairymen today is that of securing sanitary milk with a milking machine. If it once becomes established that machine milk is usually of an inferior sanitary quality, there will gradually grow up a prejudice against it, and factories will refuse to take milk unless it is drawn by hand. On account of the labor-saving value of the milking machine, we should leave no stone unturned in our efforts to avoid the establishment of such a prejudice. There is considerable evidence to show that the quality of machine-drawn milk in Western Ontario is not what it should be. For this undesirable state of affairs we must lay the blame, not on the machine, but on the man who handles the machine, and the methods employed by him.

Owing to the porosity of its structure, we find that rubber, which comes into frequent contact with milk, is very difficult to keep clean. Washing powder, hot water and brushes will remove a lot of dirt, but they cannot turn out the germs which have lodged in the pores. Live steam, in this case, cannot be used or the rubber will soon

be destroyed. One pound of chloride of lime is mixed with ten gallons of water, and after being well stirred, is allowed to settle, and the clear solution is poured off for use. If only a pint or so of water is added to the chloride of lime to begin with the lumps can be more easily broken up and a stronger solution will be obtained. Full strength chloride of lime can be bought in 100-lb. drums at from 3c to 4c a pound. A solution made up as above retains its germicidal properties for about two weeks in summer and from three to four weeks in winter, depending on the temperature at which it is held.

For use among factory patrons we suggest that chloride of lime solution be made up in bulk at the factory and distributed from time to time as needed to the different farms. As soon as a farmer finds that his solution fails to turn the test paper blue he will apply to the factory for a fresh supply.

Cleanliness of the Machine.

The metal parts should be thoroughly washed and scalded each time after use and then put out of reach of dust and flies. The test-cups and tubing should be fitted on to the machine and well rinsed out before and after use. Warm water should be used for rinsing before milking to remove all traces of the chloride of lime; warm water and washing powder should be used first after milking and then hot water before putting the tubes in the sterilizing solution.

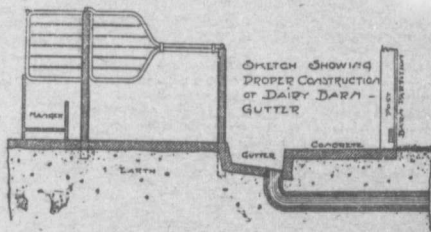
Test-cups should be taken apart at least once a week and given a thorough scrubbing with hot water and washing powder, and the tubing should be well scrubbed out with the brushes provided. They should then be rinsed in hot water before putting together and returning to the chloride of lime. This must be done at least once a week if satisfactory results are to be obtained. The test-cups and rubber tubing should be completely immersed in the solution. The required results are not secured if these parts are left sticking up into the air. The solution should fill the tubing, and not be, as we find in some cases, where the ends dip into it, but the centre of the tube remains filled with air.

Preparing for Fall Wheat

Elias B. Martin, Jr., Waterloo Co., Ont.

AFTER the first cutting of clover is saved I usually let it come on again in the hope of getting a second crop. If I need part of the land for wheat, however, I plow this crop under about the beginning of August, a common walking plow being used with a chain to assist in turning down the clover. Then I roll and disk, repeating the operation as often as it is necessary until a firm solid seed bed is formed. I keep on cultivating with the drag harrow to keep the weeds in check and to conserve moisture until the second week in September. Then I sow my wheat, using about one and three-quarter bushels of Michigan Amber per acre.

I have never used any commercial fertilizer, but most of my neighbors use it on wheat, some with good and some with indifferent results. If I were using fertilizer I would prefer to buy the different ingredients and mix them as the sowing crop requires. I do not favor the use of ready mixed fertilizers, as it is impossible to tell what one is buying.



Gutter Construction Where Liquid Manure is Specially Valued

Here and there we find a farmer who keeps a few dairy cows, but whose main income is derived from market gardening. On such farms the liquid manure is specially valued. The diagram herewith shows the gutter construction advisable where the liquid is to be carried away to a separate tank.

be destroyed. The best method employed is that of immersing the rubber parts in some kind of sterilizing solution between the milkings, after first thoroughly rinsing out any milk that may remain behind. Samples of solutions used for immersing the rubber parts were taken on farms in Western Ontario and a determination of the number of bacteria in each of these samples was made. The following is the information, with reference to the solutions used, that was obtained. Of 16 farms visited, seven were using water, five lime water, two salt, one baking soda, and at one farm, as nobody was at home, the composition of the solution was not ascertained. The bacterial content per cubic centimeter of these solutions was as follows:

Water.	Lime	Salt	Baking
Water.	Water.	Water.	Soda.
Unknown.	Unknown.	Unknown.	Unknown.
50,000	4,000	3,500,000	6,500,000
678,000	300,000	10,000,000	3,240,000
816,000	2,700,000		
1,100,000	8,100,000		
1,512,000	9,700,000		
1,600,000			
110,000,000			

A glance at these figures convinces us that there is something radically wrong. In practically every case they were teeming with billions of bacteria. If we are to get a satisfactory quality of milk with machines solutions such as these must go.

In chloride of lime we have a cheap and effective germicide which makes a satisfactory steri-

HOW stable with the in winter right in the changing life, quite as necessary in summer as in the barn. I more so as the grasses. In the pasture fence and methods improve and attention, and the cows less open sunlight cows are kept in the warm months of the year. The chief of the farmer comfort fresh air passing in the wind. In order to should he not the east and with the wind. The windows dilating shaft so that they warm air. To offer the regulation of a tags I see when the cow open so as to air before the day. Cows for a few months will be created milk.



Cow Comfort in Summer

By "Dairyman," Renfrew Co., Ont.

HOW stables have been generally designed with the object of keeping cows comfortable in winter only. This may have been all right in the past, but conditions are rapidly changing in the dairy industry, and it is becoming quite as necessary to provide for stable comfort in summer as in winter. The practice of milking in the barn is now common, and will become more so as the use of the milking machine increases. Instead of throwing green feed over the pasture fence to the cows we now have the summer silo and feed them in the stable. As dairy methods improve the fly nuisance claims more attention, and every one knows that flies bother the cows less in a cool, dark place than in the open sunlight. On most good dairy farms the cows are kept in for at least a part of the day in the warm months, and this should not be lost sight of when stables are built or remodelled.

The chief consideration in providing for summer comfort is to have a continuous stream of fresh air passing through the stables. The prevailing wind in this country is from west to east. In order to catch the most of this the stable should lie north and south, with the windows in the east and west side. This arrangement agrees with the winter demands for lots of sunshine. The windows should be entirely removable. Ventilating shafts and feed shutters should be made so that they will carry off a maximum amount of warm air. The stable fixtures should be such as to offer the minimum obstruction to the free circulation of air. This is one of the chief advantages I see in metal stable fixtures. At night when the cows are out everything should be kept open so as to provide for a complete change of air before they are put in again the following day. Cows kept in a cool, well ventilated stable for a few hours each day during the hot summer months will show their appreciation in an increased milk flow.

A Remedy for Social Ills

EDITOR Farm and Dairy: When a great political leader visits a community people turn out in force to hear him discuss remedies for social ills. He speaks with the voice of authority. We farmers are just coming to realize that right in our midst we have men who are little in the public eye, but who as they follow the plow and drive the binder, are thinking more deeply than our greatest politicians and see with clearer

vision what the needs of the country really are. Our farmer statesmen may be short on sophistry and ignorant of the game called "politics," but they are long on facts. Where, for instance, could you find a more complete summary of necessary changes needed for the rejuvenation of country life than those given by W. C. Good, Master of the Dominion Grange, in a public address to farmers. Mr. Good said:

"In the first place we must abolish the protective tariff, which is fallacious in theory, vicious in practice, un-Christian in principle, and the prolific breeder of political corruption.

"In the second place we must cease to allow the 'unearned increment' in land values to be appropriated by private individuals. Rent, in the economic sense, is a social product, and should be used for society's needs. Such a revolution in our methods of taxation would have surprising results, and would do away with all excuse for tariffs of any kind.

"In the third place, we must modernize our political machinery so as to secure and execute a more real democracy. Direct legislation through the initiative and referendum is the best immediately available means of doing this.

"Fourthly, we must organize our industries upon a cooperative basis for mutual service and not for profit. We need cooperative producing associations, cooperative stores and distributive agencies, cooperative credit associations, and so forth.

"Fifthly, we must adapt our schools to our country's needs, revive an interest in nature and country life, and develop wholesome tastes and ideals."

These opinions, advanced as they are by a man who, like the rest of us, depends entirely on his farm for a living, should command the respectful attention of all. We have been allowing others to form our opinions for us too long. And many of the opinions that we have been taking ready-made are designed for the benefit of the Privileged Interests rather than the farmer. Let us do our own thinking.—John J. McCubbin, Wentworth Co. Ont.

Corn must be fed in combination to get the best results. It is a bulky food and quickly fills the cow. Something more concentrated in nutritive value is needed to supplement it. It is succulent and very palatable. It combines very nicely with clover hay.—Clarke Hamilton, Dundas Co. Ont.



Between Haying and Harvest is the Time to Keep the Cultivator Busy.

An animal in some ways resembles a river, which is the result of the combining of many streams. The animal is the result of the combining of the blood lines of parents, grand parents, great grandparents, and so on. If one of the streams is muddy, though the rest be clear, the whole river becomes murky, and likewise one poor ancestor will weaken the animal. That is why pedigrees are kept. They do for the animal what keeping the muddy stream from flowing into the river does for the river. The pure bred is the result of careful selection and use of the animals with strong points and just as careful an elimination of those that could not add strength or quality.

A large weed may use as much as a barrel of water. A plant weighing one pound when dried has used up 700 to 800 gallons of water in making its growth, or 70 to 80 gallons, making nearly two barrels. From this it is plain that cutting down weeds is a very good way of saving moisture for the crop.—N. D. Expt. Station.

Sod lands give the best yields when plowed early. July is a good time. When plowed too late the grass roots do not rot well. Sod land plowed at the wrong time may give a decreased yield instead of an increase.



Picking Strawberries on the Farm of W. F. W. Fisher, Halton Co., Ont. This is Becoming a Valuable Cash Crop on Many Farms.

Some Facts Concerning the Jersey Cow

A Jersey Fancier Gives Interesting Facts and Figures to Back Up His Faith in His Favorite Breed

E. A. Johnson, Prescott Co., Ont.

THE future of any dairy herd depends upon the manner in which the foundation animals are selected, and how they are bred offspring are developed. Success depends upon clear, keen knowledge and application of proper judgment in selecting and breeding the herd, and to anyone who is about to begin, especially if he is about to enter the ranks of Jerseydom, it is of vital interest that he select and develop his herd carefully.

