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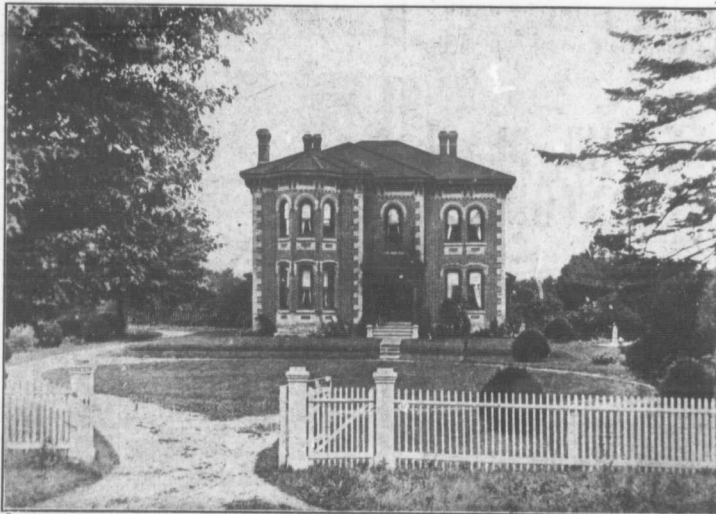
FARM AND DAIRY

Grassie J. H. CEEF (K)

RURAL HOME

PETERBORO, ONT.

JANUARY 21 1909



DAIRYING, PROSPERITY AND HOME COMFORTS GO HAND IN HAND.

It is commonly remarked by strangers that one can always locate a section where dairying is practised by the prosperity evident in the homes and farm buildings in such localities. That part of Wentworth Co., Ont., wherein the above home is situated, is no exception to this rule. Dairying, for twelve months every year, has been carried on there for many seasons, with the result that is plainly shown in the illustration. The farm, upon which the above home is built, now owned and worked by Mr. Wellington Sager, has long been devoted to a rational system of mixed farming in which dairying has played an important part.

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Should the Horse Breeders' Exhibition be Removed

The signal success of the horse breeders' exhibition, held last week at the Union Stock Yards, Toronto West, has revived interest in the proposal to move the exhibition to Guelph and hold it there in connection with the Guelph Winter Fair. At the banquet given to the breeders by the management of the Union Stock Yards, Toronto last week, Mr. W. L. Smith, editor of the Weekly Sun, stated that the success of the exhibition had been so great as to demonstrate that Toronto is the best place for holding the show. He claimed that not only should the horse show be continued in Toronto, but that the Winter Fair should be moved from Guelph to Toronto and arrangements be made for the holding with it of a big dairy show.

As the success of any exhibition depends upon the support given it by the exhibitors of stock, Farm and Dairy last week, interviewed a number of the leading exhibitors at the horse show as well as some of the judges and other prominent horsemen and farmers, to find their views. All were asked to give their views freely, whether they were favorable or opposed to the proposal. One or two seemed diffident about giving an expression of opinion. The government gives a large grant the horse breeders and as the government apparently intends to move the show to Guelph, they did not think it wise to say anything that might appear to conflict with the intentions of the government. No one seemed enthusiastic over the thought of having the show moved from Toronto. Only one man declined to be interviewed.

WHAT THE BREEDERS THINK

It will be noticed in the following interviews, that practically all who were spoken to, were of the opinion that the show should be continued in Toronto. They seemed to think that the convenience of the public and of the exhibitors should be considered ahead of those of a smaller place anxious to hold the show. They were generally of the opinion that, even if the show was moved to Guelph, it would ultimately have to come back to Toronto. It was felt that the Union Stock Yards are destined to become the great horse breeding centre of Ontario and of Canada. It was pointed out that the show has already outgrown the arena accommodation at the stock yards and that a new arena would have to be erected there shortly. All were enthusiastic about the splendid accommodations and the splendid and railway facilities at the Union Stock Yards this year.

The following are the views that were expressed:

Senator Robert Beith, Bowmanville.—"Toronto is the recognized center of the province for all events of this kind and it is the best place for the horse show. Some people seem to think that Toronto Junction is rather far from the center of the city. It is not nearly so far as the people have to travel in Chicago to attend the show held there and that show is a great success. Even if the show does go to Guelph, it will ultimately have to come to Toronto as the facilities in Toronto for holding such a show are so much better."

