

FARM AND DAIRY & RURAL HOME



DEVOTED TO
BETTER FARMING
AND CANADIAN
COUNTRY LIFE



Toronto, Ont., January 11, 1917



AT THE GRISTMILL.

—Photo at Maxville, Glengarry Co., Ont.

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A New Year Resolution

The New Year is the time for forming new resolutions. You can't do better than decide to renew your subscription to Farm and Dairy. Or, you may have a friend whom you would like to present with some token of your appreciation; something that you are sure he would like; that would help him in his daily task and afford him pleasure as well as profit. That you will find in Farm and Dairy. Its clean, forceful, helpful articles are a stimulus and an incentive to our readers. Your friend will appreciate your gift of a year's subscription.

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CIRCULATION DEPARTMENT
FARM and DAIRY Peterboro, Ont.

Another Successful E.O.D.A. Convention

High Prices and Enlarged Output Characterized Year's Operations—
Splendid Cheese Exhibit—Many Strong Addresses

THE attendance at the 40th annual convention of the Eastern Ontario Dairymen's Association, held at Napanee on Thursday and Friday of last week, rivalled that of any convention in the history of the Association. It was larger, much larger, than that of any recent convention. It was generally conceded that the interest in the Dairy Standards Act was responsible for part of the larger showing. The accommodation provided for both the meetings and the exhibition by Napanee was all that could be desired, the fine armories building being secured for the occasion. Though the exhibit of butter was disappointing, the cheese display was a credit, even to Eastern Ontario. A new feature was a demonstration of cheese made of rennet, pepsi and curdalc for the purpose of showing the merits of the new coagulants as compared with rennet.

The Chief Instructor's Report.
G. G. Pablow, chief dairy instructor, reported that there were 840 cheese factories in operation during the year 1916, which proved an increase of two more than the previous season. These factories received from the instructors, 1,228 full day visits and 4,688 call visits. Sixteen new factories had been built, the estimated expenditure, including new buildings, being \$87,239. While the general appearance and condition of the factories showed a marked improvement, there were still a number, however, that were not very creditable and would have to be improved if they continued to operate. Of the factories, 105 made whey-butter, turning out 532,769 lbs. from May 1st to November 1st. Eighty-one factories pasteurized the whey. Eighty-six factories paid for milk according to quality, being 13 more than the previous season. Forty-five paid by straight fat and 41 by the fat plus 2 method.

The quality of the May and June cheese was exceptionally fine; also that of the fall make, but during the months of July and August a large percentage of the cheese were more or less defective. In some cases, owing to the high price of rennet, makers tried to do with a smaller amount than was necessary to do the work properly and the result was a rather loss of fat in the whey, this being probably responsible for the higher average in pounds of milk required to make a pound of cheese, 11.07 pounds being the average for the season, considerably more than for any previous season. It was safer to determine the quantity to use from the action of the consultant on the milk than from the directions of the manufacturer. From the results of experiments conducted by the instructors, it was shown that it took 11.51 pounds of unneoled milk to make a pound of cheese and 11.04 pounds of unneoled milk and makers were advised to encourage their patrons to cool the night's milk to at least 65°F immediately after milking. Mr. Pablow outlined the work that had been done to secure information on the value of milk of different percentages of fat. He also called attention to the fact that the cheese industry yielded an income of nearly \$17,000,000 in eastern Ontario for the factory season.

Only a small amount of the butter was packed in solids, the most of it being put up in prints and disposed of by the manufacturer direct to the contractor. The greatest defect in the creamery industry was the condition of the cream as it reached the creamery. Regarding the quality of Ontario cream as determined by the awards obtained at the annual exhibitions at Toronto and Ottawa, while the unfavorable showing obtained was deplored, it was pointed out that the prize winners are confined to comparatively few creameries where conditions are more favorable for the production of a higher quality. There was no question but that a higher quality of cream could be produced from sweet cream properly pasteurized and ripened than from the average cream that is supplied to Ontario creameries, and this fact had been so forcibly impressed on the makers during the last few years that they had simply quit showing their butter where it comes into competition with the product of the sweet cream creameries. This did not mean that we were going back but that other sections of Canada were going ahead faster than we, with the net result that our showing is made more interesting each year.

Grading of Cream.
This year they introduced cream grading at the creamery operated in connection with the Eastern Dairy School, which proved an excellent case. The patrons were perfectly satisfied with the result, and no difficulty whatever was experienced. They established two grades for a start: first grade being defined as sweet and clean in flavor, clean second grade as sour or slightly sour, but otherwise clean in flavor. A difference of 2c a lb. of butter fat was made between the two grades. Of the total cream supply for the six months only six and a half per cent. was placed in second grade. When it was considered that nearly twenty per cent. of the cream supplied was brought in by return, the result is a remarkable showing for one season's trial.

A cow census showed that in 1916, 276,123 cows, having an average yield for the factory season of 3,910 pounds, had contributed to the factories. This was an increase of 375 pounds over 1915. The increase was due to weeding out bad cows, to better breeding and to better care of the stock. During the year 507 siles had been checked, a falling off of 50 per cent. compared with the previous year. Since 1915, 2,677 siles had been erected. The auditor's report showed that financially the association was in a strong position. Beginning the year with \$248.06 in the treasury, the books were closed with \$1,443 on hand. Prosecutions had yielded \$877.50, as against an expenditure of \$523.30 for prosecutor's salary and expenses. The legislative grant of \$2,500, the grant of \$300 from the town and county of Renfrew and the revenue of \$26.75 from advertising were the other most important sources of income. In commenting on the question of prosecutions, Auditor J. J. Payne, Brimston, stated that he would much rather have seen the outlet for this item in excess of the receipts from it.

O.A.C. Farm Manager Discusses Annual Pastures.
Mr. Leitch, of the O.A.C., stated that the cheapest milk was produced on summer pasture, and outlined the work that had been done at Guelph to devise a method of implementing the permanent and temporary pastures, such as are commonly found, by means of growing annual pasture mixtures. Remarkable results had been obtained by means of a mixture composed of one bushel of spring wheat, one of barley, one of oats, and six or seven pounds of red clover in an acre. This year 77 head of cattle had been almost wholly wintered off on acre from June 1st to September 15th. Most of the feed had been supplied by

(Continued on page 6.)



FARM AND DAIRY



We Welcome Practical Progressive Ideals

& 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. XXXVI

TORONTO, ONT., JANUARY 11, 1917

No. 2

Wanted: More Good Cows on Canadian Farms

How the Constant Use of the Milk Record Enables Dairymen to Increase the Output of Their Herds

WHO wants good cows? Naturally, anyone who attempts milk production. Every dairy farmer with a spark of ambition wants that satisfaction which the keeping of good cows imparts. Men who are not yet dairying, but believe in this cry of back-to-the-land, will want good producers. Are we to outfit our returning soldiers, when tired of raising roosters, with a mongrel deadhead, or a real dairy cow? One man has shown us from record sheets that he obtained as much in cash from his six cows last June as was brought in by the whole nineteen that made his neighbor's herd. The first man has applied the knowledge gained from cow testing.

Where Are Good Cows Wanted?

Outside the strictly fruit or beef locality, there is plenty of room in this province for the extension of high class dairying. Cow testing will not save from the heavy burden of the poor cows, but, through proving the economical advantages of better feeding, the immense value of pure-bred sires, of the real worth of young stock and selected dams, will make for good herd building anywhere. Contrasts like those shown in the first table show that some poor cows still exist. But it is apparent that men hard by have succeeded in raising fairly good cows, able to return good profit and produce milk and fat at medium cost. If such extraordinary differences exist either in your own herd or in herds at any factory, is it not high time they were discovered? Happily our records show that better cows are being obtained; we all can sense the need of far more of the good brand.

No Danger of Lessening Demand.

Again, good cows are wanted not only in these times of soaring prices, but for years to come, as fine milk-products are appreciated as choicest food. Artificial milk does not yet replace the natural nourishment, the universal staple; so the boogey of lessening demand need not frighten any one from wanting more cows. Indeed, with the growing demand for milk and the problem of farm help seeking to be solved, there is the more need for dairy records so that man power and cow energy may both be rightly directed and thriftily conserved. Records sent in to show, for example, a man with ten cows getting only thirty-six thou-

By CHAS. F. WHITLEY,
In charge of Dairy Records, Ottawa.

sand lbs. milk, but a neighbor with six cows obtaining almost fifty thousand pounds, the good six do as much, therefore, as 13 of the other kind.

If there exists a widespread desire for good dairy produce, may we next see if cow testing answers the query why good cows are wanted. We can have and should have better cows to sustain and enhance the reputation already earned by Ontario dairymen.

Labor Saving Not All.

No one wants or can afford to keep a poor cow that grudgingly gives low returns. Cow testing can be relied upon to furnish the necessary reference as to any cow's standing in the commercial herd. No good excuse is available for stock-dealing with the type that is "long" on feed

and "short" on milk, the thin margin of profit is wiped out far too easily. Legitimate stock business means herd building on sound principles among which cow testing has earned a position in the front rank. It is stated that 14 cows out of every 22 across the line do not pay: cow testing will save Canada from slavery at the heels of such cow tyrants. But labor saving is not all: the many golden hours of time apparently mispent on poor cows; the tons of feed they do not utilize could be invested with excellent returns in better types.

No Cow is Too Good.

There is no cow too good for Ontario dairymen. From amongst our members who weigh and sample each cow's milk regularly there come good orders to encourage the forthright of prominent breeders. One week last fall twelve pure-breds were purchased in one of our centres.

Our records abound with such results as these: Herds at Hallville, Oxford Mills and Perth giving over 8,800 pounds of milk, over 300 pounds of fat for each eight and ten cows; at Renfrew and Frankford herds of 13 cows averaging over 5,000 pounds of milk, and nine cows with an average of 11,000 pounds of milk and 352 pounds of fat. Beyond that we can instance good grade cows east of Toronto giving between 400 and 500 pounds of fat. On all such farms where cow testing is practised, satisfaction reigns.

What is a Good Yield?

The standard of excellence may vary according to the owner's discernment, ability and opportunity. We find cows that dry off in six months having given only 2,200 pounds of milk and 80 pounds of fat. That type adds to the high cost of living, but the individual record of 8,000 pounds of milk and 280 pounds of fat, or more, makes higher living enjoyable.

Before our general average for herd, county or province can grow, there are the poor cows to be reckoned with, those perpetually below an average. If each cow in your milk factory is made to punch the time clock of dairy records there is hope, but merely the faintest hope if tally is not kept of each individual. To deal only with a herd average adds little to our knowledge. Fortunately, the effect of an individual record means infinitely better results in a score of ways, the total cash in three hip pockets may be but eighteen bills. A has \$10.00, B, \$5.00



SOME CONTRASTS, DAIRY RECORD CENTRE WORK.

	The Ten Best Cows.	The Ten Poorest Cows (Mature).	Difference.
Average yield, lb. milk	6,406	2,469	3,937
Average yield, lb. fat	215	97	118
Value, milk at \$1.20	\$76.87	\$29.50	\$47.37
Feed cost per cow	34.04	27.85	6.19
Profit per cow	42.83	1.65	41.18
Feed cost, 100 lbs. milk	53c	1.13	60c
Feed cost, 1 lb. fat	16c	29c	13c

Each one of the ten best cows made as much clear profit as twenty-five of the poorest. Taken from a dairy record centre in Eastern Ontario, where over 800 cows are under test.

INCREASES IN YIELDS, LISTOWEL, ONT., DAIRY RECORD CENTRE FOUR YEARS COW TESTING.

Herd.	Last year's yield	Increase per cow.	Per cent. of No. of Cows.	lb. milk.	lb. fat.	lb. milk	lb. fat	lb. milk inc.
A 9	7,309	260	3,528	132	93%			
B 17	6,823	275	2,970	90	52			
C 5	9,445	300	3,216	108	51			
D 9	10,118	339	3,049	100	43			
E 10	10,197	333	3,541	114	53			
F 16	10,391	360	2,782	114	36			

Can your herd not do just as well, or better?

The constant use of a simple milk record has shown these men how to secure another 3,000 pounds of milk per cow, and it can also assist any man, really in earnest, to add fifty per cent. to his income.

* A synopsis of an address delivered before the convention of the Eastern Ontario Dairymen's Association, Napawa, Jan. 4, 1917.

(Continued on page 6.)

The Use of Sawdust as a Litter in Stables

Though Inferior to Straw It is One of Its Best Available Substitutes

THE scarcity of straw and ensilage, two of the most important roughages on the dairy farm, is making rigid economy in the use of everything of feeding value necessary this year. Since the straw, which is usually used for bedding, has also a feeding value, economy usually begins in the use of bedding. The farmer reasons, and rightly so, that when the choice has to be made for the animals between comfort and hunger, comfort is the first to be sacrificed. Evidently the cow is of the same opinion, as she shows no scruples in eating her bedding, if it is edible, whenever the pangs of hunger become too pressing. She evidently agrees that a hard bed is rather to be chosen than an empty stomach.

The Wastage of Liquid Manure.