Lack of advancement or a decline in the value of a herd is due in a great many cases to the fact that the breeder does not use good judgment in selecting the cows to be sold and those to be retained for building up his stock. No breeder ever built up a really great herd who kept continually selling his best cattle. Until a herd reaches a certain standard, his inferior animals should go to the block. After he has his herd well weeded out, and all inferior ones sent to the butcher he can begin selling for breeding purposes. He will still have choice cows, so that in selling he is not hurting his herd and not loading something poor upon a trusting buyer. If those sold are tested, so much the better, for then the buyer knows just what he is getting.

Beauty and Production.

In selecting Jerseys, it pays to get the best, at least as good as the pocket will allow. It is better to buy one good one than two poor ones. The beginner is often misled by thinking that there are two types of Jersey, the show cow and the worker. This is a very wrong idea. The show cow that is also a worker, is the ideal cow that the breeder should strive for. The Jersey will breed true to type, and with high milk production behind the sire, you will get producing capacity. The show cow is good for the show ring cow a worker, and vice versa; beauty and productiveness combined. To cultivate the beauty type or show ring cow to a great extent would tend to keep her out of many good farms where production counts, and where the cow is required not only to bring in a profitable living, but in many cases to help pay off a mortgage as well. I am sure that with careful breeding and good feeding, both beauty and production can be attained in the same animal.

Every Jersey is a problem by herself. Each animal has her own peculiarities and characteristics and peculiarities are studied out and respected, she will certainly respond to any method, both in production and reproduction.

The Choice of a Sire.

With regard to choosing the herd sire, let me impress the importance of this most vital point. One can't be too careful in choosing the head of the herd. Many failures have been traced to lack of judgment, care and attention in picking out bulls. "Like begets like," and it is almost sure to follow that if the herd sire is inferior, the result will be inferior offspring and poor milkers, but on the other hand, if the breeder will buy the best he can afford, even if he may have to cut himself short in some other line, he will find to his delight that it pays well, for the sire with lots of milk behind him will throw calves that will also make high producers.

Careful consideration must be given the mother cow, especially during the time she is dry. In order to have her milk well, she should have good and careful feeding for the last six to eight weeks, especially during the last three weeks, as the calf at this

embryonic stage needs a lot of nourishment. Roots, bran, corn meal, alfalfa or clover hay, also plenty of light and clean quarters, will bring about all that we may look for.

Just here it might not be out of place to give a few facts concerning the Jersey, of which it is sometimes said, "She is a very small milker," or "There is no money in her." Such remarks used to hurt the Jersey. Her smallness, but she is coming into her own, and if those who are often ready to criticize her would look into the facts concerning the amount of feed consumed, along with milk production, perhaps they would change their minds. In the Illinois Competitive Cow Test, finished in 1912, and conducted by the University of Illinois, a very severe try-out was given the different dairy breeds. The test was continued two years, and 197 cows were entered. There were 27 Jerseys, 57 Holsteins, 40 Guernseys and 75 Brown Swisses and a number of grades of other breeds made up the balance and resulted as follows:

Some Jersey Records.

The Jersey heifer, King's Golden Diplomi, 252638, nine days under two years old at the start of her test, won first place as the best cow of any breed. In one year she produced 664.8 lbs. butter fat and earned a credit of 738.75 lbs. butter. Her milk production was 9,770 lbs. for the year. The test was not the basis of economic production, the vantage ground of the Jersey, yet a Jersey won as best cow over all competitors of any breed or

age as well as first prize for two-year-olds.

But the most significant fact of all is that a herd of six Jersey cows was the special prize to the herd giving the largest amount of butter fat. There were twice as many Holsteins and three times as many Guernseys as Jerseys in this test.

Another feature of the Jersey is her easy adaptability to any climate. From the Canadian West and Western States to the far West of California, New Zealand and Denmark, you will find this little "butter giant."

In Alberta, considered pretty cold, we find 12 Jerseys (nine cows and three heifers) with an average of 8,983 lbs. of milk, 460 lbs. of fat, and 575 lbs. of butter per head in a year, so I consider myself safe in saying that it is an injustice and a detriment to the Jersey to suppose that she requires any extraordinary care in these cold climates.

As to the quality of her milk, there isn't much room for argument, for no other milk is so highly valued. With a greater percentage of solids than our Jersey. There is but one other breed that even approaches her in this, and as milk is mostly water, its nutritive value, as far as a human food, depends on the solids it contains. Analysis of Jersey milk all over the world has more than verified this. To "back up" as it were, the claim that the Jersey milk can't be out of place to give a few facts and figures that will further prove the value of what a grand cow she really is for butter and cream. From an analysis of cows given milk tested by Prof. C. H. Eccles and Prof. R. H. Shaw of the United States Bureau of Animal Industry, showing the percentage of solids in the milk of the

(Continued on page 7.)

Pointers on Septic Tank Management

The Bacteria Will Do the Work if the Tank is Dark and Airtight with Submerged Inlet and Outlet

CARE must be taken not to empty into the intake pipe potato peelings and other coarse substances that will not pass through a trap freely. Chloride of lime interferes with the bacterial action; hence, it should not be used to any great extent in the sink. Bacteria do not materially change grease. If it enters the tank system in great quantities, it eventually clogs it. It is often necessary to chop a grease trap below the sink.

To prevent gases from escaping, the manhole covers should be made tight by using cement or asphalt. The "Septic Tank" system is at once scientific and simple. It can be easily applied to any place where sufficient fall can be secured to carry away the sewage. It is inexpensive, absolutely automatic, and thoroughly effective and satisfactory. The product flows away in a clear, sparkling stream of water, 98 per cent. pure by chemical analysis. When a stream of air, the remaining two per cent. of impurities are liberated, leaving a stream of clear water. That sewage can enter at one end of a tank a foul, offensive stream reeking with hydrogen sulfide gas from the other end and a limp stream of water, seems wholly incredible, and yet such is the case. The wonder of it all is that it cleanses itself automatically, without artificial energy, solely through the work of the film bacteria preying upon each other. This system works continually, summer and winter, year in and year out, with absolutely no supervision and without change in any season.

How Filth is Destroyed.

In 24 hours, or a little over, after sewage enters the tank, a scum will

form on the surface, an inch or more in thickness, consisting of a solid mass of film bacteria, which prey upon the poisonous matter and the solids contained in the sewage, constantly fighting among themselves and destroying each other like the Killikony cats, which devoured each other until nothing was left but the tail, the tail is this case being represented by the two per cent. of poisonous matter left in the water as it escapes, and which is at once eliminated upon exposure to the atmosphere.

Light and air are fatal to these bacteria; hence, the necessity of keeping them in the dark and airtight so that they may accomplish their work. For this reason, the tank must be airtight. Again, to do their work effectively, they must be left in perfect quiet.

The system of this kind will not freeze in winter, as the sewage arising from the sewage in the tank generates enough heat to counteract cold and prevent freezing.

When the sewage discharge is scanty and infrequent, there might be danger of the water freezing in the filter box during a long cold spell, and then it would be advisable to erect a small, light building, well protected from frost, over the whole outfit, including both tank and filter, but when the sewer is in constant use this would be unnecessary.

The secret, if secret it may be called, of the whole system is the dark and airtight tank, the submerged inlet and submerged outlet, and that is all there is to it. The bacteria will do their work if let alone. If stirred up, they will be destroyed.

When properly working, the tank might be opened, the bottom scraped and not a handful of solid matter could be found.

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Wilkinson Climax B
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Ensilage and Straw Cutter

Our "B" machine, built especially for the farmer. A combination machine—it will cut and deliver green corn into the highest roller drystraw or hay into the mow. 12-inch throat, rolls nine inches and set close to knives—solid, locking adjustable surface. Can charge out with compact cutting surface. Can be reversed instantaneously. Best pneumatic delivery. Kinks wheels for easy loading, everything cut, well always in balance. Six feet cut.

Make twenty-five mowings or mowings. We also make larger type machines for custom work. Ask your dealer about this well known machine and write for new catalog showing all styles.

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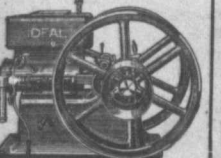
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Have You Secured One of Farm and Dairy's Real Live Premiums



Tuberculosis in Fowls

A BOUT five years ago, I isolated a sick hen in my flock and she died of tuberculosis. Next year there were more, and last year I sold off all the old hens, leaving only the pullets, and thought I was rid of the disease. They looked fine until four weeks ago and now about three-fourths of them appear to have tuberculosis. Last fall I thought I'd have pure bred roosters. Will it be safe to keep them? I am getting eggs to hatch from a neighbor. Will it be safe to have the affected fowls mother the best? Do they get tuberculosis from the parent stock or from another?—C.

The first thing to do in re-establishing healthy conditions in a flock is to thoroughly clean the house and to lime and plow the ground adjoining. The chickens should be raised in an incubator or by hens from some other source. It would be dangerous to use affected hens.

In regard to the males, there is some danger but if these males can be put off by themselves until needed for use say until next March, and if they all remain physically fit it would be fairly safe to use them, but should any break down with the disease, it would be advisable to kill them. If the stock is raised by artificial methods or healthy hens and the premises cleaned up, there should not be many birds affected with the disease later on.

Pointers on Marketing Eggs

By Michael K. Boyer.

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

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

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

Guaranteed Fresh,
Purebred Poultry Farm,
DaCosta, N.J.

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

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

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

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

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

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

In nearly all the big cities there are grocers who cater to a fancy trade, and these are only too glad to

arrange with some farm having a reputation for furnishing eggs that are strictly fresh.

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

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

The Health of the Flock

A SUCCESSFUL poultryman says that he prevents much sickness in his poultry yards by furnishing shade, exercise, pure food, fresh water, variety of diet. He avoids drafts, is regular in feeding, avoids overfeeding, gives charcoal twice a week, avoids overcrowding, has cool houses in summer and warm houses in winter. He keeps down the house crop, whitewashes the interior of the houses twice a year; gives green food daily in summer; cleans up the droppings daily, and uses plenty of disinfectants. He doctors the slightest ailments, but kills off all cases of contagious disease.