Wm. Smith, Columbus, Ont.—"I have been in favor of holding the horse show in Guelph, but the success of the show at the stock yards has been a surprise to me."

B. Rothwell, Cummings' Bridge, Ont.—"As railway communications grow there is a tendency to concentrate at central points. Toronto seems to be the natural center for Ontario. As the country grows the advantages of Toronto will become more and more marked. Toronto, also, has the wealth that will enable it to enlarge the facilities for the horse show as it

grows. Already it is evident that we will have to have a still larger arena next year."

A. G. Gormley, Unionville.—"Toronto is more of a center for the breeding interests of the province. The shipping facilities at the Union Stock Yards could not be improved. Breeders in the West who come to Ontario to see the show buy their tickets for Toronto. They generally have other business to do in Toronto beside attending the show. I am not in favor of having the show moved from Toronto."

Wm. Graham, Claremont, Ont.—"The Union Stock Yards are the best place to hold the show. They are central, they are the natural center for the horsemen and four times as many people should attend the show at the Stock Yards as would at a smaller outside point."

Robert Graham, Bedford Park.—"Toronto is the natural center. I prefer it for a horse show of this kind. Even should the show go to Guelph I am inclined to think that it would ultimately and come back to Toronto, where the facilities are all kinds for holding a show of this kind are so much better."

R. H. Taber, Hillcrest Stock Farm, Condie, Sask.—"I don't think Guelph could accommodate a show of this kind. This show is going to become international in character but it can never do so, and become a rival of the Chicago show, unless it is held in Toronto which is the only place in Canada that has the natural facilities. Toronto can handle the crowds in a way no small place can. Out in the west we look on Toronto as the natural live stock center. Many of our breeders never heard of Guelph."

R. M. Holtby, Manchester, Ont.—"I favor Toronto because it is the railway center. From our part of the province we can visit Toronto and get back in one day. We could not do that if the show was at Guelph because the railways have far better connections with Toronto than they ever will have with Guelph."

W. H. Gibson, Beaconsfield, Que.—"The success of the show this year proves that the Union Stock Yards is the place for the holding of the horse show. The men who are behind the stock yards know how to manage an affair of this kind. It would be a shame to move the show to Guelph where the accommodation for both people and stock cannot be compared to that available in Toronto."

John Bright, Myrtle Station.—"This show has been a huge success; the show has never been held. The people who have attended it have done so because they are lovers of horses. It would be difficult to surpass it even in Guelph."

John A. Boag, Ravenshoe.—"Toronto is more convenient for most of the breeders and importers. It is the best place for a show of this kind. It has better facilities than any other place. The show this year has been a great success. It demonstrates what can be done here."

L. J. C. Bull, Brampton, Ont.—"Toronto is a far better place for holding the show than Guelph. In Toronto we do not have to fight for beds and food the way we do at Guelph. The show would be too large for Guelph. Not so many horsemen would attend it in Guelph as in Toronto."

John Gifford.—"The Union Stock Yards is the best place for the holding of a horse show because of the splendid shipping facilities and its excellent stabling accommodation. There is no other place where sellers and buyers can get together to the same advantage. This year's exhibition shows that the crowd will attend the show in the afternoon leaving the morning as a crowd free for the holding of the numerous breeders' meetings that are held in connection with it."

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FORMERLY THE CANADIAN DAIRYMAN AND FARMING WORLD

Vol. XXVIII.

FOR WEEK ENDING JANUARY 21, 1909.

No. 3.

THE ADULTERATION OF CATTLE FEEDS

A Law Needed That Will Require the Sellers of Feeds to Show Their Composition

SOME at least of the mill feeds, that are being sold in large quantities are adulterated, and otherwise inferior in quality. This was shown last week by Prof. R. Harcourt, of the Ontario Agricultural College, Guelph, Ont., in an address delivered at the annual convention, held in Brantford, of the Western Ontario Dairymen's Association. Farm and Dairy has been asked to look into this matter by leading dairy farmers who have felt that the cattle feeds they were purchasing at high prices were adulterated. At the convention of the Eastern Ontario Dairymen's Association, held recently in Prescott, Ont., Mr. P. Clarke, proprietor of the Silver Spring Dairy Farm, Deschene, Que., informed us that as a result of information he had received from another leading dairy farmer he had discontinued feeding bran to his cattle and their milk yield had increased.