A shortage of bedding has two effects: discomfort to the animal and the loss of the most valuable part of the manure. Unless the liquid portion is saved, the fertilizing constituents to be returned to the land are very materially reduced. Nearly half of the nitrogen and potassium from farm animals occurs in the liquid excrement. It is therefore important that this be saved through the use of sufficient absorbents.

The claims of sawdust as a material for bedding, both as an absorbent and for providing comfort for the animals, should not be overlooked where a supply is available. It undoubtedly answers very well for this purpose. It is true, of course, that this product of the sawmills is not by any means the equal of straw in this respect, which latter, after all is said and done, is the best and indeed an ideal kind of litter for use in the stable, but despite its general inferiority to straw as litter, sawdust proves very useful. The outstanding feature of sawdust, in so far

as regards its suitability for litter in stables, is that it possesses great absorptive powers for liquid, and in this particular respect it ranks considerably above straw. Whereas the absorptive capacity for liquid of straw amounts to only about two and a quarter times of its own weight, sawdust—provided it is perfectly dry—is capable of absorbing liquid to the extent of about four times its own weight. Thus, thanks to its great absorptive capacity, sawdust makes both a dry and a cleanly bed. It does not afford such a soft bed as straw litter, but still animals are quite comfortable on it, provided the sawdust is put down sufficiently thickly.

In Cleanliness it Excels.

Besides possessing great absorptive powers, sawdust also has certain deodorizing properties, which considerably enhances its value and usefulness as a bedding material for use in stables. From a hygienic point of view it is certainly in every way excellent, it being absorptive, cleanly, deodorizing and cool to the feet. Those who have never used sawdust as bedding in the stable may perhaps think that it is not particularly cleanly, but practical experience of it will soon prove to any one who has any doubt about it that there is no cleaner kind of litter. It is true that when the animal lies down on a bed of sawdust particles of the latter adhere to its coat, while some is also apt to adhere to its legs, but it can be easily brushed off, and there is certainly no reason why sawdust should be objected to as a bedding material on this account.

An epidemic of thrift and economy is sweeping over Canada. The man who contracts it, will find it has been no misfortune, during the adjustment days after the war.

Factors of Successful Management

Why Some Farmers Do Better Than Others

WHY is it that one man is more successful in farming than another? The answer usually given is that he is a better manager. But what are the factors of successful management? They must be susceptible of knowledge. They must be open to ascertainment. But little has been done in analyzing the business of Canadian farms; of singling out the different factors which contribute to the success of those who are making the most progress, and of comparing the relative values of these factors one



Madam Pauline Canary—Guelph Winner of Total Solids. Not—Fat. She was second in her class and third in general standing at Guelph Winter Fair. A fine type of animal with plenty of size, quality and constitution. Owned by A. E. Hulet, Norwich.
—Photo by an editor of Farm and Dairy.

with another. It is for this reason that we have got to look to the United States for sources of this information. There, investigations have been conducted in many different states and under wide differences of climatic and soil conditions. One of the best of these investigations was conducted in Missouri, where conditions are not dissimilar from those found in many of the southern counties of our Eastern provinces. This investigation, says O. R. Johnson, of the Missouri College of Agriculture, has indicated that the reasons for the difference in the degree of success attained by the different farmers, lies in the following points:

A Good-sized Business.

The first is a good-sized business. A man must have enough land so that he can use his time and the time of his work stock and tools with the greatest efficiency. This means not less than 120 acres and not more than 500 acres for general conditions, the preferable size being between 200 and 400 acres. The proper amount and distribution of capital is necessary. The investment should not vary widely from the average of the region—either in investment per acre or in the distribution of invest-

ment. A farming system which furnishes a maximum amount of labor from which returns are realized either directly or indirectly, and which includes a minimum of labor from which no return is realized. Each workman on a farm should have provided for him not less than 160 days of productive labor, and each horse should have not less than 60 days of productive labor. Many farms run much below these figures.

Quality Next.

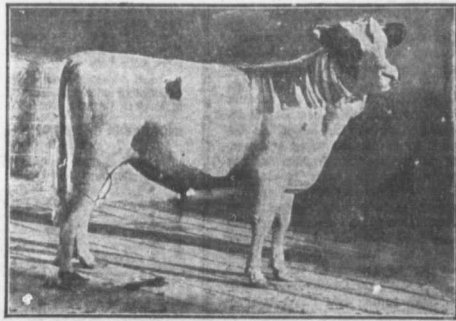
The second essential is a business of high quality. The first point in this connection is crop yields. Yields should run from average to about one-fifth above the average for the region. The man who falls below the average in yields has an up-hill job. Not only must crop yields be good, but on farms where some feeding is done the feeding operations must be efficient. All classes of live stock should return at least \$140 for every \$100 worth of feed consumed, if good wages are to be realized for a man's time. Some of the best feeders get much more than this. Some classes of stock can pay a profit by returning less than this, but in general this rate of return will give good wages and pay market price for the feed consumed.

Diversification Necessary.

A reasonable degree of diversity is also necessary for successfully operating a farm. Unless special or unusual conditions justify a highly specialized type of farming, a farm should have several sources of income to depend on. The cotton farmers of the south at the time the boll weevil appeared severe as a good illustration of the danger of having only one source of income. A man who is depending entirely on the sale of hogs is in bad shape if the cholera gets his hogs one year, but if a man has several sources, he can lose one or perhaps two sources and still have some income. The most successful farms in the region studied had from three to seven or eight sources—probably three to six sources will give the best

results.

In preparing cows for the test, it is well to have them dry for two, or better, three months, before freshening. In order to dry them quickly take away all feed including straw for bedding for 48 hours. Follow this up by putting them on half ration for one day and then gradually back to the full ration. This procedure serves to check the milk flow.



Humeshaugh Invincible Peter—Winner of Sr. Bull Calf Class at Guelph. He is a champion and the son of a champion, being a son of the Sr. champion bull at the Toronto National. A calf of quality and a coming star. Owned by A. S. Turner & Son, Ryckman's Corners.
—Photo by an editor of Farm and Dairy.

Bridle Breaking a High Spirited Colt

If it is Properly Done No Trouble is Met in Teaching Him to Drive

H. G. REED, V.S., Halton Co., Ont.

THE possession of a sensitive mouth is one of the most desirable qualities of a high-class riding or driving horse. This quality can only be maintained by careful handling in the process of bridle breaking. The value of many a good young horse has been materially reduced by rough handling during his first experience of the bit. Not only has his mouth become unduly hardened, but undesirable habits, such as lugging on the bit, tongue lolling, tossing of the head, slaver-ing, and so forth, have been acquired.

When a colt is bitten for the first time, and an effort is made to control the animal, he naturally resents the treatment, and the result will be bruised, lacerated and bleeding lips and gums. These injuries will heal, leaving a more or less hardened or callous condition of the parts, and the mouth has lost for all time the natural sensitiveness so necessary in that organ. Time and patience are required to properly bridle-break a colt, and the future value of the animal will well repay the owner for his trouble.

The First Lesson.

In biting a colt for the first time simply adjust the bridle, using great care not to put any pressure on the bit, but letting the creature go at once in a paddock or box stall. Let the bridle remain on him for several hours. When it is taken off the colt will have had his first bridle lesson. Next day repeat the operation, and so on, each day for probably a week. At the end of that time it will be found that the colt has become reconciled to the bit. He has never been frightened or hurt by its action, and feels perfectly comfortable with the bit in his mouth.

The next step is to put a surcingle and croupier on the colt. Put reins on the bridle and check him up slightly, and let him run loose in his paddock; repeat this treatment for several days, gradually tightening the check till the colt has become used to the situation and will stand with his head up, his nose turning inward toward his chest. It is good practice to have a strong piece of elastic in the check rein so that when the colt pokes his head out the elastic will have a tendency to draw his nose in again towards the chest. He has been taught to freely turn his nose in towards the chest when the reins are tightened. In big training establishments an attachment called a "dumb jockey" is always used for this purpose. It consists of two upright pieces of timber crossed and attached to the surcingle, extending a foot or so higher than the horse's back. To this string elastic reins are attached. However, the use of the surcingle as already described answers the purpose very well.

In Harness.

After the colt has been bitten in this manner, lines should be put on the bridle and he should have his first lesson in driving. Put a set of harness on him (a set of single harness is best), pass

the lines through the shaft holders on the sides of the horse rather than through the rings on the back-band, and start him down the road; the trainer walking behind. The lines being down along his sides, makes it easy to guide him in a straight line. Give him exercise in this way for several days, teaching him to stand on the word "Whoa"; to go on at the word, and to back up when told to do so. He is then ready to be hitched. A colt prepared in this way will seldom give any trouble when hitched; either in single or double harness. When a reliable old horse is at hand it is perhaps better to hitch him double for the first few times, but if necessary it will be all right to hitch him single. Few colts will make any trouble for the trainer if gradually broken in this way.

It will be readily seen that a colt treated in this humane way will never have had his mouth in-



A Popular Piece of Good Road. Kerr Street, near Oakville, Ont.
A tarvia filled macadam laid down in 1915. Photo after one year's service.

jured. He has never been frightened or hurt, and his mouth will have retained the natural sensitiveness so necessary to a high class driving horse.

Winter Care of Manure Two Efficient Methods of Handling It

MANURE exposed in loose open piles loses much of its nitrogen through fermentation and its potassium and other mineral elements through leaching. The best way to avoid this loss is to haul it to the field as fast as it is made. Not only is the manure then handled with the minimum labor, but the work in connection with it is also disposed of at a time of the year when labor is cheapest, and when it interferes least with the other major operations on the farm.

Hauling to the fields is not, however, the only way of preventing losses due to heating and leaching. If placed in a man-



A Relic of Pioneer Days.

The old potash kettle, in which many of the first settlers boiled down "black salts" is occasionally still seen doing duty as a watering trough. Snapped on the farm of F. R. Mallory, Hastings Co., Ont., by an editor of Farm and Dairy.

ure shed or left in box stalls, where it is thoroughly trampled, the loss of the important constituents is rendered inconsiderable. In loose piles it heats. The organic matter is broken down by aerobic organisms; that is, bacteria and fungi that require the presence of air in which to live

and work. In the process carbonic acid, water and ammonia are evolved; the nitrogen escaping in the ammonia. When consolidated by tramping so that the air is excluded, aerobic organisms cannot work. Fermentation then takes place as the result of the activities of anaerobic organisms, or those that thrive when the supply of air is limited. In this fermentation, only a slight rise in temperature occurs, and though there is some loss of nitrogen in the form of a gas, slight amounts of which are evolved, the loss is not nearly

so great as when the mass is allowed to heat. One of the most important things to consider in caring for manure which is being preserved in the manner just described, is to see that it is kept sufficiently moist. In Great Britain it is a common practice, especially in dry weather, to sprinkle the manure kept in boxes and sheds if it gives evidence of becoming too dry. Well made rotted manure is a more concentrated plant food than fresh manure, and is preferred for light soils, which long manure would leave too open and liable to rot. It is also preferable for gardens and those crops which require a quick acting manure, that is, one that is quickly reduced to the simpler forms of plant food, so as to be readily available in a short time.

Basic Slag

A ton of basic slag contains about 250 lbs. of available phosphoric acid and from 1,200 to 1,300 lbs. of carbonate of lime. Carbonate of lime or ground limestone rock costs about three dollars a ton, f.o.b. at point of shipment. To this must be added the freight charges. The carbonate of lime in a ton of basic slag is therefore worth about \$2.50—provided the land on which it is placed is in need of lime.



When the Tractor Turned Balky—A Scene at the Whitby Tractor Demonstration.

Though the spectators admired the excellent work done they did not hesitate to subject an engineer to good natured railery when his tractor refused temporarily to keep moving.
—Photo by an editor of Farm and Dairy.

CITY MILK SUPPLY

London Producers Organizing

THE milk producers in the vicinity of London have organized an association and are endeavoring to put the milk trade of that city on a better basis. The high and constantly rising cost of production, and the necessity for securing prices that would adequately compensate them under the new conditions, was the ground on which the dairymen got together. District Representative R. A. Finn, in his departmental report, gives the following short resume of the organization work among the milk producers: "On account of the scarcity of rough feed, and the high price of grain, the dairymen in the vicinity of London have felt they were not getting a sufficient price for their milk. They have been supplying milk to retailers and were only getting four cents a quart. They decided to organize, and at their first meeting raised the price to five cents. They came to this office and asked for help along this line. After getting in touch with Toronto Wholesale Milk Producers, and a like association in Oxford county, we were able to draw up a constitution for them which they accepted without any changes. They decided to raise the price to five and one-half cents a quart, and if feed prices should warrant it on the first of January, they will make a further advance in price. As yet, not all the producers have joined the association, but about twenty-five have. These men are all within a radius of ten miles of London. They also intend to cooperate in buying and selling supplies."

Wentworth Milk Producers Want Increase

THE striking of the word "unduly" from the former law regarding combined and the activity of the Department of Labor in preventing concerted action on the part of milk producers in bargaining on the price they are to receive for their product, has left the milk producers in a quandary as to how to proceed in settling their difficulties with city dealers and in securing a fair price for their milk. It is stated that the retailers also hesitate to work together for fear of governmental action. Considerable difficulty, therefore, is being met in settling the questions at issue between these two parties. A denunciation of the Wentworth County Milk Producers' Association recently waited upon the Hon. I. B. Lucas, Provincial Attorney-General, for the purpose of ascertaining what lines he can operate on in case the retail dealers persist in their refusal to pay the advance price demanded.