He feeds green cut home twice a week; has a constant supply of sharp grit within reach of the fowls. He scalds cut clover hay in winter for sickly food; does not feed any heating food in summer. He plows up the house several times a year; keeps floors indoors during bad weather, disinfects the houses once a month, kerosene the roosts and nest boxes once a week; has a constant supply of fresh females during moulting, and each week scalds out the drinking vessels.

Wayside Cleanings

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

Split Log Drag Needed.

WE have just finished a fine piece of road grading, and it certainly looks good," said a man in Victoria Co., Ont., the other day. "What we need now is a split log drag to run over it twice at intervals through the summer and keep the ruts and holes filled up. I think the council ought to furnish every road with a split log drag for keeping the ruts in shape and that the pathmaster should see to it that the roads are dragged when needed." The suggestion of this country there are long stretches of road in need of it. The suggestion of this Victoria county farmer might apply in many cases as the split log drag wherever used, keeps the road in first class condition.

Farm Advertising.

It usually costs money to advertise. A Prince Edward county farmer has quite an inexpensive way of advertising his stock and farm products. On the barn and on the silo were painted the name of the farm and the fact that the owner was breeding high class Holstein cattle. Anyone passing along the road could easily read this lettering and it brought to the notice of all that this man was not only making good in his particular line of farming but that he wanted others to know it. This method of advertising could easily be adopted by any farmer and would be very effective.

Sowing Turnips on the Flat. In a recent issue of Farm and Dairy there was a short article telling how one man prepared the ground for

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If not, do it NOW
They are proving very popular
They are popular with Our Folks.
We know this because they keep us busy filling their orders.

We like them best because after Our Folks get them they will constantly become more valuable. A cheap and trashy premium would be lost or destroyed in the course of a few months, but at the end of that time one of our

REAL LIVE PREMIUMS

have trebled in value and become a source of constant revenue. In a year or so, they will be like the fine big fellows you see in these illustrations.

Pure Bred Ayrshire Bull Calves

These are guaranteed to be good, strong-boned, typey calves, well marked with clearly defined colors and of the very best breeding.

In short, they will be

**A CREDIT TO THE BREED
—AND—
ELIGIBLE FOR REGISTRATION**

We are giving one of these calves for 25 New Subscribers to Farm and Dairy, at \$1.00 each.

Pure Bred Holstein Bull Calves

We still have some of the Holstein calves from the same herd that were so popular with Our Folks some time ago. They are big, strong, typey fellows, just what the beginner in the pure-bred business wants. Begin at once and earn one of them before they are all gone. Send us a list of 25 new subscribers to Farm and Dairy at \$1.00 each, and we will have one ordered for you right away.

FARM & DAIRY, Peterboro, Ont.

Dear Sirs,

Please send me full information and supplies, as I am determined to win one of your REAL LIVE PREMIUMS.

Name

Address

Premium desired

mangles. I noticed another man in one of the Eastern counties recently sowing turnips with the ordinary grain drill. He used the holes of the grass seed attachment stopped with corks, excepting the three which he was using. After the ground had been well prepared and rolled, he proceeded to sow it after the same manner as farmers sow corn. This man stated that he had followed this method for several years and found it quite satisfactory, one advantage being that the ground did not dry out to such an extent as it would when put up in drills. Germain's ion was quicker and although a little harder to hook, a more even crop was secured.

Primitive Hay Making.
That primitive methods in hay making are still in vogue was seen from a car window in Victoria county recently. A man and two women were rolling hay direct from the mower swath. The presence of the women in the hay field would not have been necessary if the man had been progressive enough to have either bought or borrowed a hay rake. A large amount of time could have been saved by the use of this implement. With the scarcity of labor and lateness of the season, the most improved implements are needed by the farmer and there surely is not a place in Canadian agriculture for such primitive methods as were in evidence on this farm.

HORTICULTURE

Midsummer Garden Hints

Keep all vegetable and flower beds free of weeds.

Watch vegetables and flowers closely for indications of insect and disease troubles.

A good velvetv lawn adds to the value of a home.

Train the tomatoes to stakes in the home garden. Do not allow more bunches to grow than can be matured.

Flow under the old strawberry bed as soon as the plants have fruited and plant some other crop.

Now is a good time to take a day off and visit a city park or perhaps a neighbor who has a well-planned and well-kept place.

Use a note book on your travels and make a memorandum of the plants and plantings that appeal to you.

There seems to be no sure way of getting rid of crab grass in the lawn but to dig it out before it goes to seed. Close mowing helps, but even then some branches are left to raise seed to start new plants next season.

Do not put any but clean, well-graded, perfect fruit on the market. It doesn't pay to mix second grade with first grade because your first grade at once becomes second grade in the eyes of the purchaser and you get the lower grade price.

There is a wealth of wild flowers in the woods that make good cut flowers. Should we not make an effort to save these in parks and gardens, especially those like the lady slipper, showy orchid, etc., that are fast being destroyed because of their singular beauty?

Light pruning of elm and maple trees may be done now.

Do not let but one or two delila shoots grow. Keep these tied to stakes and you will have larger flowers than if all shoots are allowed to bloom.

If you need to water shrubs or plants, do a thorough job. Be sure the plants are soaked clear to the tips of the roots. Sprinkling does not pay except to get the dust off.

It is just as important to cultivate the garden now as it was earlier in

the season, though it may not be so pleasant work.

Keep a pan of water where birds may find it on these warm days. Protect it from cats and the birds will furnish you much enjoyment.

Seed of perennials may be sown now, transplanted to seed boxes or the open ground when large enough and protected over winter, when the plants may be set in the border.

There are many annual vines that may be used to cover a trellis or fence. Among them are sweet peas, morning glory, cobeia, bean, balloon vine, cypress, moon flower and adiantum chlorocephalum.

There are few prettier plants than the common wild rose. Its buds and flowers are useful as decorative material and its foliage and fruit tips add much to a planting in autumn.

The Darwin, or late-flowering, tulips are well worth planting this fall. They come into flower later than the others and if the weather is not too hot will remain in bloom over a long season. Pride of Harlam and Gretchen are two good varieties.—Lefroy Cady, University Farm, St. Paul.

Maggots on Carrots

FOR the last two years I have been bothered by a small worm which I have called into my garden carrots. It does not attack them much in summer, but it does during the winter they are spoiled for table use.—Subscriber, Stansted Co., Que.

It is evident that the worms which he has found in his carrots are the maggots of the carrot rust fly. The effect upon the growing plant is usually to cause the foliage to turn reddish and have a rusty appearance.

It is very difficult to suggest any remedy for creatures that feed internally. They cannot be reached by any poison and usually methods of culture are the only ones that are effective. It has been found useful to sprinkle the ground around the plants with sand, and plaster or lime to three gallons of which one pint of coal oil has been added. This is employed to prevent the flies laying their eggs. The application ought to be made early, while the plants are quite young and repeated about once a week. It is important not to grow carrots in the same piece of ground two years running. When it comes to storing in the autumn, the carrots should be carefully examined and all diseased ones removed and fed to pigs or otherwise disposed of, as the maggots continue to feed and grow during the winter.

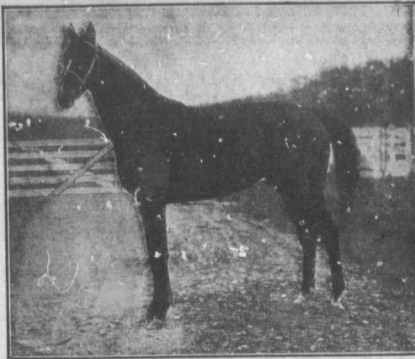
Quince as an Ontario Fruit

QUINCE has never become very popular as a fruit, yet it is one of the oldest, being much in favor of the far back part of the century VIII. Some people are quite fond of quinces and if they were more extensively grown and used they might be more popular.

Some five or six years ago I planted a number of trees in my garden just to see if they would grow and produce fruit. They have grown fairly well and do not seem to be seriously affected by this rigorous climate. We have had some fruit from them also, and it is as delicious as any that can be bought.

We have found that the quince does best on well drained clay soil. It will not produce good growth on wet land. The tree should be kept open to the sun and trimmed carefully. The growth is slow, but trees will usually bear at about four years old. I am quite convinced that the quince is worthy of a much better place in the minds of most people than it now holds.

Juiciness in broilers is due to pure food and rapid maturity.



"AMNER," THE KING'S GIFT TO CANADA.

The Canadian National Exhibition has arranged with the Dominion Government and the Canadian Thoroughbred Horse Society to have Amner, the Thoroughbred stallion, presented by His Majesty, King George, as a gift suitable to improve the stock in Canada, paraded every afternoon during the Exhibition. Amner is a beautifully bred horse, and stands over 16 hands, with plenty of quality and substance, and a good disposition. He was selected by Lord Marcus Beresford from the Royal stud as a horse most suitable for the Canadian requirements, and has been pronounced by successful breeders as the best stallion that has ever left the shores of the world's greatest nursery.

"Production and Thrift"

You Dairymen of Canada! The Department of Agriculture, in its War Book, "Production and Thrift," asks you to "do your bit" in the great struggle by increasing production. The shortage of labor has made this hard to accomplish. Yet the problem can be solved by labor-saving devices. Take milking: One man can milk and strip 30 cows per hour with a Sharples Milker. If you have 15 cows or more, it will pay you to get a

SHARPLES MILKER

The patented "Upward Squeeze" keeps the teats perfectly healthy—Nature's own way. Valuable cows can be safely milked—hardest milkers respond readily. Bred makes no difference. Over 300,000 cows milked twice daily by the Sharples is abundant proof of satisfactory service. Milk flows through rubber tubes to sealed silver buckets, so no pollution is possible from stable air, stable dust or hands. The milk is cleaner milk and higher priced. Anybody can operate it. Practically every part is non-corrosive—built to last. Send for free booklet: "Dairying for Dollars Without Drudgery"—full of hand-graded facts.