Professor Harcourt told the convention at Brantford, that not only is there a wide variation in the composition of the same kind, of by-products of the mills, but that there is a tendency to mix residues of one grain with another and sell them under a trade name. In some cases low-grade by-products are added to those with which the farmer is familiar. For instance, oat hulls are sometimes added to wheat bran. This makes it impossible for the purchaser to form a correct idea of the composition or value of a food from its name.

Professor Harcourt advocated the taking of steps to have concentrated feeds sold in such a manner that the percentage composition rather than their name will be the guide to their value.

He pointed out that laws have been passed in many states of the American Union making it compulsory for the seller of mill by-products to print on the bag the guaranteed maximum percentage of protein and fat and the minimum percentage of crude fibre and also, the grains from which the feed was made. In this way the buyers are able to know exactly what they are buying. While much that Professor Harcourt said was rather technical his remarks were followed closely by the farmers present. At the close of his address a request was made that it should be published so that the facts might be laid before farmers at large.

CATTLE FEEDING

"The study of the science of cattle feeding," said Professor Harcourt, "has received a great deal of attention during late years. Fortunately, while a knowledge of the results of the numerous investigations would be of great aid to the thorough understanding of the subject, it is not essential to success; for the practice of some experienced feeders leaves little to be desired. They have learned much from their forefathers, and this, together with long experience with the same

kind of cattle and feeding stuffs, and the natural instincts of a feeder, has enabled them to become proficient in the art of feeding. There are, however, many farmers, both old and young, who have not been bequeathed any valuable experience, and, further, there are on the market today a great variety of new cattle foods about which very little is known. Consequently there are many reasons why we should look into the question of the composition of some of the cattle foods.

COMPOSITION OF FOODS

The feeding value of a food is largely determined by two factors: (1) Its composition, (2) its digestibility. The first of these deals with richness of the food in protein, fat, carbohydrates, and ash materials. The second determines the extent to which these various constituents become available in the body. A knowledge of the composition of a food is important if it is to be used intelligently. Those foods which contain the largest amounts of the protein and fat and the smaller percentage of crude fibre are the most valuable. The following table gives the percentage amount of the various food constituents present in a number of the most common foods:

COMPOSITION OF CATTLE FOODS

	Water	Crude Protein	Fat	Soluble Carbohydrates	Crude Fibre	Ash
Wheat.....	10.5	11.9	2.1	71.9	1.8	1.5
Oats.....	11.0	11.8	5.0	56.7	9.5	3.0
Barley.....	10.9	12.4	1.8	63.0	2.7	1.8
Corn.....	10.6	10.3	5.0	70.4	2.2	1.5
Peas.....	14.0	22.5	1.6	53.7	5.4	2.8
Timothy Hay.....	13.2	5.9	2.5	4.90	29.0	4.4
Clover Hay.....	15.3	12.3	3.3	38.1	24.8	6.2
Alfalfa Hay.....	8.4	14.3	3.2	48.7	25.6	7.4
Oat Straw.....	9.2	4.0	2.3	42.4	57.0	5.1
Corn Silage.....	79.1	1.7	0.8	11.1	6.0	1.4
Mangels.....	90.9	1.4	0.2	5.5	0.9	1.1
Turnips.....	90.5	1.1	0.2	6.2	1.2	0.8
Wheat Middlings.....	10.1	15.5	3.9	62.5	4.3	3.7
Wheat Bran.....	10.4	15.0	3.8	57.0	8.7	3.1
Cotton Seed Meal.....	5.9	44.2	13.0	24.6	4.8	6.9
Linsed Meal.....	9.1	33.4	7.1	30.9	10.6	5.9
Gluten Meal.....	7.1	38.8	3.4	47.6	2.0	1.1
Gluten Feed.....	8.6	25.0	4.6	54.8	5.9	1.1
Brewer's Grains.....	9.5	14.6	8.5	36.1	12.8	1.3
Oat Hulls.....	8.1	2.2	0.9	33.9	24.1	6.8
Dried Beet Pulp.....	2.9	3.5	1.1	63.9	15.2	6.4

FORAGE PLANTS

"The valuable forage plants of this country belong mostly to two families, the grasses and the legumes. June grass, red top, timothy, and the cereal grain plants are types of the former; and the clovers, alfalfa, and peas of the latter. The most essential difference between the members of the two families of plants when considered as feeding stuffs is in the larger proportion of the protein in the legumes. For this reason they are very justly regarded as the better foods for growing stock and for general use on dairy farms.