In placing the case of the association before the Attorney-General, President J. P. Griffin stated that his association had not definitely decided upon the advance price of milk supplied to the Hamilton dealers, but they felt that an increase from 21 to 24 cents a gallon, or \$1.32 a can, which is eight cents lower than the price paid in Toronto, could not be unreasonable.

At the present price, the producers were losing on an average of nine cents a gallon. He declared that the present wholesale prices were absurd under existing conditions, that Wentworth producers, because of the lack of fodder, corn, forced to purchase feed at high prices, with the result that they were losing an average of 72 cents a can on every can of milk delivered to the Hamilton dealers. In this connection, Mr. Griffin produced figures to show that, leaving out of consideration the overhead expenses, interest on capital invested, and the high cost of labor, it took 30 cents to produce a gallon of milk. The fear was expressed that

should the producers refuse to deliver to Hamilton, some of the Toronto companies might fill Hamilton orders, but this view was discountenanced by the Toronto producers, who claimed that the Toronto dealers had difficulty in securing milk sufficient to supply their own trade.

After the Attorney-General had heard the arguments advanced by the producers, he advised them to take up the matter with their solicitors, so that they would not fall in danger of assessing the regulations laid down by the new order respecting combines. The Hon. Mr. Ferguson also informed them that he could not promise anything definite until further investigations were made. It is likely the Wentworth producers will continue their agitation, and it is hoped that the rise in price can be secured without disturbance to the Hamilton milk trade.

Woodstock Milk Producers Amalgamate

THE milk dealers of Woodstock, Ont., are endeavoring to offset the rising price of milk by organizing to reduce the cost of delivery. It is expected to effect considerable economy by doing away with unnecessary duplication of milk routes. Local consumers are promised that, as a result of the reduction in the cost of distributing, made possible by the amalgamation, the price of milk will be reduced from ten to nine cents a quart as soon as the company starts operation. Next summer it is proposed to install a pasteurization plant, the first in Woodstock. The high cost and scarcity of labor is given as the reason for the amalgamation.

Dairy Notes

TO give proper care to milk you must have the equipment with which to do it. Those who grow grain have a granary. Every crop producer, you have in condition to put on the market. The dairyman is keeping his cows on expensive land. He is selling all of his crops through them. What he gets for milk is his reward. Surely then, it is worth while giving the milk producer a plan in order that the resultant product may bring the best price possible.—G. G. Publow, Chief Dairy Inspector, Eastern Ontario.

The best of salt should always be used when making butter. There are many good brands of dairy salt, but we always use the Windsor, which is put up in barrels.—Mrs. A. Thomson, Wellington, Co., Ont.

Adding enough preservative to keep the composite sample fresh without shaking after adding the dairy sample, gave the least mould in the bottles at the Ontario Agricultural College Dairy School. It was noticed that if cream was not allowed to spill on the sides of the bottle little mould developed. Mr. A. Mac Robinson, of Belleville, suggests that the method may be improved on where powder is used by adding half the preservative when a composite sample is started and the other half when half the individual samples have been added.

One of the farmers' most troublesome problems is the equalization of labor throughout the year. Among the suggestions for winter work are the following: Repair each piece of farm machinery, make tools and do other carpenter and repair work; oil and repair harness, haul manure, sharpen all tools, sharpen mower sickles, sharpen post for fences, prune orchard and other trees, clean seed, repair buildings (particularly inside work), and market grain and hay. Where cows freshen in the fall, the larger care in milking them and caring for their calves comes during the winter months.

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Dairymen Want Legislation Postponed

E.O.D.A. Convention Passes Resolution to that Effect—Principle of Dairy Standards Act Commended—Country Not Ready For It

KERIN is the interest taken by the dairymen of eastern Ontario in the legislation providing that after March 31st next the milk received at cheese factories in the province shall be paid for on a quality basis. As was interested, that interest was manifest at the Dairymen's convention at Napanee. The attendance, larger than it has been at a convention of the E.O.D.A. for the last eight or ten years, was evidence of this interest. The opponents of the Dairy Standards Act are aggressive in their opposition, and when that part of the programme providing for the discussion of the Act was reached, a lively discussion took place. A considerable proportion of those in attendance were from those districts in which opposition to the Act has been most marked, and the sentiment of the meeting reflected this attitude. The result was, therefore, that when the moment of decision came a resolution asking the Ontario Government to postpone the date of carrying the dairy legislation into effect be postponed until a further campaign of education regarding quality payment be carried on was agreed to.

Mr. Roadhouse Opens Discussion.

"It could not be expected that conditions that had existed for thirty years could be disturbed without causing pain," said Mr. W. Bert Roadhouse in opening the discussion on the new Dairy Standards Act. "From the start there has been difference of opinion as to which of the various systems of quality payment was nearest right; there has been no difference of opinion, however, that the pooling system was the furthest from the right method." After outlining the method by which the Act had been drafted and placed before the people, Mr. Roadhouse stated that from Quebec, New York, and many other states they had received letters of commendation for the Act. Authorities everywhere were agreed that the move was with the trend of the times. He then referred to some of the objections that had been raised. To those who said that the principle was all right but that it wouldn't work in practice, the answer was that work was going in 10 per cent. of the factories of eastern Ontario; 86 of which had adopted the quality basis of payment. Some had objected on the ground that the legislation was arbitrary, but that could be said of all legislation. In this case it was necessary to legislate on the matter in order to do justice to all. This was not an objection, but a proof of uniformity. "We didn't ask for it," said some, but since there had been a persistent discussion of the matter for over 20 years it could not be said that the Legislature had broken the speed laws in framing it. One way of judging public opinion was by the press, and the agricultural press of Ontario had, without exception, favored the legislation. Time had been given, every means to facilitate the smooth working of the Act had been provided. The close of the war would see a scramble for trade, and he believed that this legislation would put the cheese industry on a sounder footing to meet the demands of such times, since it would guarantee to each patron of cheese factories a fair share of his returns from the cheese industry.

Mr. Zuehl Explain Experiments.

The experiments that were conducted to find out the amount of cheese that was produced from 100 lb. lots of milk of different percentages of fat were explained by Mr. Zuehl. These

experiments have already been dealt with in full in these columns and require no further comment. Mr. Zuehl asked the pointed question, "Would you be willing to pool your cows and receive payment for your milk according to the number of cows whose milk you sent to the factory?" If makers were out 10 lbs. in their weights, he said, the patron called him to time, and rightly so, yet the richness of the milk he sent to the factory had much more to do with the amount of money he received than a slight mistake in the weighing.

At this point a young farmer asked the question, "Is there a danger to the breeding of dairy cows in that farmers would, instead of taking the long road to breed up for higher fat readings, take what might appear to be the short cut, and cross breed to high testing breeds." Mr. Zuehl replied that it was not the fat reading of a cow's milk that determined her value, but her combined milk and fat production. It was conceivable that a 2.8 cow would be a profitable one if she gave milk enough.

Mr. Zuehl went on to say that the luck of the dairy business was the cause of discrimination in the value of our cows' production. It resulted in giving a premium to the poorest, instead of up to the best. The proper enforcement of the Dairy Act would do more for the upbuilding of the dairy industry in Ontario than all the cumulative legislation of the last 20 years.

Mr. Ayer raised a tremendously important point when he stated that cheese from high testing milk lacked the body that was required by the British market. He showed plugs of cheese taken from exhibits in the hall, one of which was from 4.2 milk and the other from 3.0 milk. The latter was much firmer and, said Mr. Ayer, was more what the market required. He was not opposing the dairy Act, but wished to point out to dairymen that milk could be too rich for making good export cheese.

A Vigorous Protest.

Jas. McCormack, of Richmond Hill, entered a vigorous protest against the legislation. "There are very few men sending 4.3 per cent. milk to factories," he said. "The average is around 2.5 per cent. and there is not enough variation from this to warrant any such legislation." A few men, he stated, had studied the matter and had the legislation put through without asking the farmers whether they wanted it or not. The members of the legislature had worn cushion-soled boots when they were passing the Act so that the farmers would not find out what they were about. Now they were sending men around with sugar coated speeches to tell them what had been done, but the sugar would soon melt off and the farmers would taste the slops. They did not want a Government auditor over them at every cross road.

A Resolution Introduced.

W. J. Paul, M.P., then took the platform. He paid a high tribute to Mr. Paulson, Mr. Zuehl and the instructors under them. Regarding the Act he said that it was easy to bring arguments to support it, but not so easy to argue against it. The question they should all ask themselves, however, was how was it going to affect the situation. The results, he feared, would be disappointing. Two or three disgruntled patrons on a route of ten would destroy it and two or three destroyed routes would mean a destroyed factory. If the Act was going to have the effect of discouraging co-operation, they would be better without it. (Continued on page 15.)



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The paid subscriptions to Farm and Dairy exceeds 22,000. The actual circulation of each issue, including the copies of the paper sent to subscribers who are but slightly in arrears, and sample copies, varies from 24,000 to 25,000 copies. No subscriptions are accepted at less than the full subscription rates.

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

Regrets shall not pay 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.

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

Lowering Production Cost

THE high cost of living, by which reference is commonly, though incorrectly, made in particular to foodstuffs, is not an incidental thing. True it is that war and the crop shortage has resulted in abnormally high prices, but these are not the only factors to be taken into consideration. Deep-seated social and economic conditions, entailing a shifting of population with a resultant disproportion between the numbers of producers and of consumers, have been the cause of the gradual rise in price of all the products of the farm since the early nineties. Since then the trend of prices has been generally upwards. Slight fluctuations have occurred, but the tendency has been too strong to be checked by depressing influences for any length of time. Now the climax seems to have been reached.

In attacking the problem of the high cost of living, it is necessary to take cognizance of those conditions which have been its main contributing factors. Isolated attacks on the producers of eggs here and of city milk there, though they may have a certain political effect, will never make any appreciable or permanent reduction in the cost of living. There is much that can be done, but the duty that seems nearest to hand, is to strike at those interests which seek to enhance prices by creating artificial shortages, rather than to drive out of business those who are doing their best to increase production. Another thing to do is to recognize that the steady march of prices upward has not been sufficient either to attract men to the land, or to hold those that were there. The reason of this is not far to seek. The gradual increase in prices of the last twenty years has been accompanied by a corresponding increase in the cost of production, and there are not wanting those who say that the condition of the average farmer shows but little improvement over what it was during the period of low prices that prevailed a generation ago. Lowering the cost of

production for the farmer would mean the lowering of the cost of living for the city consumer. The cost of producing the foodstuffs turned out by the average farmer each year is, according to our most capable agricultural economists, unnecessarily increased by at least \$200 by the tariff alone. The supply of foodstuffs will be increased and the prices lowered only by widening the margin between the farmer's receipts and expenditures, thereby inducing more men to engage in agriculture. Threats of terms in jail for collectively protecting their interests is a poor way of encouraging men to become or remain farmers, and is, therefore, a poor way in which to attack the problem of the high cost of living.

Traffic Regulation

THE need for regulations by which some control of the traffic going over our main roads can be exercised is strongly favored by many of the farmers we have met. The benefit of such control has been amply demonstrated. For instance, Prince Edward county some years ago passed a bylaw compelling all people driving loads over their county roads to use a certain width of tire. The advantage of this is now quite obvious to those who use those roads. It has saved the roads in a way that possibly nothing else would have done.

There are certain seasons of the year when the control of heavy traffic is more urgent than at others. If heavily loaded motor trucks, or even heavily loaded wagons are allowed on the roads when they are not in a condition to carry them, almost an irreparable damage is done. In the spring of the year, a wagon or motor truck carrying a load of from two to eight or ten tons will often break through the crust of stone or gravel that forms the wearing surface, and other vehicles following soon widen and deepen the rut thus started until it becomes dangerous and perhaps impassable. If, however, there was some restriction placed upon these loads, making the load carried in accordance with the condition of the road, much of this damage could be avoided. Even when we get all our main lines of traffic built with the most approved and scientific methods, the same trouble will prevail, unless the load is restricted.

The initial cost of our permanent main roads runs into thousands of dollars a mile. It would be far from wise to allow them to be speedily broken up by the city dray man or the thoughtless farmer, who think only of their own selfish ends. The control of traffic should be one of the questions considered by both the government and the county councils when working out their good roads systems.

The Made-in-Canada Slogan

THE Howard Smith Paper Mills, Ltd., in sending out a Christmas card wishing their customers the compliments of the season, suggest as a resolution for 1917 the following: "I will buy only goods made in Canada." To emphasize its importance, they print in red ink the words, "Made in Canada."

As a general rule, Farm and Dairy prefers to buy goods made in Canada, and therefore has no objection to the slogan in question, excepting to the fact that it is frequently used to cover an immense amount of hypocrisy. Let us take the paper mills as an example.