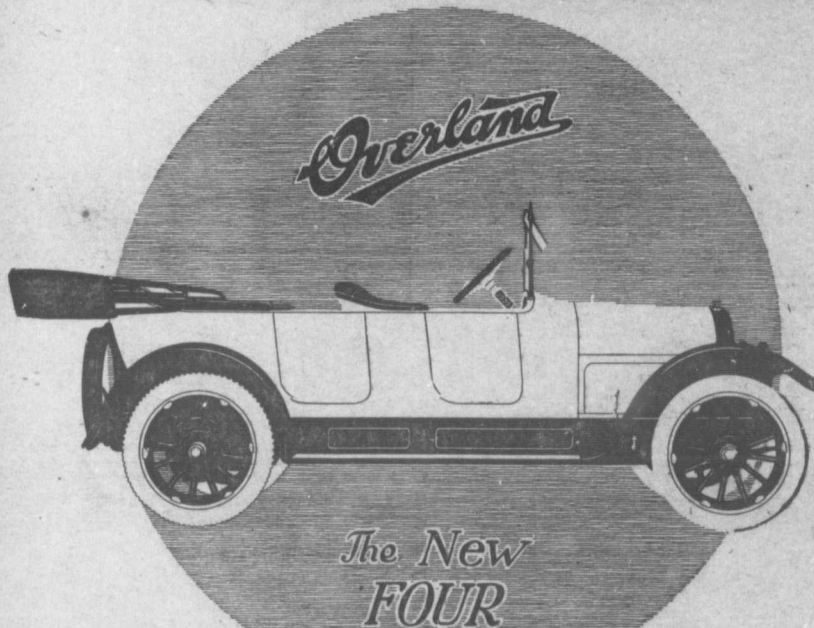
Another Aid to Economy

Cream production can be increased by the use of a separator that will get ALL the cream at ANY speed. There's only one machine that will meet this requirement, the

SHARPLES SUCTION-FEED CREAM SEPARATOR

will save on the average about 947 a year—sometimes as high as \$100—over any other separator. Remember, too, the cream's purity even every time—that means higher prices. Sharples tubular bowl contains no disc—by far the easiest to wash. Low supply tank—easy to fill. Send for our free book: "Values for Dairymen." Price 25c. We make a splendid line of Double-Ignition Gasoline Engines, 1/2 to 5 horse-power—fully guaranteed.

The Sharples Separator Co. Toronto - - - - - Canada



What 1000 Cars a Day Make Possible

Here is one of two new Overland models which again emphasize the enormous economy of enormous production.

No one has ever before made 1000 a day of cars of this size and class—nor half that many.

1,000 cars a day enable us to use materials of a much higher quality and not only permit but actually enforce an accuracy of workmanship which smaller productions of cars in the same price range neither permit nor require.

1,000 cars a day make possible better, larger,

The New Four
Model 85-4

<ul style="list-style-type: none"> ■ 35-horsepower en bloc motor 112-inch wheelbase 32½-inch tires Castilever rear springs 	<ul style="list-style-type: none"> Auto-Lite starting and lighting Gasoline tank fuel feed Electric tank in rear with gauge Electric control switches on steering column
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much more comfortable cars than have ever before been possible at anywhere near the price.

• • •
This newest Overland is the largest Four ever offered for so low a price.

In the first place, note the longer wheel base—112 inches.

The en bloc 35-horsepower motor, which has made

the Overland famous is continued.

True—it is perfected even more and now it is a fitting climax of the experience obtained from a quarter of a million of these Overland motors in daily use.

Shock absorbing cantilever type rear springs are a big improvement.

The gasoline tank placed in the rear is another improvement.

The vacuum system insuring a steady, even gasoline flow at all times is still another improvement.

The famous and complete Auto-Lite electric starting and lighting equipment is furnished.

All electric switches are on the steering column—right within reach.

The artistically designed streamline body with one piece cowl makes this car one of America's most attractive models.

Yet the price of this, our greatest Four cylinder value, is less than any car of its size ever sold for before.

Catalogue on request. Please address Dept. 760

Willys-Overland, Limited, Head Office and Works West Toronto, Canada



Cars of Higher Quality —Greater Values

The newest Overland Six is no less a pace maker than the new Four.

Here is the Six of Sixes! A snappy five passenger long stroke 40 horsepower model—easy to handle, light, economical, mighty comfortable, having all the advantages of higher priced sixes, yet it comes absolutely complete at a lower price than any other Six of its size.

Its smart body design is long and low—having lines of artistic simplicity.

And the motor! This will warm the heart of every six cylinder enthusiast in the Dominion.

The New Six

Model 85-6

36-40 horsepower six bloc motor
116-inch wheelbase
32x4-inch tires
Cantilever rear springs

Auto-Lite starting and lighting

Vacuum tank fuel feed

Gasoline tank in rear with gauge

Electric control switches on steering column

You've heard all about fast get-a-ways—smoothness—crawling and climbing on high. This Six does all that and then some!

The wheel base is 116 inches. It has cantilever springs and even-flow vacuum system with the gas tank in rear.

The tires are four inch. It has the complete Auto-Lite electric starting and lighting equipment

with all switches on the steering column.

Some Six! Yet the price is lower than any other Six of its size.

• • •

All emphasis falls short of expressing the real superiority in quality of Overlands compared with other cars in the same price class.

You must grasp the enormous advantage of our greater production—

more than double that of any other producer of cars of like size—or Overland prices will lead you to underestimate Overland quality.

In a comparison of values Overlands have always dominated, but this season's Overlands dominate by a margin wider by far than ever before.

But go to the nearest Overland dealer and see these new models. Go over them—note all the very real and important improvements and learn the prices.

The Overland dealer is ready to make demonstrations of both models now.

Catalogue on request. Please address Dept. 760

Willys-Overland, Limited, Head Office and Works West Toronto, Canada

FARM AND DAIRY

AND RURAL HOME
PUBLISHED EVERY THURSDAY



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For more detailed statements of circulation of the paper, showing its distribution by counties and provinces, will be mailed 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 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 such 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."

Requests shall not ply their trade at the expense of our subscribers, who are our friends, through the medium of these columns; 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.

The Satisfied Buyer

RECENTLY we happened to be present when the buyer and seller of a pure-bred animal met. It was very gratifying to hear the many expressions of satisfaction from the present owner of the animal. He was so well satisfied that he said he felt like going back for more. Needless to say, this made the other man feel good also. He does not wish to sell his best individuals nor any of the particular strain with which he is working, but he has reached a place in his breeding operations where he will have animals of both sexes to sell every year, and he realizes the value of a pleased customer. He knows that with the good-will of a few such men as the one with whom he was talking he will find ready purchasers for any surplus stock of which he wishes to dispose.

To always endeavor to satisfy a customer is recognized as one of the fundamental principles of good business. This applies as forcibly in breeding as in other lines of activity. In no business is the good will of the public of more value than in that of the live-stock breeder, and in no business do opportunities arise more frequently for imposing on buyers. To be able to accurately appraise the value of a pure-bred animal requires special aptitude and years of experience. Many young breeders have to depend on the word of the men from whom they purchase their animals for an estimate of their market value. When they find that their trust has been misplaced and that an animal for which they have paid out hard earned money is not as represented, that business affinity which business men call good-will, and which may be worth more to the seller of the animal than the price paid for it, is lost. He may never have an opportunity repairing the damage that has been done by dealing fairly with them

in another transaction. If they find that their experience has not been taken advantage of they are likely to come back when they require more animals. Square dealing is one of the foundation stones of successful breeding.

Demanding Their Rights

PRESIDENT HALBERT, of the United Farmers of Ontario, never failed to secure applause when he declared, at the recent conventions, that the day was past when the farmers should be satisfied with the cry bones that were thrown to them through the back doors of legislatures after the demands of the interests had been satisfied, and that the time had come when they should unite and march boldly up the front steps and demand their rights as the agriculturists of this country. Much is said of the appropriations that are made annually for the advancement of agriculture, but compared with the legislative benefits that accrue to other and less important industries they are a bagatelle. That farmers are aware of this is evident from the appreciation they showed of Mr. Halbert's call for united action.

Only by uniting will the farmers be able to press their demands through the front doors of legislatures. The memorable "Siege of Ottawa" by the western grain growers was possible because they were first thoroughly organized. If the farmers of Ontario are ever to be in such a position as to lend such force to their demands as will result in legislative action in their favor it must be as a united body. In the "U. F. O." they have a promising organization, one that is truly representative of their industry and that merits the support of every farmer in the province. Its membership comprises men of all shades of political opinion. Though only two years have elapsed since the inception of the organization they now number over five thousand. With the rapid spread of the movement that is sure to take place in the near future it will only be a short time until the farmers of Ontario will have an organization of such strength that its demands cannot be ignored.

City Pavements vs Country Roads

THE chief purpose that inspired the building of the million dollar pavement between Toronto and Hamilton has been revealed. "By means of a durable pavement between these two cities" says the annual report on Highway Improvement in Ontario for 1915, "goods ordered in one city may be placed on a motor truck and in four or five hours will reach the purchaser in the other city with a minimum of handling. The advantages of this highway between the two cities in replacing the present comparatively slow freight and express process are thus apparent."

This explanation will be comforting to the many farmers of Ontario who can never take more than half a load to market, owing to the steep grades and quarries that intervene. If they should think of the many miles of good plain country road that could have been built with that million dollars, the lack of transportation facilities between Toronto and Hamilton will reconcile them to the Gooderham project. The plight of these two cities for lack of quick and easy transportation facilities between them, is truly pathetic. They are about forty miles apart. On the two railways that connect them, there are approximately twenty passenger trains, and probably as many freight trains, running each way every twenty-four hours. At least three steamships make the inter-city trip daily. The great need that exists for additional means of transportation is therefore apparent.

In the face of these illuminating facts, how unaccountable is the action of the Toronto city council, which kicked like the proverbial steer when called upon to vote the city's share of the few

hundred thousand dollars that the cost of the highway exceeded the estimate. Of course, the anxiety of auto owners for a joy-riding which to indulge their passion for joy-riding while the tilling producers earn the wherewithal to pay for it, had nothing to do with the project. As soon as the business men of these two cities are relieved from the necessity of waiting an hour or two for a train on which to ship their goods, it may be that the attention of the good roads experts will be exclusively devoted to fixing up some of the bad spots in the roads of Ontario, so that the farmer will be able to take a full load at a decent speed when going to market. That is the only kind of a joy ride that he desires.

Good Fruit and Good Prices

NO branch of agriculture is the reward for turning out a high-class product greater than fruit growing. The lesson of the last two seasons in regard to this industry is that although the market will not absorb even at prices that are disappointing to the grower all the fruit of inferior quality that is produced, for high-class fruit the demand at good prices exceeds the supply. The grower who, by good cultural methods produces fruit of superior quality, and who follows this up by attractive and honest packing will find that the war will not seriously affect his sales, and that the consumer is willing to pay him good prices for his product.