The theory is that we should be willing, for patriotic reasons, to give Canadian goods the preference, even although we may lose a little in other ways by so doing. At present the paper mills in Canada are insisting on about doubling the price of paper to Canadian consumers, and even in troubling it in some cases. They claim that they can obtain a market for all their paper in the United States, and are shipping immense

quantities of it to the United States. It has been pointed out to them that if they continue to ship paper in this way it will mean that many Canadian publications will have to cease publication. It has been proved by Government investigations that the cost of producing paper has not increased in anything like the proportion that the paper mills are advancing their prices, and it has been suggested that the paper mills continue to supply the Canadian publishers with paper at a reasonable advance while they charge foreign publications as much as market conditions will permit. To all of this the paper mills have turned a deaf ear. They prefer to sell in the United States, or wherever they can get the highest price, and allow Canadian industries that may be adversely affected by their action to look after themselves. If we are supposed to buy made in Canada goods, ought not the firms who advocate the adoption of such resolutions to be willing to sell in Canada in preference to selling abroad, even though they may have to lower their price a little to do so in order to promote the interests of the country?

We frequently see another form of the same brand of deception when town and city merchants proclaim from the housetops that you should spend your dollars in your home towns and villages and thereby build up your local industries. According to these men it is almost a sin to send money away to another town to buy goods that you may need, even if you can buy them cheaper by so doing. The deception in this case consists in the fact that these men do not take their own medicine. Take a grocer for instance. There may be a wholesale grocer in his own town, but does he buy all his supplies from this wholesale grocer? Not by a good deal. He buys his supplies from the travellers representing wholesale grocery firms elsewhere, who will supply them the cheapest, and he would think himself fearfully abused if the public expected him to do anything else. The same is true of every other merchant. They would not think for a moment of buying their supplies only from their local wholesale houses, but prefer to buy and go wherever they can to the best advantage. Yet these are the men who demand that the public shall buy only home-made goods. Isn't it about time that we got wise to how these cries are used to deceive us for the sake of financial gain to the men who play on our loyalty for their own purposes?

When cows are being fed for high records so that the cost of feed is of minor consideration, or in cases where the number of cows is too small to warrant the use of a silo, sugar beets are one of the best sources of succulence. They tend to increase milk production, but corn silage is far more economical as a source of succulence for ordinary purposes where many cows are kept.

Ten years' experimental work in Ohio has shown that two pounds of dry matter can be produced in the form of silage at a less cost than one pound in the form of sugar beets. The convenience in feeding is also in favor of silage.

Recent investigations at the Ohio Experiment Station, in which it was endeavored to discover the peculiar tastes of horses in the selection of the most palatable feed, have shown that they prefer mixed clover and timothy. Brome grass was also to their liking and timothy hay stood third. None of the horses were fond of tall oat grass, while blue grass and red top also stood near the bottom of the list for palatability.

Plowing 15 inches deep, with a subsoil plow following ordinary plowing, has been found unprofitable on test plots at the Ohio Experiment Station. Subsoiling has produced an average increase of less than half a bushel to the acre. Corn yields have been increased only one to two bushels an acre, clover has shown no benefit, while oats have yielded most with ordinary plowing.

Programme for the United Farmers Convention

THE approaching third annual convention of The United Farmers of Ontario, judging from the interest being shown throughout the province, will be the most largely attended and in certain respects the most important yet held by the Association. It will be held in Toronto, Wednesday and Thursday, February 7 and 8. The first draft of the programme was completed at a meeting of the executive committee of the Association, held last week in Toronto. Last year a considerable proportion of the time of the convention of The United Farmers of Ontario was occupied in discussing business matters relating to the affairs of The United Farmers Company. This year it has been decided to give more attention to public issues, as is done at the farmers' conventions in Western Canada, and leave the business affairs to be discussed at the annual meeting of the shareholders of the company.

The most important matter that will come before the convention will be the farmers' platform, drafted at the recent meeting of the Canadian Council of Agriculture, held in Winnipeg, and which has been submitted to the various provincial organizations to be passed upon by them, as well as by as many locals as possible, and if approved, to be ratified and adopted as the national platform of the farmers' organizations in Canada. Almost two full sessions of the convention will be devoted to the discussion of this matter. An outline of the platform was published on page 11 of the December 14 issue of Farm and Dairy. We are planning to republish it in full in an early issue. The draft of the programme, as adopted last week, is as follows:

The opening session, Wednesday morning, will convene at 10 o'clock, and will be a closed meeting for delegates, secretaries, and those invited, on presentation of cards. There will be the reading of minutes and communications, reports of standing committees, the appointment of committees to deal with railway certificates, credentials and resolutions, the filing of notices of motion, the presentation of the directors' report and financial statements, and the report of the secretary.

At the afternoon session, which will open at two o'clock, the first item will be the nomination of officers and directors. The object in placing this so early on the programme is in order that the convention may become better acquainted with those who are nominated before the election takes place, which will be held the following morning. Following this, President R. H. Halbert will deliver his presidential address, and there will be a report by the delegates who attended the meeting of the Canadian Council of Agriculture at Winnipeg. The rest of the session will be devoted to a general discussion of the farmers' platform, as prepared by the Canadian Council of Agriculture for consideration by the provincial organizations. This discussion will be led by leaders of the farmers' movement in Ontario. It is expected that a couple of leading farmers from Western Canada will be on hand, including, probably, H. W. Wood, President of the United Farmers of Alberta, and R. B. Henders, President of the Manitoba Grain Growers' Association.

The subjects to be discussed will include the tariff as it affects the farmer; the placing of a direct tax on unimproved land values, including all natural resources; the favoring of a sharply graduated income tax; a heavy graduated inheritance tax on large estates; a graduated income tax on the profits of corporations over 10 per cent. The advisability of urging the following reforms will be dis-

cussed: The nationalization of all railways, telegraph and express companies; the urging of the government not to alienate any more natural resources from the Crown, but have these brought into use only under short-term leases in which the interests of the public shall be properly safeguarded, these leases to be granted only by public auction; direct legislation; the publicity of political campaign funds contributions, and full provincial autonomy in liquor legislation, including its manufacture, export and import. Men well posted will be asked to lead the discussions on these subjects, and as much information as possible relating to them will be gathered and submitted to the convention.

Thursday Morning Session.

At the Thursday morning session the first item of business will be the election of officers and the report of the secretary, Mr. J. J. Morrison. The meeting will then be thrown open to the delegates, who will be given an opportunity to discuss any problems relating to the movement that they desire. The speakers will be limited to five-minute addresses. Following this, reports will be received from the committees and the adoption of final resolutions, after which the convention will adjourn.

The annual meeting of the shareholders of The United Farmers' Company will be held Thursday afternoon and possibly Thursday evening. A suggestion has been made that a banquet should be held Thursday evening at which Premier Hearst and Mr. N. W. Rowell shall be invited to deliver addresses, the concluding address to be given by some prominent farmer. If it is found that the time or other factors do not permit of the making of arrangements for such a banquet, then the meeting of the shareholders will probably be continued Thursday evening.

The executive committee decided to endeavor to have printed copies of as many of the reports as possible ready for distribution at the convention, so that the delegates will be able to take them home and use them when presenting reports to their clubs.

Cooperative Live Stock Marketing in Grey

THE possibilities that lie ahead of the organized farmers of Ontario in marketing their live stock cooperatively are well demonstrated by the work of a club in Grey county that has been operated this season with marked success. In his departmental report the District Representative Laughland, of Simcoe, refers to the activities of the club as follows:

"A farmer who ships live stock for a Farmers' Club in Grey County, just across the line from Collingwood, calls at the office occasionally, and during conversation with him the other day I learned that the club had shipped over eighty thousand dollars' worth of stock during the past year. There are only about sixty members in this club. Some individual farmers sold three thousand dollars' worth of stock.

This man is a real live wire and if there were a few like him in every locality, much could be done to encourage the live stock industry. He threw out a couple of suggestions that are important in connection with successful farming. He emphasizes the value of feeding live stock and keeping up soil fertility and he stated that a farmer with one hundred acres of land, for, should never lack capital when an opportunity presents itself of buying some live stock for feeding. If he has not the ready cash, he should be able to deal with his bank in a city business house operates with the bank."



Seed Potatoes

Seed potatoes are likely to be scarce. Parties placing their orders early will tend to avoid disappointment.

Corn

Corn shipments are now coming forward slowly. Freight congestion is still delaying deliveries along the road. Saturday, Jan. 6, the price on all feeds closed firm.

Cottonseed

We are able to offer favorable prices on cottonseed meal for parties who can wait a few weeks for delivery. Grass-seeds have had an indication of advanced prices.

Seed Corn

Seed corn points to being very scarce. Those who order early, we think will be wise. Those in need of commercial fertilizers, should write us for quotations. Get our latest prices on groceries and oils.

Don't forget that we can supply you with cutters and sieves.

NOTICE TO CLUB SECRETARIES

Please advise our central office the date of your regular meeting. We want you to have our latest price-list just before you meet. Write us the date to-night.

The United Farmers' Co-Operative Co.

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WHEN the fight begins within himself, a man's worth something.
—Browning.

Winning the Wilderness

(Continued from last week.)

THE pelting rain and deepening chill made the little home a very snug nest that night. There was only one stove to warm the house, but they kept up a fiction of parlor and dining room, kitchen and bed chamber. Even the library was there, although it crouched dreadfully on the parlor, bedroom and kitchen, all three, for it consisted of space enough for two chairs, one footstool, and a tiny lampstand, beside which they spent their evenings.

"Who's likely to drop in to-night, and what's the programme for the evening: charades, music, readings, dancing, cribbage, or political speeches?" Asher inquired.

They had invented all sorts of pastimes, with make-believe audiences, such as little children create for their plays. For these two were children in a big child world. The wilderness is never grown up. It is Nature's little one waiting to be led on and disciplined to mature uses. Asher and Virginia had already peopled the valley with imaginary settlers, each one of a certain type, and they adapted their pastime to the particular neighbors whom they chose to invite for the evening. How little the helpless folk in the city bored with their own dullness, and dependent on others for amusement—how little could such as these cope with the loneliness of the home on the plains, or comprehend the resourcefulness of the home-makers there!

"Oh, let's just spend the evening alone. It's too stormy for the Arnolds and Archibalds beyond the Deep Bend, and the Spooodykeds have relatives from the East and the Gillivays are all down with colds."

Virginia had tucked herself down in the one rocking chair, with her feet on the footstool.

"It's such a nice night to be to ourselves. Watch the rain washing that wet window. It's getting worse. I always think of Jim on nights like this."

"So do I," Asher said, as he sat down in the armed chair he had made for himself of cottonwood limbs with a sunny sack seat. "He's all alone with his dog these dark nights, and loneliness cuts to the heart of a man like Jim. I'm glad I have you, Virginia. I couldn't do without you now. The rain is getting heavier every minute. Sounds like it was thumping on the door. Listen to that wind!"

"Tell me about Jim, Asher. What made him come out here anyhow?" Virginia asked.

"I don't know all the story. Jim has never seemed to want to tell me

and I've never cared to ask him," Asher replied. "When we were away together at school, he was in love with one of the prettiest girls that Ohio ever grew. She lived in the country up the valley from Cloverdale. Her name was Alice Leigh, and she was a whole cut above the neighborhood. Jim said she was an artist, could do wonderful things with a brush and she was just wild to go somewhere and take lessons.



A Strip of Good Road west of Norwich, in Oxford Co., Ont.

"Jim was planning always how to give her the opportunity to do it, but her mother, who owns a lot of land for that country and could afford to send Alice away to study, couldn't see any dollar sign in it, so she kept her daughter on the farm."

Asher paused and looked at Virginia. His own happiness made his voice tremble as he went on.

"He has a brother Tank. I suppose his real name is Thaddeus, or Tantalus, or something like it. I never knew, and I never liked him well enough to ask. Tank was a black-eyed little runt, whom none of the boys liked, a crapping cuss, younger than Jim, and as selfish as Jim is kind.

Just before I came West to scout the Indians off the map, Jim came back to school one time so unlike himself that I made him tell me what was the matter. It was Tank, he said, who was making trouble for him up in the Leigh neighborhood, and he was so grieved and unhappy, I wouldn't ask any more about it. I left for the

West soon after that. When I went back to Cloverdale, Tank Shirley had married Alice Leigh and her mother's farm, and Jim had left the country. I ran on to him by accident up at Carey's Crossing when I came West again, but I've never heard him say a word about the matter, and, of course, I don't mention it, although I believe it would do Jim good if he could bring himself to tell me about it. He's never been quite the same since. He has a little tendency to lung trouble, which the plains air is taking out of him, but he's had a bad attack of pneumonia and it's an old enemy of his, as it always is to a man of his physique. He's a good worker, but lacks judgment to make his work count. Doesn't really seem to have much to work for. But he's a friend to the last ditch. Just hear the rain!"

"It seems to be knocking against the door again," Virginia said, "and how the wind goes howl! Poor Jim!"

"Listen to that! Sounds like something loose against the window. There's something out there." Asher started up with the words.