There are many dairy farmers who produce fruit as a cash crop. With them it is purely a sideline. In the rush of other work there may be a temptation to neglect the orchard in favor of the more important of their farm operations. Investigations have shown that the skillful handling of cash crops has an important bearing on labor income. The wise expenditure of time on a sideline has frequently been shown to be the chief cause of a farmer's prosperity. A little extra effort devoted to the orchard may enable a farmer to secure the premium that the consumer is willing to pay for good fruit. This may result in a substantial increase in the net income for the year.

The community needs nothing so much as the church to interpret life, to diffuse a common standard of morals, to plead for the common interest; to inculcate usefulness, neighborliness, cooperation; to uphold ideals and to stand for the supremacy of the spirit. In the depleted town, with scattered institutions and broken hopes, in the perplexity of changing times, in the perils of degeneracy, the church is the vital centre which is to be saved at any cost. In the readjustment of the times the country church has suffered, but if in its sacrifice it has learned to serve the community, it lives and will live.—Dr. Anderson.

One of the most important things that can be done now to aid the corn crop is to keep it free from weeds. The weeds are after the same plant food, the same moisture and the same sunshine that the corn plant needs. Another big thing that will help the corn plant is shallow cultivation. Many of the corn roots run quite close to the surface and in a wet year they are still nearer the surface. The cutting of these roots by the cultivator delays the corn. D. D. Expt. Stn.

Families run out both at the top and at the bottom of the social scale. It is the great middle class which, from the point of view of the evolutionist, cogitates the hope of society; and it is precisely this class which remains in the country.—Josiah Strong.

On August 10 the first Western Canada Edition of Farm and Dairy will be published. Watch for this splendid number.

Rural Home

Men and Women

INSPIRING address by the Rev. Mr. R. H. Deane, pastor of the St. Paul's Episcopal Church, held at the Toronto Convention of the National Sunday School Union, July 20, 1916. It was a most interesting and timely address. The speaker, who is a member of the Executive Committee of the National Sunday School Union, in his address, gave an interesting and timely address. The speaker, who is a member of the Executive Committee of the National Sunday School Union, in his address, gave an interesting and timely address.

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Prof. Frank H. Rowland, of the University of Toronto, in his address, gave an interesting and timely address. The speaker, who is a member of the Executive Committee of the National Sunday School Union, in his address, gave an interesting and timely address.

Rural Leaders Attend Summer School

Men and Women Engaged in Rural Work Assemble at the O. A. C., Guelph, for Two Weeks' Instruction

INSPIRING addresses and pleasant social relations, made the second annual session of the School for Rural Leadership, held at the O. A. C., Guelph, from July 3 to 15, one of pleasure and profit to those who took advantage of it. Although the attendance was not large, the enthusiasm ran high. One of the pleasing features of the school was the learning and playing of games during the recreation period. Volley ball became very popular. A series of games in indoor baseball, tennis and bowling was carried through, these being participated in by many of the school teachers, who were at that time attending their summer short course. The lecture program was contributed by Prof. Edwin L. Earp, Professor of Sociology, Drew Theological Seminary, Madison, N.J.; R. W. Murchie, Lecturer of Rural Sociology in the Manitoba Agricultural College; A. MacLaren, Student Y.M.C.A. Secretary of the O. A. C.; R. H. Hays, Lecturer, Geo. E. Day, and H. H. Dean of the College staff. Miss Gardiner, the college librarian gave an interesting lecture on stories and story telling to children.

It was a gross pleasure to the members of the Summer School to know and listen to Professor Earp. A cultured Christian gentleman, well acquainted with his subject, with a pleasing address and a keen sense of humor, he won the hearts of all the class. In dealing with the rural social survey from the standpoint of the church, he outlined the method of procedure in making a survey, stating that it should include and showing how to chart the facts secured. He especially emphasized that a survey of any local community should get at all facts, since they have definite purpose in view and should result in some definite plan of work. A social survey involves effort in community building.

Prof. Earp next spoke of the training of Rural Ministers. The men already on the field need to visualize their task. Short courses in Agriculture, Summer Schools and Conferences would help them to do this. For the men in colleges, who are preparing for the ministry there are special courses on Rural Sociology and on Rural social organization and engineering. The Professor then took up the cooperation and federation of rural churches, the church as a community centre, and the social centre parish plan. He emphasized the thought that the church should stand for constructive forces in the community and should exist for the sake of the community and not merely for itself. The emphasis was no longer placed on the saving of the individual soul, but also on the saving of the community. The church should seek to give a religious significance to all the legitimate forms of social service in the community. The old circuit system was of great service in the pioneer period, but changed conditions demanded changed methods. The plan best suited was the circuit system or social centre parish plan. This plan would socialize the community in consciousness and in activity. The harnessing of rural social forces was the next step in the rural life movement. The end sought was closer cooperation and the development of a better type of community life.

Mr. Murchie in lecturing on the rural home showed that he had given considerable attention to the practical side of his subject. His first dealt with the matter of home conveniences and improvements. One of his first attention, he said, was given to home planning and the providing of labor sav-

ing devices in the home. Why did the farmer have labor saving devices? To do a maximum of work with a minimum of time and energy. "A woman as working partner," said Mr. Murchie, "works longer hours than a man and provides equipment for her husband for the comfort and efficiency of her family. Many women look old at 40 because they take needless steps, work with poor tools and do not see to it that they save for money, time and energy spent. The husband will pay doctor's bills sooner than buy or make time savers, energy savers, for the household. In a rural home survey made in one of the best districts of Manitoba, out of 200 homes visited, 88 per cent of the men had some labor saving devices and 23 per cent were well equipped, while 14 per cent of the women had labor saving devices and six per cent were well equipped. The gasoline engine is a wife saver and a life saver. A water supply and drainage system, including a septic tank, are essential and may be had at moderate cost. Saving steps means saving time, strength and health." Mr. Murchie said that we don't need to have life. We can have near life, ventilated, homes surrounded by trees, flowers, vines and with a garden. All these things add to comfort and contentment and increase efficiency.

The relation of home and school and of home and church were also dealt with, and Mr. Murchie showed the need, an suggested means of bringing these great community institutions closer together. He strongly advocated consolidated schools and showed how these would solve many of our difficulties. He favored the home garden for pupils rather than the school garden.

Secretary MacLaren in his usual energetic manner took up the question of rural recreation. He first gave a definition and then explained the functions of play. "Organized and directed play is the best method of physical training," said Mr. MacLaren. "Physical training is practically neglected in this country. Farm boys and girls may get sufficient exercise, but farm work does not necessarily mean physical training and all round development of the body. Play is more than just physical in its function. It is mental, emotional, social, and moral, and has a great educational value. The character forming or moral functions of play are varied and far reaching. Properly directed play overcomes selfishness, strengthens the will, develops character, enthusiasm, honesty, a sense of justice, true sportsmanship and a high athletic ideal. It discourages profanity, obscenity and the slightest dishonesty. The aim in Canadian play life is the danger of the spectacular and the professional." Mr. MacLaren also gave a history of the playground movement in Germany, Britain and America, and showed the need of play and playgrounds in rural districts and how to promote, equip and conduct them.—W. C.

Children in the Guelph Home

FARM and Dairy has received a letter from Secretary Amos Towell, of the Ontario and New Society, Guelph, Ont., in which he states that he has the following small children for whom he desires to secure good country homes: Twin boys, eight weeks of age; a baby girl, about five weeks of age; a baby boy three and one-half months old; and a baby girl about six weeks old. All these children are in good health. Any of our folks wishing to receive a small child, should write direct to Mr. Towell.



The Next Best Thing to Making More is Saving More

WE WANT you to read about the articles mentioned in this advertisement and then see if you are not losing money by failing to use all or some of them. Every one of these is a leader, a specialty for farm and home and we'll be glad to tell you more about them.



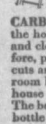
AMATTITE ROOFING—Here is a ready roofing that needs no painting or other attention to keep it watertight. Amattite Roofing has a mineral surface that laughs at wind and weather. Very attractive because of its bright, sparkling appearance. Wherever you have steep roofs, you need Amattite. Amattite is made in rolls of 110 square feet with galvanized nails and cement in center. Try it.



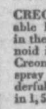
EVERLASTIC ROOFING—Here is a ready roofing of wonderful value. No better "rubber roofing" has ever been made at the price. Everlastic Roofing is ready, easy to lay and sure to wear. You don't need skill labor to lay it. Durable and inexpensive. The solution to your roof troubles.



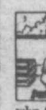
EVERJET—On every surface exposed to the weather, you need Everjet Elastic Paint. It is the best carbon paint ever made and carbon paint is a sworn enemy of the weather. There isn't a slit or metal roof in the country that could not be improved by a coat of Everjet. It clings, penetrates and protects. Everjet is wonderful on iron work and farm implements. Its sparkling black surface is tough and elastic. Never cracks or peels. You ought to keep this paint on hand always.



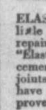
CARBONOL—The most necessary thing you could have around the house is a bottle of Carbonol. It is the best disinfectant, healer and cleanser ever made. Removes grease, germs and odors. Therefore, put some in the water with which you clean house. Heals cuts and wounds, prevents blood poisoning. Wonderful in the sick room because it prevents contagion. It will keep your stable or barn house clean and drive flies from garbage pails or cattle pens. The best thing you could have for a hundred different uses. Get a bottle today.



CREONOID—When it's so easy to have healthy, profitable live stock, why not try this idea. Put some Creonoid in the barn and poultry house and spray the cattle. Creonoid insures clean, healthy cows, horses and chickens. Creonoid is the most effective lice destroyer and cow spray ever made. You need it, perhaps right now. Wonderful in the pigery, too. Makes better porkers. Sold in 1, 5 and 10 gallon cans, half barrels and barrels. Follow directions carefully.



WOOD PRESERVATIVE—Do you want to add many years' wear to your fence posts and exposed woodwork? You can do it by treating them with Grade-One Creosote Oil. Its use is safe, practical and inexpensive way to make fence posts, clothes posts, or porch steps immune to the attacks of weather, earth or moisture. You know the preservative values of creosote. Being a liquid oil it can be applied by simply dipping, spraying or brushing. No expensive method. That's why Grade-One Creosote Oil is practical for the farmer. And it actually penetrates deeper into the wood than any other preservative. Protect your timber with Grade-One Creosote Oil and begin now.



ELASTIGUM—Don't tinkler, delay and experiment with the little everyday repairs. We have a product that makes such repairs not only cheap and easy, but permanent. It's called "Elastigum" because it's tough, elastic, adhesive, waterproof cement. Has no equal for joining or relining gutters, sealing joints or stuffing cornices. Invest in some Elastigum now and have an ever-ready handy man in the future. A trial will prove that it's indispensable. Make that trial now.