Something white had seemed to splash up against the window, and drop back again. It splashed up a second time, and fell again. Asher hurried to the door, and as he opened it, Pilot, the big white-throated dog from the Shirley claim, came bounding in, so wet and shaggy he seemed to bring all the storm in with him.

"Why, Pilot, what's the news?"

reopened, and Pilot, with a sorrowful yelp, stretched himself at full length beside the stove.

"Jim's sick, then?"

Pilot wagged his tail understandingly.

"Virgie, Jim needs me. I must go to him." Asher looked at his wife.

"If Jim needs you, you'll need me," she replied.

"And you'll both need Pilot. So will keep all the human beings together," Asher said, as he helped his wife to fasten her boots. "We've got a long old-fashioned nubia about her head. Then they went out into the darkness and the chilling rain, as neighbor to neighbor, answering this cry for help.

Pilot ran far ahead of them and was waiting with a dog's welcome when they reached Shirley's cabin. But the master, lying where he caught the chill draught from the open door, was rigid with cold. A sudden attack of pneumonia had left him helpless. And to-night, Pilot, doing a dog's best, did not understand the danger of leaving doors open, and of joyously shaking his wet fur down on the sick man to whom help was coming none too soon.

"Hello, Jim. We're all here, doctor, nurse, cook, and hired man, and the little dog under the wagon," Asher said cheerily, bending over Jim's bunk. "That pup pretty nearly killed you with kindness, didn't he?"

Jim smiled wanly, then looked blankly away and lay very still.

The plains frontier had no use for the one-talent folk. People must know how to take care of life there. Asher's first memory of Virginia was when she bent over him, fighting the fever in a prison hospital. He knew her talent for helping, and he had fairly estimated her quick ingenuity for his sad home emergency. But a new vision of the plain life came to her as she watched him, gentle-handed, swift, but unburied, never giving an inch to the enemy in fighting with death for the life of Jim Shirley.

"He's safe from that congestion," Asher said when the morning broke. "But his fever will come on now."

"Where did you learn to do all these things for sick people?" Virginia asked.

"Farly from the hospital nurse I had in the war. Also, it's a part of the game here. I learned a few things fighting the cholera in sixty-seven. We must look everything on the frontier squarely in the face, danger and death along with the rest, just as we have to do everywhere else, only we have to depend on each other more here. He'd on there, Jim!"

Asher sprang toward Shirley, who was sitting upright, staring wildly at the two. Then a struggle began, for the sick man, crazed with delirium, was bent on driving his helpers from the cabin. When he lay back exhausted at length, Asher turned to his wife.

"One of us must go to Carey's Crossing for a doctor. You can't hold Jim. It's all I can do to hold him. But it's a long way to Carey's. Can you go?"

"I'll try," Virginia replied, and Asher remembered what Jim had said on the windy September day: "She's as good a woman as we are men."

"You must take Pilot with you and leave him at home. You can't get lost, for you know the way up to the main trail, and that runs straight to the Crossing. Dr. Carey knows Jim, and he will come if he can. I will have pulled Jim back once a year or two ago when the pneumonia had him. Heaven keep you safe, you brave little."

(Continued on page 15.)

The Upward Look

Others Burdens

BEAR ye one another's burdens, and so fulfil the law of Christ.—Gal. 6, 2.

I know a hero. I can fancy his amazement if he knew I called him that. He is married to a wife with a disgraced and degraded family connection. In this, her brother's family, there are young, innocent children, not too young yet to be beyond saving. That hero is straining every nerve to help that family in every possible way. His wife is better and prejudiced; he is loving-hearted and fair. Though he is sneaked and misjudged, he perseveres for the sake of those children. Another might say: "They are no relatives," but he is none of my business," but he has taken the burden upon his already burdened shoulders. Because the burdens of others may be heavy, distasteful and unwelcome, nevertheless, often it must become ours. One of the hard ones to carry is when the real owner is utterly unappreciative, and to whom it never occurs to express any gratitude. Again, there are those who cannot understand why we take their burdens, and yet we know we must.

One of the heaviest loads is when our motives are unjudged, and we must carry those same under the additional one of blame and criticism. But with the anxiety, the heartache, the discouragements, always comes the joy of conscience-freedom. There are also always so many who are truly grateful and appreciative. A letter was received this morning, which will bring many a heart-glow for many a month, so warm was the gratitude expressed and hearty the offer of real assistance from one who had not before been able to do anything in return for help gladly given some years ago and since almost forgotten. Have you ever spent grudgingly a precious hour listening to the recital of another's burdens? But have you not been amply repaid at the end by the evident relief it was to the teller? Then whatever the compensations, or the lack of them, we know gratefully that there is one who understands all, our motives, our difficulties and our endeavors.—I. H. N.

A Wonderful Power of "Come Back"

Mrs. Wm. Todd, Orillia, Ont.

OUR war work as a Women's Institute could not have been possible had we not already been a strong working force. The silent, unobtrusive work that went on for 15 years before the war has made it possible to do the work that we have. This women's organization is an organization for all time. There is no circumstance in which it cannot serve. When we look into the organization itself, one thing impresses us; that is that the Women's Institute has a wonderful power in what our boys call a "come back." You cannot put them down. The harder you put them down, the harder they come up. Another thing about our Institute is the almost total lack of professionalism. There is so much of this in our churches that we are dragged down. In our Institute we have a band of real women, and a hard-working women come from the farms of the country, and we have the truest aristocracy right on our farms.

We do not count it a small thing to consider a properly balanced diet of foods in our family. Neither is it a little thing that in this province of Ontario there are over 20,000 women who are being trained in the Institute in all the principles of parliamentary rule.

Some day this will mean a great force. We have so much destruction to-day that it is very helpful to know that in the Institute we can work together nicely, and we are building and constructing all the time.

In connection with Red Cross work, our Women's Institute in Simcoe has raised \$3,600 for special purposes. We have donated a motor ambulance, two field kitchens, and added to the comfort of our own Simcoe battalion, as well as given to the British Red Cross. In doing our patriotic work we have not neglected our own local work. The number of branches in East Simcoe has increased from 14 branches to 15, and every branch is alive. We have done our special work and our own work as well.—Extract from an address given at the Women's Institute Convention, Toronto, last fall.

Life Is What We Make It

LIFE'S oftener talk of nobler deeds, And rarer of the bad ones, And not about our happy days, And not about the sad ones. We were not made to fret and sigh, And when grief sleeps to-wake, Bright happiness is standing by— This life is what we make it.

Let's find the sunny side of men, Or be believers in it; A light there is in every soul That takes the pains to win it. Oh! there's a slumbering good in all, And our perchance may wake it; Our hands contain the magic wand; This life is what we make it.

Then here's to those whose loving hearts Shed light and joy about them! Thanks be to them for countless gems We ne'er had known without them. Oh! this should be a happy world To all who may partake it; To all who may partake it— The fault's our own if it is not— This life is what we make it. —Anonymous.

Discipline Will Beautify Character

MRS. P. J. Bowers, Pontiac Co., Que. **H**OW much capital should a young man have before asking a girl to marry him? Well, I should say it all depends on the man and the woman. If she has the strength and determination to put her shoulder to the wheel and keep it there, and if he is of a thrifty and sober family, they may safely get married on expectations. It will be a long uphill fight, however, and when bad health and babies come to cause expenses, there will be many heartaches.

The young man should hesitate to take a girl from a loving, comfortable home into poverty and hardship. He must know that his love does not compensate her for the loss of all she leaves, although many men and young girls feel that way when in love. He ought to have reasonable hopes of providing a home and furnishing it, before he ever so humble, before he proposes marriage. That ought not to be so difficult in these times.

I know a young man who has saved \$500 in two years and supported a family. He has made a payment on a farm and has commenced already to build. He could not save anything while single, so perhaps we should not discourage the peevish boys if he is willing to save and so is willing to do without all the luxuries of her father's home, and if they both have good hearts, then let them get married. The discipline and sacrifice will beautify their characters and make them more devoted and forbearing, with each other as the years pass, and a home and family reward them for their courage and industry.

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FARM AND DAIRY

Over Night With Friends in Hastings County

BY R. M. MCKEE.

January 11, 1917.

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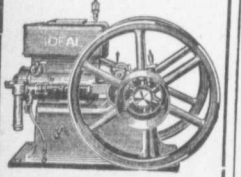
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ONE day last summer I boarded the train at Peterboro and went down to a Women's anti-tube meeting at Madoc, Hastings Co. It was impossible for me to get a train back to Peterboro that night, but as I was fortunate in having friends not far from Madoc, they considered an ideal time to pay them a visit. My friend, Miss Harris, drove in for me and soon we were at her home, some five miles from the village.

As it was my first visit to the Harris home, I was naturally interested in the surroundings. Their house is quite new being built only three or four years ago. It is very attractive and comfortable looking, both inside and out. The rooms are nicely laid out, sound-shed, but not too large, and with little space going to waste. "We built this house for comfort, not for show," Mr. Harris told me, "and with the object in view of making use of every room."

What interested me most was the complete water system. Upon my arrival, I naturally felt rather travel-stained and was taken upstairs where I found a fully equipped bathroom. Just like we have in the city, I could readily appreciate how much that bathroom must be valued in the country home and made a remark to this effect to Mrs. Harris later in the evening.

"It certainly is a great convenience," said Mrs. Harris. "Come out this way and I will show you how the system is operated." We went out to the wash-room and found a sink with hot and cold water on tap and at one side stood a pump. Mrs. Harris explained that this pump was used to force the water up into a tank in the attic. "It only takes about half an hour to fill the tank," she said, "and it holds enough water to last a week." A hot water boiler is attached to the kitchen range so that they always have hot water when a fire is in the range.

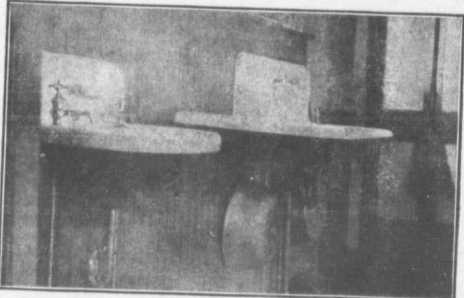
"How do you manage if your cistern goes dry?" asked. "There is not much danger of that," interjected Mr. Harris. "Our cistern is a large one, being five feet long, 10 feet wide and six feet deep, so holds a large quantity of water. We try to get the water pretty well used up at least once a year, so make use of the cistern at threshing or corn cutting

time with this object in view. There is enough water in our cistern at not have rain for the next three months."

Rural mail delivery and the telephone are other conveniences enjoyed by Mr. Harris and his family. It is my belief that the three greatest conveniences in the country home are village, rural mail delivery and the telephone. Quite a number of homes have the latter two, but a much

to have the butter well out of the way by noon, but luck seems against us. We churn and churn until time to get dinner. The milkfok come in at night and take a hand at the churn, and even then it occasionally happens that they, too, have to give up in despair, as butter still refuses to "come." The causes of this trouble are very clearly given in an article which comes from the Missouri Cultivator of Agriculture, by L. G. Rinkle, a portion of which is reproduced here below:

If the milk of one or two animals is responsible for the difficult churning, other milk when mixed with it will



Kitchen Conveniences Well Worth While.

The illustration herewith shows conveniences in the home of Butler Bros., Mississauga Co., Que. There are not many farm homes fortunate enough to have both the basin with water on tap for washing the hands and the sink with draining board for dish washing as well. These conveniences, however, are of inestimable value in the farm home.

smaller proportion can boast of all three. And yet running water is quite as important, in fact more so, than the pleasure of being in a home where they have a complete water system, such as that found in the home of Mr. and Mrs. Harris, that the value of this convenience is brought home most forcibly.

Making the Butter Come
THIS is the season of the year when many of us have difficulty in getting butter to "come." Sometimes we get out the churn early in the forenoon and plan

overcome the trouble. Usually when the trouble occurs it is due to one of two causes: an incorrect churning temperature, or because of the peculiar composition of some milk and cream.

During the cold months of the year, cream should be churned at a higher temperature than during the summer months. For this reason, a careful regulation of the temperature is necessary to give the proper ease in churning. If the temperature at which one churns is not high during the winter months, the cream must be churned a longer time to form butter. One may churn at so low a temperature that butter will not form with a reasonable amount of churning. It is a very common practice during the winter months to allow the cream to become so cold that it will not churn.

Sometimes when cold cream is agitated in the churn it will whip and expand until the churn is nearly full. In this condition butter will not form because the cream cannot be sufficiently agitated. When a low temperature of the cream is the cause of difficult churning, the trouble may be easily corrected by raising the temperature. As the winter season approaches, there is usually a larger number of stripper cows. When a cow becomes nearly dry, the butterfat globules in the milk become very small and collect with great difficulty on being agitated in the churn. During the winter, the feed is such that the fat globules become very much hard, and this likewise interferes with ease in churning. The cream also becomes more viscous as the animals advance in their lactation period, and this again makes churning more difficult.

Whenever butter pressures fail to appear in about 30 to 40 minutes churning, the cream should be raised in temperature. It is well to raise the temperature only a few degrees at a time, for if too warm the softness of the butter with a very soft, silky texture. If, on raising the temperature a few degrees, the butter refuses to gather, a further raise of temperature is necessary.