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THE PATERSON MANUFACTURING COMPANY, LIMITED
MONTREAL TORONTO WINNIPEG VANCOUVER

THE CARRITTE-PATERSON MANUFACTURING CO., LIMITED
ST. JOHN, N. B. HALIFAX, N. S. SYDNEY, N. S.

BOYS—How would you like to work for us during your holidays?

The work is pleasant, keeps you out in the open air and your income 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 to-night for particulars.

CIRCULATION DEPARTMENT

FARM & DAIRY

PETERBORO, ONT.

OUR FARM HOMES



ASPIRATION carries one half the way to one's desire.
—Elizabeth Gibson.

God's Country and the Woman

(Continued from last week.)

HE leaned over the table as or about to spring. And then, slowly, his fingers relaxed, the fire died out of his eyes, and he sank back in his chair. In the face of the half-breed's outburst Philip had remained speechless. Now he spoke:

"Call it threatening, if you like. I do not intend to break my word to Josephine. I demand no answer to questions which may concern her, for that is my promise. But between you and me there are certain things which must be explained. I concede that I was mistaken in believing that it was you with whom I fought in the forest. But it was you who looked through my window earlier in the night, with a pistol in your hand. You would have killed me if I had not turned."

"Genuine surprise shot into Jean's face.

"I have not been near your window, M'sieur. Until I returned with M'sieur Adare I was waiting up the river, several miles from here. Since then I have not left the house. Josephine and her father can tell you this, if you need proof."

"Your words are impossible!" exclaimed Philip. "I could not have been mistaken. It was you."

"Will you believe Josephine, M'sieur? She will tell you that I could not have been at the window."

"If it was not you—who was it?"

"It must have been the man who shot at you," replied Jean.

"And you know who that man is, and yet refuse to tell me in order that he may have another opportunity of finishing what he has to do tonight."

"The most I can do is to inform John Adare."

"You will not do that," said Jean confidently. Again he showed excitement. "Do you know what it would mean?" he demanded.

"Trouble for you," volunteered Philip.

"And ruin for Josephine and every one in the House. Adare's honored Crossed swiftly. As soon as Adare could lace his moccasins he would take up that trail out there. He would come to the end of it, and then—mon Dieu!—in that heat the world would smash about his ears!"

"Either you are mad or I am," gasped Philip, staring into the half-breed's tense face. "I don't think you are lying, Jean. But you must be mad. And I am mad for listening to you. You insist on giving this murderer another chance. You as much so say that by giving him a second opportunity to kill John Adare you are proving your loyalty to Josephine and her father. Can that be anything but madness?"

Over an almost gentle smile flickered Jean's lips. He looked at Philip over his shoulder, but the other could not understand.

"Within an hour it will be Jean

Jacques Croisset who will take up the trail," he replied coolly, and without boastfulness. "It is I, and not the master of Adare's House, who will come to the end of that trail. And there will be no other shot after that, and no one will ever know—but you and me."

"You mean that you will follow and kill him—and that John Adare must never know that an attempt has been made on his life?"

"He must never know, M'sieur. And what happens in the forest at the end of the trail the trees will never tell."

"And the reason for this secrecy you will not confide in me?"

"I dare not, M'sieur. It is Philip who leaned across the table."

"Perhaps you will, Jean, when I know there is no longer anything between Josephine and me," he said. "To-night I will tell me everything. I have seen the baby. Her secret she has given to me freely—and it has made no difference. I love her. Tomorrow I shall ask her to end all this make-believe, and my heart tells me that she will. We can be married secretly. No one will ever know."

His face was filled with the flush of hope. One of his hands caught Jean's in the old grip of friendship—of confidence. Jean did not reply. But his face betrayed what he did not speak. Once or twice before Philip had seen the same look of anguish in his eyes, the tightening of the lines about the corners of his mouth. Slowly the half-breed rose from the table and turned a little from Philip. In a moment Philip was at his side.

"Jean!" he cried softly, "you love Josephine!"

No sign of passion was in Jean's face as he met the other's eyes.

"How do you mean, M'sieur?" he asked quietly. "As a father and a brother, or as a man?"

"A man," said Philip.

Jean smiled. It was a smile of deep understanding, as if suddenly there had burst upon him a light which he had not seen before.

"I love her as the flowers love the sunshine, as the wind violets love the rain," he said, touching Philip's arm. "And that, M'sieur, is not what you understand as the love of a man. There is one other whom I love in another way, whose voice is the sweetest music in the world, whose heart beats with mine, whose soul leads me day and night through the forests, and who whispers to me of our sweet love in my dreams—Love, my wife! Come, M'sieur; I will take you to her."

"It is late—too late," voiced Philip wonderingly.

But as he spoke he followed Jean. The half-breed seemed to have risen out of his world now. There was a wonderful light in his face, a some-

thing that seemed to reach back through centuries that were gone—and in this moment Philip thought of Marechal, of Prince Rupert, of the Chevalier Groussier—of the adventurous and royal blood that had first come over to the New World to form the Great Company, and he knew that of such men as these was Jean Jacques Croisset, the forest man. He understood now the meaning of the soft and flawless speech of this man who had lived always under the stars and the open skies. He was not of today, but a harkening back to that long forgotten yesterday; in his veins ran the blood red and strong of the First Men of the North. Out into the night Philip followed him, bare-headed, with the moonlight streaming down from above; and he stopped only when Jean stopped, close to a little plot where a dozen wooden crosses rose above a dozen snow-covered mounds.

Jean stopped, and his hand fell on Philip's arm.

"These are Josephine's," he said softly, with a sweep of his other hand. She called it her Garden of Little Flowers. They are children, M'sieur. Some are babies. When a little one dies—if it is not too far away—she brings it to Le Jardin—her garden, so that it may not sleep alone under the lonely spruce, with the wolves howling over it on winter nights. They must be lonely in the woody graves, she says. I have known her to bring an Indian baby of a hundred miles, and some of these I have seen die in her arms, while she crooned to them a song of Heaven. And five times as many little ones she has saved, M'sieur. That is why even the winds in the tretops whisper her name, L'Angel! Does it not seem to you that even the moon shines brighter or here upon these little mounds and the crosses?"

"Yes," breathed Philip reverently.

Jean pointed to a larger mound, the one guard mound of them all, rising a little above the others, its cross lit and watchfully above the other crosses:

"This is the grave of M'sieur Adare's wife. She died three years ago, but she is with me always, and even now her beloved voice is ringing in my heart, telling me that it is not black and cold where she and the little ones are waiting, but that all is light and beautiful. M'sieur—his voice dropped to a whisper—"Could I sell you hereafter with her for the price of another woman's love on earth?"

Philip tried to speak, and straggled after a moment he succeeded in saying:

"Jean, an hour ago I thought I was a man. I see how far short of that I have fallen. I have loved you, and let me be your brother. Such a love as yours is my love for Josephine. And to-morrow—"

"Despair will open up and swallow you to the depths of your soul," interrupted Jean gently. "Return to your room, M'sieur. Sleep. Fight for the love that will be yours in Heaven, as I live for my love here. For that love will be yours, up there. Josephine loved but one man, and that is you. I have watched and I have seen. But in this world she can never be more to you than she is now. To-night I told you to-night is the least of the terrible thing that is eating away her soul on earth. Good-night, M'sieur!"

Straight out into the moonlight Jean walked, head erect, in the face of the forest. And Philip stood looking after him over the little garden of crosses until he had disappeared.

CHAPTER THIRTEEN.

ALONE and with the deadening depression that had come with Jean's last words, Philip returned to his room. He had made an effort to follow the trail, but he had shamed him to the quick beside his grave of his wife. He felt no pleasure, no sense of exultation, that his suspicions of Josephine's guilt toward Jean had been disproven. Since the hour MacTavish had sat up in the madness of Arctic night, and had hoped to glow had not laid its eyes more heavily upon him.

He bolted the door, drew the curtain to the window, and added a bit of wood to the fire embers that still remained alive in the grate. Then he came down, with his hat to the fire. The dry birch burst into flame, and for half an hour he sat staring into it with almost unseeing eyes. He knew that Jean would keep him out—that even now he was possibly on his fresh trail that led through the forest. For him there was something about his half-breed now that was almost ominous. In him Philip had seen increase the things which made him feel like a dwarf in marshes in those few moments close to his graves. Jean had risen above the world. And Philip believed in him. Yet will his belief, his optimism did not quench the darkness.

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"What-Whi Mother Say."

(To Be Continued)

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The Upward Look

Teachings From the Poets

True Happiness.
THE happiest heart that ever beat,
 Was in some quiet breast,
 That found the common daylight sweet,
 And left to heaven the rest.
 Here is a gem of thought dropped on the shores of time by some little-known bard, who has passed on into the great beyond, leaving no footprint on the sands to reveal his presence or whither.

"True happiness is the craving and desire of every human heart, whether expressed in words or only felt as a mysterious 'something,' which prompts the eternal sigh for which we bear to live or dare to die."

Men in all ages have sought in vain to find happiness in external things, overlooking the fact that the kingdom of happiness, like the kingdom of heaven, is within them. One of the greatest of American writers, Edgar Allan Poe, wrote a story to vindicate his theory that "things least hidden are best hidden." Is this not the reason why so few people ever find true happiness? They search for it vainly everywhere, in wealth, fame, labor, and even sin and gain but transient pleasures which soon fade away. But all the time it is near at hand—in the very heart itself—unknown and unnoticed.

See the essentials that the poet has given us: "the quiet breast" and "the common daylight." That is all and we leave the rest to heaven. A heart that finds its chief delight in the common things of life, seeing in these the beautiful gifts of a loving Father, and accepting them with thankfulness, is content to leave all else in the hands of Him in whom we live and move and have our being.

Who drives the horses of the sun,
 Shall lord it but a day;
 But the lowly deed that's done
 And kept the lowly way.
 The rust will find the sword of fame,
 The dust will hide the crown,
 Aye, none shall nail so high his name,
 Time will not tear it down.

The happiest heart that ever beat,
 Was in some quiet breast,
 That found the common daylight sweet
 And left to heaven the rest.—J.E.W.

The Kingbirds

THE well-known Eastern kingbird is essentially a lover of the orchard, though groves and the edge of forests were probably its original habitat. It breeds in the States east of the Rocky Mountains, and less commonly in the Great Basin and on the Pacific Coast. Its hostility to birds and crows is proverbial, mainly for this reason a family of kingbirds is a desirable adjunct to a poultry yard. On one occasion in the knowledge of the writer a hawk which attacked a brood of young turkeys was pounced upon and so severely buffeted by a pair of kingbirds whose nest was near that the would-be robber was glad to escape without his prey. Song birds that nest near the kingbird are similarly protected.

The kingbird is largely insectivorous and is a true flycatcher and also a wing a large part of its take. It does not, however, confine itself to this method of hunting, but picks up some insects from trees and weeds, and even descends to the ground in search of myriapods or thousand legs. In the complaint against the species by both professional beekeepers and others has been that it preys largely upon honeybees. One bee-raisers in Iowa, suspecting the

kingbirds of feeding upon his bees, shot a number near his hives; but when the stomachs of the birds were examined by an expert entomologist, not a trace of honeybees could be found.

The insects that constitute the great bulk of the food are noxious species, largely beetles—May beetles, click beetles (the larvae of which are known as wire worms), weevils, which prey upon fruit and grain, and a host of others. Wasps, wild bees, and ants are conspicuous elements of the food, far outnumbering the hive bees. During summer many grasshoppers and crickets, as well as leaf hoppers and other bugs, also are eaten.

About 11 per cent. of the food consists of small native fruits, compris-



ing some 30 common species of the roadside and thickets, as dogwood berries, elderberries, and wild grapes.

Three points seem to be clearly established in regard to the food of the kingbirds—(1) That about 90 per cent. consists of insects, mostly injurious species; (2) that the alleged habit of preying upon honeybees is much less prevalent than has been supposed, and probably does not result in any great damage; and (3) that the vegetable food consists almost entirely of wild fruits which have no economic value.

All of the kingbirds are of the greatest importance to the farmer and fruit grower, as they destroy vast numbers of harmful insects, and do no appreciable damage to any product of cultivation.

More Use of Lime Water

A more general use of lime-water during hot weather is much to be desired. When one goes to a drug-gist and buys a small bottle of it, one does not feel encouraged to apply the liquid freely to the many uses for which it is excellent; but when one finds that it costs practically no more than the trouble of making one can get generous with it. Lay a lump of quicklime as big as the two fists in a granieware pitcher or bowl, pour over it two quarts of cold water, stir with a wooden spoon and let it stand six hours. Strain the liquid through a double thickness of cheesecloth without disturbing the sediment of lime. Put in bottles and cork tight. Before using, pour off half an inch from the top if it has stood any length of time.

Lime-water is good to rinse bottles, pitchers and pans which have held milk; to soften hard water; to sweeten drains and to bleach out the marks left when stronger alkalis have failed to entirely remove grease spots. From a teaspoonful to a tablespoonful in a glass of milk will make it acceptable to delicate stomachs, and especially for those troubled with acidity. Lime-water is liked as a mouth wash. The equal parts of sweet oil and lime-water make the very best household remedy for scalds and burns is not likely to be forgotten after one trial.

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Magic Baking Powder costs no more than the ordinary kinds. For economy, buy the one pound tins.

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" CHATHAM	... 7.00 a.m. "	"	"
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Ex. LONDON	... 8.00 a.m. Daily
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Canadian Women's Responsibilities

ONE of the most enthusiastic members of the Woman's Institute branch at Canby, Victoria Co., Ont., in Mrs. Frank Webster, at one time president of the branch. Mrs. Webster has just sent us a short report of a meeting held not long ago and addressed by Miss B. Gilholm, of Bright. About 40 ladies were in attendance and besides the address, an enjoyable program was rendered. Miss Gilholm's address was on the subject of "Responsibility of Canadian Women."

After touching on the great work that Canadian women have done and were still doing in Red Cross and patriotic work in general, the speaker became a little nearer home when she spoke of training our boys and girls so that they would grow up healthy, strong, true, and pure Canadian citizens. Who is to think of the boys and girls if the mothers do not do their duty? A mother's duty to her boy and girl was to see that they have good company and a nice room in their home in which to entertain their friends. Are we allowing our children to leave the farm and seek positions in the city? Have we taught our girls that there is a white slave trade going on right in our own cities and that they should be very careful in making friends with strangers?

Miss Gilholm also made reference to the number of foreigners coming into Canada whose vote was not Canadian, and yet our government allowed it to be equal to the vote of any good Canadian. She stated that some of our laws needed amendments. Let us as Canadian women ask the government for laws that will help us in bettering the standard of Canadians and she believed we would get them. We should make good use of the laws and responsibilities that are ours now, however, before we ask for a vote to make new laws.

Back to the Hills

By Graydon Gray.

DAY after day in the market place we have bowed to an idol man called Success. We have shackled our souls with a chain of gold. We have bartered our birthright for empressment.

We have forsaken the things of worth—

Brotherly kindness and faith and peace; We have measured our lives by our power and gain, Forgetting that manhood is greater than these.

Now let us get back to the patient hills,

To the sweep of the valleys wide and free;

Let us lie in the careless clover and mure On Nature's beautiful mystery.

Let us follow the wood lanes deep and dusk,

And steep our souls with the piny scent;

Let us learn to laugh with the woodland brook—

Lo, here is the secret of true content!

We are the brothers of all that live, Tree and blossom and bird that wings;

Come, let us get back to the good green earth—

To the ancient, eternal meaning of things.

—Farm Journal.

The cause of large holes in cake is too much baking powder.

Are We Prepared for Warm Weather?

Farm and Dairy patterns shown in these columns are especially prepared for Farm and Dairy Women Folk. They can be relied upon to be the latest models and include the most modern features of the paper pattern. When sending Farmer and Dairy year order please be careful to state bust or waist measure for adults, age for children and the number of the pattern desired. Orders are filled within one week to 10 days after receipt. Prices of all patterns in cents to Our Factory, etc. each. Address all orders to Pattern Dept., Farm and Dairy, Peterboro, Ont.



smart set of dress accessories, showing three styles of collar and vest effect. One can wear a collar which lies flat, one high in the back and rolling in the front, or one that is high both back and front and bows in the style, so the dress which is most becoming and comfortable should be our choice. This pattern has shown including all styles, in six sizes: small, medium and large.

1775—Lady's Dress—This fabric collar is a commendable feature, the collar and vest in this case being made from contrasting material to that of the dress. If one thought the skirt a trifle plain, a couple of fringe would take away its plainness. Six sizes: 34 to 44 inches bust measure.

1767—Girl's Middy Suit—This is a splendid suit for sport wear, and is fit to be worn on a great many occasions. The middie blouse is cut quite different from the majority of middie suits. This skirt is perfectly plain, the pockets on each side of the front being the only trimming. This suit will fit ten to twelve years. Four sizes: 2, 4, 6 and 8 years.

9623—Girl's Dress—The mother or sister who is skillful with the needle can fashion a delightful dress for little sister after the style of the model shown. Four sizes: 2, 4, 6 and 8 years.

1776—Girl's Dress—Another charming pattern for the young girl in the one dress herewith. The skirt is laid in pleats, while the blouse portion is quite plain with a trimming of lace around the collar, cuffs and front closing. Four sizes: 8, 10 and 12 years.

1777—Girl's Apron—Many women in their white aprons to protect the best of their blouse as well as the skirt. Those who have such a preference, the pattern here shown should appeal. Two sizes: small, medium and large.

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Leave Toronto (Union) 9.50 a.m. daily, except Sunday, arrive Camp Borden 12.30 p.m.

Leave Toronto (Union) 12.15 p.m. Saturday only, arrive Camp Borden 2.15 p.m.

Leave Toronto (Union) 1.30 p.m., North Toronto 1.40 p.m. Saturday only, arrive Camp Borden 3.20 p.m.

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The Makers' Corner

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

Acid in Cream

It is a generally accepted theory that the production of good butter necessitates the development of a certain amount of acid in the cream, for two reasons—to develop a desired flavor and to improve the keeping quality, says the New Zealand Dairyman.

It is ascertained, however, that butter made from pasteurized cream has better keeping qualities and remains for a longer time than butter made from sour cream. A study of the changes which butter undergoes in storage, and especially the influence of acidity of cream on the keeping qualities, to determine the best method of making butter for storage, is instructive.

Butter kept in acid storage, and examined at certain intervals by men who had no previous knowledge of how, when or where the butter was made, have found that butter frequently undergoes marked changes even when stored at very low temperatures, and that these changes are more marked as the acidity of the cream from which the butter is made is increased.

Bacteria Not Responsible.
No bacteria were found in the cream or the butter which could reasonably be expected to be the cause of the more rapid deterioration of the high acid butter. Further, the changes in the high acid butter were not checked by heating the ripened cream. The results also indicated that acid which develops normally in the cream by the action of certain bacteria, or which is added directly to the cream in the form of pure acid, brings about or assists in bringing about a slow decomposition of one or more of the compounds of which butter is largely composed.

What may be referred to as of special importance is that butter can be made from sweet pasteurized cream without the addition of a starter. Fresh butter made this way is found to have a flavor too mild to suit the average dealer, but it changes less in storage than butter made by the ordinary methods, and sells after storage as high grade butter.

At the present time many butter makers are using sweet pasteurized cream without a starter, and others with a starter, but without ripening. The statements in regard to butter from unripened pasteurized cream do not hold for butter made from un-pasteurized cream churned without ripening, because butter made in this way has poor keeping quality. Butter for the market is being made from sweet cream, and is giving satisfaction. A box of sweet cream butter fourteen months old, an exhibitor at the National Dairy Show, London, last December, had no storage or fishy flavor, and was pronounced first class in quality.

Standardizing Cream

THERE are three ways in which heavy cream may be standardized to a lighter grade. First, by the addition of skim milk; second, by the removal of buttermilk; and, third, by the addition of a "lighter" or less rich cream. Although the same principle is used, illustrations of all three methods will be given, using the most common method devised by Pearson.

Draw a square and place in the center the per cent. of fat in the

cream desired. At the upper left-hand corner place the per cent. of fat in the heavy cream, and immediately below, at the lower left-hand corner, place the per cent. of fat in the standardizing medium. Working diagonally across the square, subtract the smaller numbers from the larger and place the differences in the upper and lower right hand corners. The upper right hand figure indicates the number of pounds required of the standardizing medium to produce the standardized product.