Just as wheat is one of the big crops here in Canada, so tea is tea one of the largest ones of India. Much of the harvest work is done by the women folk, and our illustration shows a lady picking Salada tea in Ceylon—a tea by the way which is familiar to many of the homes of Farm and Dairy readers."

Dairymen Want Legislation Postponed

(Continued from page 8.)
 out it. It was the man who followed the cow for 365 days in the year that accounted by Mr. E. H. Hills, that in view of the fact that the dairymen were not convinced that payment by the Babcock test and the pasteurization of whey would be in the interests of dairying; that there was a danger of disorganizing cooperation as applied to factories and that there was intense opposition among dairy men to the enforcement of the Act, therefore it was resolved that the legislation be asked to rescind it.

Secretary Thompson Moves an Amendment

Secretary T. H. Thompson begged leave to move an amendment. There was no doubt in his mind, he said, that the legislation would be beneficial if it could be introduced without stirring up discontent. It would do away forever with the pernicious practice of adulteration. In view of the fact, however, that legislation was apparently in advance of public opinion, he would move, seconded by R. G. Leggett, Newboro, that the convention, while approving of the provisions of the Act, ask the government to postpone the date of enforcement until further educational work regarding the matter could be carried on. Mr. Paul withdrew his motion, and the amendment, which then became the motion, was carried.

Another Successful E.O.D.A. Convention

(Continued from page 6.)
 got started again after the close of hostilities. This the convention unanimously agreed to.

The Use of Rennet Substitutes.
 "No danger threatens the cheese-making industry on account of the scarcity and high price of rennet," said Geo. H. Barr, of the dairy division, Ottawa. He outlined the experiments that had been carried on at Finch with pepsin, curdles and other preparations, and the result was entirely satisfactory. In no case was the flavor of the cheese made from pepsin or curdles inferior to the pepsin-made article, and in no case was the quality they were also satisfactory. Canadian-made rennet had not proven to be so good. It was had smelling, and some of the cheese made from it had already gone. Cheese made from the different preparations were on demonstration.

Mr. J. A. Rudlick gave a comprehensive report on the larger aspects of the dairy industry. He explained how the department had saved the situation regarding cheese by investigating rennet substitutes, and securing a large supply of pepsin. A full report of his paper will appear in later issues of Farm and Dairy.

Creamery Men Heard From.

"The creamery industry of eastern Ontario is small, but it is growing, and will continue to grow. It will soon be in a position to make a better showing than it has at this exhibition," said Mack Robertson, of Belleville. He called attention to the greater number of special prizes that were offered for cheese than for butter. His remarks were supported by B. A. Rudlick and Wm. Newman. Mr. Newman asked that Mr. Zuffelt give the creamerymen an instructor to help them in this matter of grading. Next year they hoped to have a much stronger showing of butter than this.

The last session of the convention was addressed by Dr. G. C. Creelman and W. F. Bailey, Assistant Deputy Minister of Agriculture. Dr. Creelman outlined some of the things that

was hoped to inaugurate along agricultural lines. These included seed farms, so that the farmer would always be able to secure sufficient seed of approved varieties of grain at reasonable prices; a good seed catalog; movements for better roads; better schools and more electrically outfitted farms, and for improved social conditions in rural sections. Mr. Bailey gave an illustrated address on his tour of Europe.

Next Convention at Perth.

At a directors' meeting, held after the convention, it was decided to accept an invitation from Perth to hold the next convention there. The officers were reappointed for 1917, with the exception that Wm. G. A. Gillespie, M.P.P., was substituted for that of J. F. Ferguson.

Winning the Wilderness

(Continued from page 12.)

soul. Jim may turn the trick for us some day."

He kissed her good-bye and watched her gallop away on her errand of mercy.

"The men will have all the credit by and by for settling this country. Little glory will come to their wives," he thought. "And yet, the women make anchor for every deed of daring and every test of endurance. God make me worthy of such a wife!"

Virginia Aydelot had spoken truly when she declared that the war had left the Thaines little except inherited pride and the will to do as they pleased. Inherited tendencies take varying turns. What had made a re-

former of old Jean Aydelot made a narrow bigot of his descendant, Francis. What had made a proud, exclusive autocrat of Jerome Thaine, in Virginia Thaine developed a pride of the good of others. It was this pride and the Thaine will to do as she pleased in defiance of the perils that sent her now on this errand of mercy for a neighbor in need. And she took little measure of the reality of the journey. But she was prudent enough to stop at the Sunflower Inn and make ready for it. She slipped on a warm jacket under her heavy cloak, and put on her thickest gloves and overshoes. She wound a long red scarf about her neck and swathed her head in the grey nubia. Then she mounted her horse for her long, hard ride.

(Continued Next Week.)



Kirstin Horse Power Puller

The Kirstin is the best on the market. It pulled 2000 stumps, some running as high as 50 inches in diameter and we averaged about ten stumps per acre. ALEX. ZACHARIA, Sandy Lake, Man.

80 stumps in 100 acres. Used by Kirstin Horse Power Puller Co. at the University of Wisconsin.

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Guaranteed for 15 Years **Kirstin Stump Puller** **A Money Back Bond**
One Man — Horse Power

No deeply embedded top-root is too big for the Kirstin Horse Power Puller. Its mighty strength is irresistible because of its triple power and exclusive Kirstin features. It will clear more than two acres at one setting without strain to man, horse or machine. For 15 years it has proved its invincibility on Southern stump lands.

One man without horses can pull the biggest stump, too, with the Kirstin One Man Stump Puller. A little push on the handle gives tons of pull on the stump. This enormous power is developed by use of double leverage.

There is a machine for every need, from the smallest land clearing job to the largest. Every customer is given a Guarantee Book that tells the Kirstin Method will clear your land and make it ready for the plow at a cost from 10% to 50% clearance cost against breakage. For 15 years Kirstin Puller has cleared 100,000 acres in 10 days' trial and money refunded if our guarantee does not deliver the goods.



Send for Free Book "The Gold in Your Stump Land." Write today. You be the judge, read the letters from men who have bought Kirstin and see they say they did. Look at the photos after our clearing men have used Kirstin and see they have pulled the biggest stump on any stump land. We will send you one of our Kirstin Owners. Read the interesting information on all kinds of best stump pullers until you read this book.

Big Money to those who Order Early
 We offer you a special opportunity to join in our Profit Sharing Plan. No courting. Just a willingness to show your Kirstin to your neighbors. Don't wait—send the coupon today. Be the first to share in this big money making plan.

A. J. KIRSTIN CANADIAN CO.
 5325 Dennis St.,
 Sault Ste. Marie, Ont.

The Kirstin does great work and is greatly pleased with it. Arthur A. J. Collie, B. E., Creston, B. C.



Kirstin One Man Puller

Send us a free copy of "The Gold in Your Stump Land" and full particulars of the Kirstin Method, The Money Back Bond, The 15 Year Guarantee, The Profit Sharing Plan.

Name _____
 Address _____
 Sending this coupon obligates you to no cost

Cream Grading Discussion Still Goes On

Let Larger Creameries Get Together

I J. B. Jackson, Simcoe, Ont., would be benefited, but there are some serious difficulties in the way, in my opinion. In the first place, starting grading with one creamery to take all grades at the present time. On the other hand, if grading is practiced by all creameries it will be found that small creameries will put their first and second grades into the same vat and churn all together. The farmers then will object, and say the cream and grade cream is keeping down the price of first grade cream.

Grading cream will almost compel creaming dependent so much upon individual taste, for example the amount of salt and the pasteurized flavor. As their experience is certainly valuable to us. At the same time, I believe the conditions in the West, especially, are very much different from what they are in Ontario. Regarding the competition at the large fairs, this is not a good test of quality, in that only the best samples are sent for exhibition. To get at a practical solution of the cream grading question I would suggest that the larger creameries throughout the province get together and decide upon a system of grading and carry it out during the best season. This will force all others to come into line and will do so without legislation, which is bound to be objectionable in some points or at some places.

Grading Will Do the Trick

Rosecote Creamery Co., Kitchener. NEARLY every manufactured product in our ranks is high in price for quality and workmanship, with the exception of creamery butter. Why can't our creamery butter rank as the best? It can be done, and grading will do the trick.

Recommends Individual Cans

D C. A. Morrison, Whitechurch. DURING the past summer, Mr. J. B. Smith, Dairy Instructor for Laurel district, visited our factory there and spent two days out in the country on the wagons. He graded every lot of cream and took note of the quality and conditions under which it was produced. He also took the customary sample for the Babcock test. When he and the drawer came in with the lead in the evening, Mr. Smith and myself went over the samples and graded the cream from the samples taken. When we got over them all, we compared our decision with that of his notes taken at the farm, and the results were very encouraging. They were not all the same, but I think with a little care and practice it could be worked very satisfactorily, but I would recommend the individual can exclusively.

Settle Margarine Question First

T HING question under ordinary circumstances would be worthy of considerable thought on the part of creamerymen, but at the present moment we believe there is a much more serious matter facing the creamerymen of Canada in the agitation to introduce oleomargarine. Granting that cream grading is a step in advance, we believe, at the same time, that there should be no such important matter brought up at present to distract the attention of creamerymen and dairy farmers from

the much more serious situation presented by the above agitation. It must be admitted that the matter of cream grading has for its ultimate object the increasing of the selling price of butter. We therefore believe that any proposal which has for its object a serious reduction in the price of butter should be disposed of first. We understand that Farm and Dairy has taken the stand opposing the introduction of oleomargarine, but our opinion is that a much more vigorous action is necessary if we are to keep pace with its proponents.

Paying by Ticket

N. D. Schatz, Milverton.

T HERE is another matter which I think should be taken up in your columns. Re war tax, or whatever you may call it, I have asked the Honorable Mr. McDiarmid whether we could not pay our patrons by ticket, the same as live stock dealers, and at the end of the day give the bank a check for the full amount. We do not object to doing our part in full, but they should we have to pay from \$6 to \$10 and \$12 a month war tax and the live stock dealer, probably only paying two cents war tax? Hon. Mr. McDiarmid's reply was that he thought we had the same rights as the live stock dealer, but we should not object to paying a little war tax. I then took the matter up with the bank, but they will not allow us to pay by ticket, although they allow the live stock dealer to do so. If it is fair for one, why not for the other?

Butter Must Be Graded Too

Wm. Newman, Lorneville.

G RADING must begin with the farmer's cream and continue until it reaches the consumer, who should know what grade of butter he is buying. If the consumer knows what he is buying, our markets will grow until our production reaches its maximum.

You Need This Book

Our free book, "The Soil and Its Tillage" will help you make this a banner year. Send for it.

And, the farmer who understands this science is the one who produces paying crops in good seasons and in the bad. "The Soil and Its Tillage" is a practical text book. Tells you in plain practical way just the things you need to know. No matter what tools you use you need this book.

Cutaway

Disk Harrows and Plows

have cutlery steel disks forged sharp. They cut, pulverize and level the soil without bringing up stones, trash or sod. CUTAWAY (CLARK) Double-Action Harrows give two shavings in a single operation, rest are left in draft. In all sizes, (as small as one-horse) and for every purpose. If your dealer has not the genuine CUTAWAY write us and we will send at once for our new free book, "The Soil and Its Tillage."



The Cutaway Harrow Co.
Maker of the original CLARK disk harrows and plows
6621 Main Street, Higganum, Conn.

The Soil and its Tillage

Skimmed Milk Wanted

Is this not the expression on the faces of your Calves and Pigs when you meet them face to face?
If so, give them what they require.
I send your CREAM to us and have two cheques coming in instead of one, as all our Creamery patrons do.
I We pay all express charges.
I Keep you supplied with Cans.
I Keep you supplied with Butter.
And—Well, you'll always be supplied with money. We do not Boast of our business methods, they speak for themselves.

Corwall City Dairy, Adolphe Street, Corwall, Ont.

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advertising reliable goods. They want to know you; are reliable. They are where you saw the Ad. When writing them don't forget to tell them you saw the ad. in FARM AND DAIRY.

NOTICE

To Our Customers

The price of wire continues to steadily advance and that upward trend is likely to continue for some time to come. We believe that wire is going to be much higher. Still we are selling Page Fence direct to the customer, for cash, at the old low prices. We will have to sharply advance prices just as soon as we have to buy material on a basis of its present cost. It may be years before the present comparatively low prices again prevail.

THE PAGE WIRE FENCE COMPANY LIMITED.

WALKERVILLE

TORONTO

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ST. JOHN

ABSORBINE STOPS LAMENESS from a Bone Spavin, Ring Bone, Splint, Curb Side Bone, or similar trouble and gets horse going sound. Does not blister or remove the hair and horse can be worked. Page 17 in pamphlet with each bottle tells how. \$2.00 a bottle delivered.

Horse Book 9 K free. ABSORBINE, JR., antiseptic liniment for mankind. Reduces Puffy Swellings, Enlarged Glands, Gout, Wens, Bruises, Varicose Veins, Arteriosclerosis, Heat Old Sores, Allergy Pain. Will tell you more if you write. \$1 and \$2 a bottle at dealers or delivered. Book "Evidence" free. Manufactured only by W. H. YOUNG, P.O. #115 Lyonsville, Pa. Absorbine and Absorbine, Jr., are made in Canada.