To make 20 per cent. cream from 42 per cent. cream and skim milk:	
Cream 42	20
:	:
:	20
:	:
:	22
Skim milk 0	22

From this diagram it is seen that 20 parts of 42 per cent. cream and 22 parts of skim milk will produce a 20 per cent. cream. If a given quantity, say 25 pounds, of 20 per cent. cream is desired, the following formula should be used:

20 divided by 42, multiplied by 25, equals heavy cream, 23 divided by 42, multiplied by 25, equals skim milk.

This gives 11.9 pounds of heavy cream and 12.1 of skim milk. (The factor 42 is obtained by adding the total number of parts, as 20 plus 22.)

To make 40 pounds of 18 per cent.

cream from 32 per cent. cream and 4 per cent. milk.	
32	14
:	:
:	18
:	:
4	14

Or, equal weights of 32 per cent. cream and 4 per cent. milk will make 18 per cent. cream.

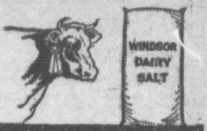
III.
To make 35 pounds of 25 per cent. cream from 40 per cent. cream and 20 per cent. cream:

40	5
:	:
:	25
:	:
30	15

Therefore, use 5 divided by 30, multiply by 35 pounds of 40 per cent. cream, and 15 divided by 20, multiplied by 35 pounds of 20 per cent. cream. In standardizing cream the following points should be carefully observed:

1. The milk and cream to be used in standardizing should be accurately tested.
2. Great care should be exercised in figuring the quantity to be used.
3. All vats, stirrers, etc., which come into contact with the milk or cream should be sterilized. Standardization should be done in a clean room and the product should be guarded from a fly and dust contamination.
4. It is important to see that the materials used are thoroughly mixed.

—U. S. Bulletin.



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The Magnet skimmer is different from any other on the market. A cheap machine cannot give you a skimmer that is so efficient with hot or cold milk of any degree of butter-fat.

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Market Review and Forecast

TORONTO, July 17.—Business conditions continue in a healthy state for the season throughout the country. The real summer weather of the past week has tended to emphasize the usual changes in the larger export markets. Farmers are busy with haying. The weather of late this week will be necessary in order to arrive it.

In other respects, the market has been quiet. The demand for butter is not so great as it was in the latter part of the season. The market for eggs is not so strong as it was in the latter part of the season. The market for hogs is not so strong as it was in the latter part of the season.

GRAINS.
 Manitoba wheat, No. 1, 1.25; No. 2, 1.20; Ontario wheat, No. 1, 1.25; No. 2, 1.20; No. 3, 1.15; No. 4, 1.10; No. 5, 1.05; No. 6, 1.00; No. 7, 0.95; No. 8, 0.90; No. 9, 0.85; No. 10, 0.80; No. 11, 0.75; No. 12, 0.70; No. 13, 0.65; No. 14, 0.60; No. 15, 0.55; No. 16, 0.50; No. 17, 0.45; No. 18, 0.40; No. 19, 0.35; No. 20, 0.30; No. 21, 0.25; No. 22, 0.20; No. 23, 0.15; No. 24, 0.10; No. 25, 0.05.

MILL FEES.
 The recent cutting in prices of mill feeds has apparently come to an end, and there is a more settled feeling on the market. Bran is quoted at 12c; middlings, 13c to 15c; good feed sorghum, 12c to 15c; At Montreal, corn, 90c to 95c; wheat, 1.10 to 1.15; clover, 80c to 85c; alfalfa, 80c to 85c.

EGGS AND POULTRY.
 Eggs, fresh, Canadian, western, 22c to 25c; Ontario, 20c to 25c. Poultry: Hens, 1.25 to 1.50; Ducks, 1.50 to 2.00; Geese, 2.00 to 2.50; Turkeys, 3.00 to 4.00.

FRUIT AND VEGETABLES.
 Apples, 1.00 to 1.50; Strawberries, 1.00 to 1.50; Raspberries, 1.00 to 1.50; Blueberries, 1.00 to 1.50; Peaches, 1.00 to 1.50; Plums, 1.00 to 1.50; Cherries, 1.00 to 1.50; Potatoes, 1.00 to 1.50.

DAIRY PRODUCTS.
 There is no notable change in the butter situation. The market is heavy, however, and the demand for butter is not so great as it was in the latter part of the season.

LIVE STOCK.
 There are no notable changes in the live stock market. The market is heavy, however, and the demand for live stock is not so great as it was in the latter part of the season.

quantity sold of steady rates; a fair export trade prevailed at the lower level; the car trade remained steady; hams were steady, and winter-tendered farns. Quotations are about as follows:
 Choice steers, \$10.00 to \$9.60; med. \$8.75 to \$8.50; butchers' cows, \$7.75 to \$7.50; butchers' steers, \$7.50 to \$7.25; calves, \$7.00 to \$6.75; hogs, \$7.00 to \$6.75; sheep, \$7.00 to \$6.75; pigs, \$7.00 to \$6.75.

CHEESE BOARD SALES.
 Bellerose, July 8—3,700 wheels offered; 220 sold at 11.15c and balance at 11c; Vanklee Hill, Ont., July 8—1,280 wheels offered; 500 sold at 11.15c and balance at 11c.

Postal Card Reports

Correspondence Invited.

CAPE BRETON CO., N.S.
 BALMORAN RIVER, July 1916.—We are having a very early hay is going to be a record crop. Oats look well. Potatoes are doing well, although the hoppers are doing some damage. Prices are higher than usual at this season. Owing to the good pasture, the butter is in good shape, but the price keeps up well.

NEW WESTMINSTER DISTRICT, B.C.
 CHELLAWACK, B.C. June 30, 1916.—During the last week there has been considerable rainfall, but at this time of the year no harm but much good results from it. The temperature is very dry and warm, the maximum temperature being 84 in the shade. During that week the weather was unseasonably very quickly and in consequence the ground is very dry and the water level is overpowered a large area of land at the lower end of the valley. The cool air from this week is bringing it back a little nearer to its normal condition. However, there is still a danger from floods. In 1884 this valley was flooded by the overflow from the mighty river, and considerable damage was done. Since then a dyke has been constructed to overcome this trouble. It was built at the lower end of the valley and is 12 feet wide with tapering sides. The dyke has been built at the lower end of the valley and is 12 feet wide with tapering sides. The dyke has been built at the lower end of the valley and is 12 feet wide with tapering sides.

WATERLOO CO., ONT.
 WATERLOO, July 11.—Laying is in full swing. The wind has been high and fresh. The weather has been very good. The market is heavy, however, and the demand for live stock is not so great as it was in the latter part of the season.

THORNHURST, July 8-6.—We are having delightfully warm weather now, but have had some very bad frosts in the latter part of the season. The market is heavy, however, and the demand for live stock is not so great as it was in the latter part of the season.

Which Herd is Yours

YOUR CHEESEMAKER turns out 20,800 lbs. of cheese for June worth 15c. a lb. net—\$3,120 in all. Your maker tells you that milk containing 1 lb. of butter fat will make 2.6 of Cheese. It, therefore, must have 3 required 8,000 lbs. butter fat to make the June run.

How Much of this June Cash is Yours?

It will depend upon the amount of butter fat you supplied—no more on the 1st of milk you sold. If your herd of 8 cows gave 9,600 lbs. of 3 per cent. milk, equal to 252 lbs. butter fat, then you will get \$312.00.

If, however, you had a herd of 8 Ayrshires, giving 4.2 per cent. (average on 100 Govt. tons), you would have 403.2 lbs. butter fat. And you would receive \$500.00 or \$187.80—a difference of approximately \$40.00 in cash, and from the same number of cows.

MEASURE UP THIS HERD YOU HAVE on your farm to-day against the above standard. You can be your own judge as to whether your herd is the profitable herd.

If you are not satisfied with their record, why not improve it? Ayrshire blood will do it. They are high testers, thrifty and heavy producers. We shall be glad to send you full information about starting a pure-bred herd.

Canadian Ayrshire Breeders' Association

W. F. STEPHEN, Secretary, Huntingdon, Que.

Avondale Holstein Bulls

We have three extra good yearling bulls, fit for heavy service, which we are offering at attractive prices.

Here is one—Sir Woodcrest Sir Clyde, our 33-lb. Pictle bull. Dam, a 2 1/2 three-year-old daughter of King Pontine Artia Canada, who has at five years more tested daughters than any bull in Canada. This heifer in turn is from a 19-lb. daughter of a 31-lb cow that also is a Canadian champion eight months after calving.

Other two are grand breeding and of 20-lb cows. We have a number of youngsters unacquainted in Canada for average in breeding and will clear all out. Two are sired by a son of MAY ECHO SYLVIA and from high record show cows, four months old. Sylvia has finished 100 days with over 600 lbs. butter and 15,000 lbs. milk.

H. LYNN, Avondale Farm, Brockville

3 HOLSTEIN BULLS READY FOR SERVICE
 One black dam 16.3 lbs. butter in seven days at two years, her dam 16 months old, and 26,000 lbs. milk in one year. Three bull calves four to five months old.
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Lakeview Stock Farm, Bronte, Ont. Sir Mona, by Colantha Johanna Lak. 1st A.R.C. daughter, 4 over 22 lbs., and 7 over 20 lbs.; 3 of them world records for 305 days; and Sir Mona's 1st 3-year-old daughter is the new Canadian Champion Sec. 3-year-old, 34.66 lbs. Choose your bulls for sale. MAJOR E. F. CHAFFIN, Bronte, Ont.

Fairmont Holsteins

Young bulls for sale, all sons of King Bead Albany, Canada's, the famous son of the \$50,000.00 Sire, world record for 305 days, and very rich & show bull. All from superior stock. The best of the breed. Best to suit purchaser. PETER B. ARBOAST, R. R. No. 5, Mitchell, Ont.

A Holstein Bull Calf

Five months old, sired by King Pontine Artia Canada, out of a dam with 20.80 lbs. of butter fat in seven days; also one month old. CHAS. BOAG, Clayton, Ont.

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THE Ontario farmer can get no other fertilizer for \$20 per ton that will make him as much money on his Fall wheat as Sydney Basic Slag. If we have no agent in your district we will supply ten lots direct from the factory at this price, cash with order. Better still, perhaps you could get a few of the neighbors to join with you and take a 20-ton car. If you think you can manage this drop us a line right away and we will get our general Salesman to call and talk the matter over. If necessary, he could drive a day with you and see the neighbors. You would be reasonably remunerated for your trouble, and what is of more importance you will confer a great benefit on your district in introducing Sydney Basic Slag.

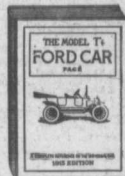
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