Opposition to Dairy Act Dying Out

PERHAPS the strongest opposition to the Dairy Standards Act which was met in Hastings County. That the opposition is becoming less and that it will finally die down is intimated in the following extract from the report of Mr. A. D. McIntosh, "I have attended several annual cheese factory meetings and have thoroughly threshed the matter at the Dairy Standards Act again. At the Hobbin factory in Huntsgrove township, where there were visitors from the surrounding factories who came to get light on the subject, the meeting unanimously voted that they were in favor of the act taking effect April 1st next. At the Harold cheese factory meeting, in Oxford township, the consensus of opinion was in favor of the act, but that it should not be put into effect for another two years. When the people over the country, more thoroughly understand that the act is being passed, and that the weight of it will be done at the expense of the Department and by the local dairy farmers, I feel sure that most of the act will rapidly die down, and that a new era dairying will dawn for the farmers of Ontario."

President R. H. Harbert, of the United Farmers of Ontario, has been busy lately addressing meetings in different parts of the province. Wednesday, Thursday and Friday, January 2-4, he spoke at Dunford and Charbono, in Victoria county, and Charbono in Ontario county. This week he is speaking in Oxford county.

Butter and Cheese at E.O.D.A. Winter Exhibition
(Continued from page 16.)

percentage of the money to the makers. On closeness and texture he had no final say but took some of the number of points. Mr. Thompson drew attention to the boxes in which the cheese had arrived and which showed every conceivable form of injury. This showed that cheese had received very rough handling, or that the present regulations regarding boxes were not being enforced.

The closeness of the scoring was evidenced by the slight variations in the number of points allowed. The variations in the cheese getting into the prize money were as follows: Sept. white, 97.80 to 96.80; Sept. colored, 97.80 to 96.45; Oct. colored, 97.35 to 96.70; flats (4 prizes), 96.75 to 95.90; Silt-on, 94.40; 95.85 to 94.55. The most silver for the best scoring cheeses, which was donated by the inspectors and cheese makers, and is valued at \$100, was won by Jas. S. Tobin, Martintown. The score, made on Sept. colored, was 97.80.

Butter Exhibits Not Strong.

The butter was placed by Mr. T. A. Zufeit, of the Kingston Dairy School. In his comments Mr. Zufeit said that there was scarcely enough butter on exhibition to give a fair base an opinion as to the quality of the product of eastern Ontario creameries. There were only three exhibits of creamery butter. Perhaps it is owing to the poor showing that Ontario butter had been making at our leading fairs that fuller classes were the newer province and with them some of our ancient makers had discarded the hope of a better showing. It was so that in the near future the butter exhibits would rival in excellence the cheese exhibits.

LIST OF PRIZE WINNERS. CHEESE.

- Class 1—1—Sec. 1—September White: 1. A. G. Wilkins, Vanhook Hill; 2. Leith Talmann, Eggle; 3. J. W. Stewart, Oxford.
- Class 1—1—Sec. 2—September Colored: 1. Orlin E. Barton, Springbrook; 2. Ralph Tobin, Martintown; 3. Alex. McWhittan, 7. John Hall, Rossmore; 4. John Grant, Lunenburg; 5. E. R. Claxton, Cornwall; 6. Alex. McWhittan, 7. John Hall, Rossmore; 8. J. Orrie E. Barton, Springbrook; 9. Geo. H. Ross, Sterling; 10. Jas. F. King, Almonte; 11. W. Chambers, Sterling; 12. Geo. Baker, Sterling; 13. Jas. S. Tobin, Martintown.
- Class 1—1—Sec. 3—October Colored: 1. G. Wilkins, Vanhook Hill; 2. Jas. S. Tobin, Martintown; 3. Kenny Dumas, York; 4. W. Freshell, Oxford Mill; 5. Ralph Aigue, Northbrook; 6. Percy Forton, Brocksman; 7. John Kyle, Nawa; 8. John Hall, Rossmore; 9. Ralph Aigue, Northbrook; 10. Walter Loukette; 11. Benson Avery, Kinburn.
- Class 1—1—Sec. 4—Silt-on: 1. W. J. Potter, Monticello; 2. A. W. Wilkins, Mills; 3. W. J. Zerow, Nanawau; 4. Walker T. Hill, Sterling.

BUTTER.

Creamery Butter—Class 4—Sec. 1—150 pound box: 1. Bellevue Creamery; 2. E. R. Claxton, Cornwall; 3. R. S. Southworth, Campbellford.

Class 4—2—Sec. 1—150 pound prints: 1. R. M. Halsey, Lanark; 2. Bellevue Creamery; 3. R. S. Southworth, Campbellford; 4. Dairy Butter—Class 5—Sec. 1—(30 pound crates): 1. J. Orrie E. Barton, Springbrook; 2. Jas. Cramer, Westport; 3. Miss N. Fraser, Northport; 4. D. H. Hill, Northport.

Class 5—Sec. 2—(10 pound prints): 1. Jos. Cranston, Northport; 2. M. J. McDonald; 4. D. H. Fraser, Northport.

SPECIAL PRIZES.

Canadian Fat Co.

- 1. John Hall, Rossmore; 2. Ralph Aigue, Northbrook; 3. W. J. Potter, Monticello; 4. C. A. Wilkins, Mills; 5. H. Ezzenst, Selby; 6. Jos. Cramer, Westport.

Silver Trophy by instructors and Chemist: 1. Jas. S. Tobin, Martintown; 2. J. Orrie E. Barton, Springbrook; 3. J. G. Gardiner, Vanhook Hill; 2. W. G. A. G. Western Fat Co. 1. A. G. Wilkins, Vanhook Hill; 2. A. G. Wilkins, Vanhook Hill; 3. Bellevue Creamery; 4. R. M. Halsey, Lanark; 5. Geo. D. Taylor, Selby; 6. Miss N. P. McDonald.

De Laval Dairy Supply Co.

- 1. Orlin E. Barton, Springbrook; 2. Ralph Tobin, Martintown; 3. Jos. Cranston, Westport; 4. Hulse, Cornwall; 5. H. Ezzenst, Selby; 6. F. J. Ford.

M. H. Richardson & Co., Inc.

- 1. J. E. E. Claxton, Cornwall; 2. Bellevue Creamery; 3. J. Orrie E. Barton, Springbrook; 2. J. S. Tobin, Martintown; 3. Jos. Cramer, Westport; 4. Jos. Cramer, Westport.

TILLSONBURG AYRSHIRE SALE.

Held another successful sale at Tillsonburg on Dec. 29. The splendid quality of animals offered and the attendance received at the two former sales of the Club, brought out buyers in good numbers. About 400 people were in good attendance at the sale of the Imperial Hotel. Auctioneers Moore and Phillips acted as a pleasing manner. The animals were in the best condition, quite satisfactory to the trade. There was quite a demand for bulls, and it was as they merited. Fat cows averaged 1250 lbs. or an average of nearly 1210 lbs. each. Mature cows averaged 1100 lbs. each. 100 lbs. yearlings, 58.75; two-year-olds, 110.00; 142 lbs. bulls, 67.50. All animals selling for \$100 or over.

Cows 3 yrs. and over—White Legged Kerry, #116, E. R. Palmer, Newburgh; #117, M. E. Babe, #118, G. T. McKee, Belmont; #119, F. H. G. T. McKee, Belmont; #120, F. H. G. T. McKee, Belmont; #121, F. H. G. T. McKee, Belmont; #122, F. H. G. T. McKee, Belmont; #123, F. H. G. T. McKee, Belmont; #124, F. H. G. T. McKee, Belmont; #125, F. H. G. T. McKee, Belmont; #126, F. H. G. T. McKee, Belmont; #127, F. H. G. T. McKee, Belmont; #128, F. H. G. T. McKee, Belmont; #129, F. H. G. T. McKee, Belmont; #130, F. H. G. T. McKee, Belmont; #131, F. H. G. T. McKee, Belmont; #132, F. H. G. T. McKee, Belmont; #133, F. H. G. T. McKee, Belmont; #134, F. H. G. T. McKee, Belmont; #135, F. H. G. T. McKee, Belmont; #136, F. H. G. T. McKee, Belmont; #137, F. H. G. T. McKee, Belmont; #138, F. H. G. T. McKee, Belmont; #139, F. H. G. T. McKee, Belmont; #140, F. H. G. T. McKee, Belmont; #141, F. H. G. T. McKee, Belmont; #142, F. H. G. T. McKee, Belmont; #143, F. H. G. T. McKee, Belmont; #144, F. H. G. T. McKee, Belmont; #145, F. H. G. T. McKee, Belmont; #146, F. H. G. T. McKee, Belmont; #147, F. H. G. T. McKee, Belmont; #148, F. H. G. T. McKee, Belmont; #149, F. H. G. T. McKee, Belmont; #150, F. H. G. T. McKee, Belmont; #151, F. H. G. T. McKee, Belmont; #152, F. H. G. T. McKee, Belmont; #153, F. H. G. T. McKee, Belmont; #154, F. H. G. T. McKee, Belmont; #155, F. H. G. T. McKee, Belmont; #156, F. H. G. T. McKee, Belmont; #157, F. H. G. T. McKee, Belmont; #158, F. H. G. T. McKee, Belmont; #159, F. H. G. T. McKee, Belmont; #160, F. H. G. T. McKee, Belmont; #161, F. H. G. T. McKee, Belmont; #162, F. H. G. T. McKee, Belmont; #163, F. H. G. T. McKee, Belmont; #164, F. H. G. T. McKee, Belmont; #165, F. H. G. T. McKee, Belmont; #166, F. H. G. T. McKee, Belmont; #167, F. H. G. T. McKee, Belmont; #168, F. H. G. T. McKee, Belmont; #169, F. H. G. T. McKee, Belmont; #170, F. H. G. T. McKee, Belmont; #171, F. H. G. T. McKee, Belmont; #172, F. H. G. T. McKee, Belmont; #173, F. H. G. T. McKee, Belmont; #174, F. H. G. T. McKee, Belmont; #175, F. H. G. T. McKee, Belmont; #176, F. H. G. T. McKee, Belmont; #177, F. H. G. T. McKee, Belmont; #178, F. H. G. T. McKee, Belmont; #179, F. H. G. T. McKee, Belmont; #180, F. H. G. T. McKee, Belmont; #181, F. H. G. T. McKee, Belmont; #182, F. H. G. T. McKee, Belmont; #183, F. H. G. T. McKee, Belmont; #184, F. H. G. T. McKee, Belmont; #185, F. H. G. T. McKee, Belmont; #186, F. H. G. T. McKee, Belmont; #187, F. H. G. T. McKee, Belmont; #188, F. H. G. T. McKee, Belmont; #189, F. H. G. T. McKee, Belmont; #190, F. H. G. T. McKee, Belmont; #191, F. H. G. T. McKee, Belmont; #192, F. H. G. T. McKee, Belmont; #193, F. H. G. T. McKee, Belmont; #194, F. H. G. T. McKee, Belmont; #195, F. H. G. T. McKee, Belmont; #196, F. H. G. T. McKee, Belmont; #197, F. H. G. T. McKee, Belmont; #198, F. H. G. T. McKee, Belmont; #199, F. H. G. T. McKee, Belmont; #200, F. H. G. T. McKee, Belmont; #201, F. H. G. T. McKee, Belmont; #202, F. H. G. T. 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Market Review and Forecast

WHEAT.
 There was a steep advance in Manitoba wheat, May option, on the Winnipeg market during the week and prices on cash wheat advanced accordingly. The reason for the higher price of wheat on this side of the lake is explained in the smaller stocks in the elevators and the impossibility of getting all-rail shipments.

Toronto Board of Trade official quotations:
 Manitoba wheat—Trade, bay parts, No. 1 northern, \$2.04 1/2; No. 2 northern, \$2.04 1/4; No. 3 northern, \$1.97 1/2. (Old crop wheat, 40 c higher.)
 Manitoba oats—Track, bay parts, No. 1, C. W. 7 1/2.
 American corn—No. 3 yellow, \$1.09, subject to embargo.
 Ontario wheat—Winter, new crop, No. 2, \$1.74 to \$1.76 (according to freight out-aid); No. 3 winter, new crop, \$1.72 to \$1.74.
 Ontario oats (according to freight out-aid)—No. 2 white, 66c; No. 3 white, 65c to 66c.
 Harley—Malting, \$1.16 to \$1.18, nominal.
 Buckwheat—\$1.25.
 Type—No. 3 new, \$1.33 to \$1.35.
 Manitoba flour—First patents, in 48 bags, \$9.50; second, in job, \$9.40; strong below, in job, \$9.30, Toronto.
 Ontario flour—Winter, new, trade, Toronto, same as above, according to freight, \$2.75 to \$2.80, in 48 bags.

MILL FEEDS.
 Carlots delivered Montreal freight:
 Shorts, \$27; bran, \$23; good feed flour, \$20; \$2.70 to Montreal, heavy;
 \$22; shorts, \$25; middlings, \$23 to \$40; middie, \$43 to \$48.

HAY AND STRAW.
 The demand for baled hay is slackening. It is quoted on track here, No. 1, new, \$12 to \$12.50, carlots; No. 2, \$9 to \$11; straw, \$9.50 to \$10. At Montreal No. 2 hay is \$12 a ton in carlots.

SEEDS.
 Alaska No. 1, bush, \$10 to \$10.60; No. 2, \$9 to \$9.50; No. 3, \$7.50 to \$8; selected,

\$12.5 to \$6; Timothy, cwt., \$3 to \$6.50; corn, grades, 1.50 to \$2.50; red clover, No. 1, bush, \$10.50 to \$10.75; No. 2, \$9 to \$9.75; No. 3, \$7.50 to \$8.75.
PEAS AND BEANS.
 New Brunswick, in carlots, \$3 to \$3.25; selected, \$3.25 to \$3.50; No. 1, \$2.75; No. 2, \$2.50; No. 3, \$2.25 to \$2.50.
 Japanese hand-picked beans, bush, \$6; cut, \$5.50; Canadian, hand-picked, \$7; primes, \$6.50.

HONEY.
 Tins, 2 1/2-lb. tins, 12c to 13 1/2c a lb.; 5-lb. tins, 10c a lb.; 10-lb. tins, 12 1/2c a lb.; 10-lb. tins, clover, 12c to 13c a lb. Comb honey—Selects, \$2.40 to \$2.75; No. 2, \$2 to \$2.75. Buckwheat honey, 50-80 lbs., 8c to 9 1/2c a lb.

EGGS AND POULTRY.
 Wholesale rates are adding to the trade, new-laid in cartons, medium, 45c to 70c; ex-cartons, nominal, 65c to 68c; storage, selecta, 45c to 48c; storage, No. 1, 48c to 49c.
 Poultry—Laid
 Dressed
 Spring chickens, No. 16 to 17c 20c to 23c
 Old, lb., 11c to 13c 16c to 18c
 Turkeys, lb., 12c to 15c 20c to 25c
 Geese, lb., 9c to 10c 21c to 23c
 Ducks, lb., 9c to 10c 21c to 23c

DAIRY PRODUCTS.
 The butter market is firm and business is confined chiefly to home requirements. There is a large export business going on via Montreal, but the butter comes from the United States. The shipments are large and this fact is keeping butter at high values for the moment. Quotations are: Creamery tins, fresh made, 45c to 46c; storage, 45c to 46c; solids, 45c to 46c; choice dairy prints, 40c to 41c; ordinary dairy prints, 36c to 38c; bakers', 35c to 36c.
 Cheese, new, large, are quoted at 25 1/2c to 26c; twin, 26c to 26 1/2c; triplets, 26 1/2c to 27c; Siltons, 27c to 27 1/2c.

LIVE STOCK.
 Prices advanced during the week to 50 cents above last week's figures. Several loads of choice cattle went as high as \$13 a cwt. and a number of loads of good butchers' at \$9 to \$9.25. There was a good demand, although the increased offerings are enabling buyers to secure more for immediate requirements than usual. The quotations for choice cattle are about as follows: Steers, choice, weight, \$9.25 to \$9.75; butchers', choice, handy, \$9.50 to \$9.90; good, \$7 to \$7.50; cow, 50 med. \$8.20 to \$7.50; butchers' cows, choice, \$7 to \$7.25; med. to good, \$6.25; butchers' bulls, choice, \$7.20 to \$7.50; med. to good, \$6.40 to \$6.80; heifers, 400 to 500 lbs., \$6.25 to \$6.75; med., 700 to \$7.00; cows, 100 to 120 lbs., \$5.25; cows, light, \$4.80 to \$4.75; canners and cull, \$4.10 to \$4.25. There was quite a sharp advance in the hog market during the week and buyers were generous in giving quotations. Hogs, weighed off cars, were quoted at \$12 1/2; fed and watered, \$12.50; less \$1 to \$2 on light; less \$2.00 to \$2.50 on medium, less half per cent. Government condemnation.

During the year 1916 Montreal cattle receipts showed a big decrease, while hogs showed an increase to this date.

Lakeview Dutchland Hengerveld 2nd

THE GRAND CHAMPION
 Holstein-Prisian bull at the Canadian National Exhibition and Western Fair heads our herd. His senior three-year-old three-quarter sister is Canadian champion, with 168 lbs. milk in seven days. **BOTTLE CHAMPION**, this is our motto: "Bred for type and production. Choice young bulls out of high testing R.O.M. dams for sale. Write for extended pedigrees and prices."
 W. G. BAILEY, Oak Park Stock Farm, R. R. No. 4, PARIS, ONT.

WALNUT LODGE AYRSHIRES

We have for sale a bull calf from **SCOTTIES NANCY** (record 650.8 milk, 26.15 lbs. fat as a two year old, testing 4.1 per cent.). She is a daughter of a Canadian champion sire **SCOTTIE** (60 qualified daughters). Also six heifer calves sired by **NEEDHAM'S ADMIRAL**, whose dam was a full sister to **SCOTTIE**. They are a quality lot proud to sell. Write for extended pedigrees.
 REG. J. A. SMITH, R. R. No. 1, HATCHLEY STATION, Ont.

"I am tired answering inquiries"

So writes a live stock advertiser in Farm and Dairy, when advising us to cancel his advertisement. He had sold all his surplus stock, and could have disposed of more had they been available. We offer the same good service to you as this breeder had.

Have You Stock For Sale?

You will find through the advertising columns of Farm and Dairy the surest, cheapest method of disposing of them. Have your advertisement go through to our 24,000 readers regularly. Write us a line for our special rate to breeders and we will be glad to make you a specialty and give you our assistance in preparing your advertisements. Write us to-night.

ADV'T. DEPT. FARM AND DAIRY PETERBORO, ONT.

MAPLE VILLA STOCK FARM

Offers for sale two 4-yr. old cows, good production, good size and in good condition, light color, due to freshen January 20th and March 11th. Price, \$300.00. Also young bulls fit for service, sired by a son of Tidy Abbecker's Merona Youth, whose seven nearest dams average 160 lbs. butter in seven days. And from dams ranging from 10 to 13 thousand lbs. milk in one year. Price \$75 to \$100 each.
 R. W. JOHNSON, R. R. No. 1, WILSONVILLE, ONT.
 Long distance phone from Waterford, Ont.

HOLSTEINS

Could spare 10 cows or heifers bred to the Great Bull KING SEGIS PONTIAC DUFRAYE. Have one yearling bull, and calves from 10 months down.
 R. M. HOLBY, Perth Ferry, R. R. 4

PEACH BLOW AYRSHIRES

Young stock for sale, always on hand (both sexes), from high-testing heavy producers. Good udders and large test a special feature of my herd. Three fine young Sires ready for service. Get particulars of these if you need a sire. R. T. BROWNLEE, Peach Blow Farm, HEMMINGFORD, Que.

LAKEVIEW HOLSTEINS

We are now offering the highest producing 3-yr.-old in Canada, in Lakeview Dutchland Article, the 7445-lb. Can. Champion, due to freshen Mar. 23, 1917; her 3 daughters; her own dam, her full sister and her daughter. Also several young bulls, all sired by Det. Col. Sir Monk, and half brothers to the 3446-lb. cow above. One is out of Queen Mabel, the 2427-lb. cow in the Div. 5. Sex after calving. Don't miss an opportunity to see this herd.
 Major E. F. OSLER, Prop., BRONTE, ONT. T. A. DAWSON, Mgr.

HIGHLAND LAKE FARMS

Offer for sale at attractive prices a few choice bred Holsteins.
 No. 1—A yearling son of a 34 lbs. bull and a 29 1/2 lb. 3 year old prize-winning cow. No. 2—An 8 months son of a 34 lbs. bull and a 16.2 lb. 3 year old grandaughter of King Segis. The dams of these bulls are in our foundation herd, and will be tested again at next freshening. Write for printed pedigrees. We also have for sale a few females bred to our herd sire, KING SEGIS PONTIAC CANADA.
 R. W. E. BURMAN (Farm at Stop 55, Yonge St. Radial) Jefferson, Ont.

RIVERSIDE AYRSHIRES

calves male and female; bulls fit for service; by Netherington Lochwinny, Imp. 35431. Females all ages, from 1st Prize stock and good producers. One Standard Bred Friesian 15 months, by His Nibs 284, "58909".
 Apply to Robert Sinton, Manager, Riverside Farm, Monte Bello, Que. Or to Hon. W. Owens, Westmount, Que.

AYRSHIRE BULLS

Two yearling bulls, sired by a brother to the champion R. O. P. two year old heifer (record 1413 lbs. milk and 820 lbs. fat), and dams by a son of exceptional R. of V. cows. Females of Tanswilde record 1613 lbs. milk and 638 lbs. fat). Dams are from dams whose milk and dams a high fat content.

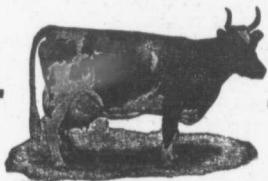
We are also selling a choice bull and 2 heifers, with same top crosses, at Southern Counties Ayrshire Club Sale at Tilsonburg, December 29th, 1916. All are choice animals, the bull in same family as the champion R. of P. bull "Scottie", who was bred by us.
 W. W. BALLANTYNE & SON, R. R. No. 3, Stratford, Ont.

55 Auction Sale 55
 Head Head

Old Commercial Stables, Brantford
Wednesday, Jan. 31st, 1917
 AT ONE O'CLOCK

The Brant District Holstein Breeders will hold their third annual consignment sale of 50 choice females and 5 bulls. The females are mostly fresh or springers and a number are R.O.M. or from R.O.M. and R.O.P. dams. Apply to secretary for catalogue.

ALMAS & MOORE J. W. RICHARDSON N. P. SAGER
 Auctioneers. Sales Manager. Secretary
 St. George, Ont.



Paving the Way to Prosperity

EVERY shrewd dairy farmer in the dairy business to-day is aiming to have his herd turn him out a greater margin of profit for his work. With labor scarce and feed expensive it is necessary that we, as dairymen, should make every effort to increase the earning capacity of every animal.

One way to accomplish it, to breed your herd to give a higher fat test and still retain the persistency in milk production—

For Instance--

Your herd of 10 head may now produce 2,500 lbs. milk per week testing 3%. But, by using a sire from "high-testing" blood, your herd of 10 could produce 2,500 lbs. milk per week testing 4%.

It Would Mean

1. The same labor would do the work.
2. Only the same amount of hay and grain required.
3. The young stock would sell for more.
4. You would take a much greater pride in your herd.
5. And your cash returns would be 33% higher.

In a test extending over 12 months at the New Hampshire Experiment Station, the Ayrshires competing made 100 lbs. of butter with \$3.00 less feed than No. 2 breed, with \$4.50 less than No. 3 and with \$5.50 less feed than No. 4. Such is the record of economical production for which Ayrshires have been noted in both Europe and America. You can have these qualities in your herd

Ayrshire Blood Will Do It

A good way to get a start in Ayrshires is to buy an Ayrshire bull from a good milking dam and by a sire from a good strain and grade in your present herd. Better still, buy a good Ayrshire cow or heifer and get a start in pure bred. Ayrshires are economical, persistent producers, hardy and thrifty, and with all a sweet attractive cow you will admire. Get a start in them now before the prices go higher.

In improving the quality of your herd you'll find Ayrshires sustain their great reputation as high testers—thrifty and productive. See that your first pure bred is an Ayrshire. We shall be pleased to send you the names of your nearest Ayrshire breeders. Send for our free booklet—



The Type of Sire That Makes for Better Herds.

Canadian Ayrshire Breeders' Association

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

SYDNEY BASIC SLAG

LET US LEARN EVEN
FROM OUR ENEMIES

In a Bulletin recently issued by the Minister of Agriculture in England, he points out that food production in Germany per acre is 50% greater than in the United Kingdom, notwithstanding that German soils and climate are distinctly inferior to those of Britain.

WHAT IS THE REASON?

The Minister replies:

"That the chief cause of the increased production of German soil is the increase in the use of fertilizers." Basic Slag is the leading fertilizer used in Germany and there is on record the purchase by one single German Agricultural Society of 620,000 tons in one year.

ISN'T IT WORTH YOUR WHILE TO INVESTIGATE?

Send us your address and we will post you some instructive literature telling you all about Basic Slag.

The CROSS FERTILIZER
COMPANY, LIMITED
SYDNEY - - NOVA SCOTIA

Make 1917 a Record Year

It can be done by resolving to keep a close record of all your animals. It is very valuable. You like to have a certain amount of information about your animals always at hand. Just think what it would mean to you if you could instantly turn up the date of birth, records, and all other information relating to any animal in your herd.

The Farm and Dairy Herd Record Book

gives you the means of providing this data with the minimum amount of trouble and expense. It provides for name and number of the animal, date of birth, by whom bred, milk production, and full service record. Has space for name of calf, sex, and disposition of it. To live stock breeders they are simply invaluable and indispensable. Write for samples and prices to

LIVE STOCK DEPARTMENT

FARM and DAIRY
PETERBORO, ONTARIO