"The composition of all dried fodders and roots,

foods that are fed in an immature state, is liable to considerable variation. The composition depends largely on the stage of maturity at which they are cut and also upon the character of the manuring. In general it may be said that as a plant matures the proportion of water, protein, and ash matter decreases, while the proportion of carbohydrates, especially of fibrous material, increases. As this latter substance is largely indigestible, fodder crops deteriorate towards maturity.

"Young grass is much richer in albuminoids and contains a smaller proportion of indigestible fibre than older grass, and is, consequently, more nourishing. The same comparison may be made between young clover and that which is allowed to mature for hay. It follows that fodder crops should be cut for hay before they reach maturity, and experimental work and general experience has fully demonstrated that these crops should be cut immediately after full bloom is reached. Alfalfa is an exception to this, because it very rapidly becomes fibrous and should be cut in the early blossoming stage to obtain the best results.

"Fodder crops deteriorate towards maturity, because of the conversion of soluble forms of carbohydrates into the insoluble and indigestible fibre. Root crops, such as mangels and potatoes, improve, owing to the carbohydrates produced in this case being sugar and starch, both of which are of great feeding value.

"The root crops do not contain a very large amount of the valuable food constituents, but when fed along with the dried fodders, they probably have a food value much greater than their composition indicates. This is due to the increased succulency which they impart to the ration.

WHY GRAIN IS FED

"The place of grain in a ration is to increase the proportion of protein and other digestible materials, or in other words, to make the ration more concentrated. Cows of 1,000 lbs. weight need approximately 16 lbs. of total nutrients daily. Animals that are thin in flesh, especially when fresh in milk, can consume two or three pounds more to advantage. Of these 16 lbs., approximately 2.5 lbs. of protein is necessary, in order to enable the cow to produce large and continuous yields of milk.

"If a cow is fed all day, she cannot eat enough of the food to obtain the amount of the nutrients mentioned. Thus, suppose a cow should be fed all she can consume of any palatable, dry, coarse fodder, such as good hay, she would have at her disposal the following digestible nutrients, approximately: Protein 1.4 lbs.; fat 0.4 lbs.; carbohydrates 12.4; total 14.2. Such a ration lacks in protein, as well as in total digestible matter.

"In order to overcome these deficiencies, recourse is had to the concentrated feeds, rich in protein, and sufficient is added to increase the protein to the desired amount. This is the function of grains and concentrated by-products of the ra-

tion. The cereal grains, as corn, oats, wheat, etc., are not sufficiently rich in protein to very materially increase its proportion in the diet. But these foods are rich in nitrogen-free-extract or carbohydrates, that are easily digested and are very useful when fed along with the coarser foods which contain much fibre.

MILL FEEDS

"Pea meal, linseed meal, gluten feed, wheat bran, and middlings are foods rich in protein and are, therefore, most valuable components for a ration intended for dairy cows. On the other hand, it is evident that oat hulls, dried beet pulp, corn bran, and such low grade materials cannot build up the protein side of a ration. They are also entirely unfit to be used as substitutes for linseed meal, gluten meal, gluten feed and such nitrogenous materials.

MUST HAVE PROTEIN

"When purchasing foods the percentage of protein they contain is of prime importance. The home-grown crops, especially the grasses and cereal grains, are more likely to be deficient in this than in any other constituent, but when clover or alfalfa hay are used as the coarse foods, the use of concentrates, especially rich in protein is not so necessary.

"The shortage of coarse foods and grains the last few years has been the means of causing many feeders of live stock, particularly dairymen, to consider the advisability of purchasing certain of these mill by-products for which, heretofore, they have had little or no use. Dairymen too are recognizing the fact that in order to secure the best results from their cows, they must feed a ration richer in protein than can, as a rule, be compounded from the grains, hay, and straw raised on the farm. The by-products best adapted to enrich the diet in protein are the residues from the manufacture of some specific product from the seed or grain, as, for example, oil from cotton seed and flax seed, starch and sugar from corn, beer from barley, and flour from wheat, rye, and buckwheat.

ARE RICH IN PROTEIN

"All these by-products which include cotton seed meal, linseed meal, dried brewers' grains, gluten meal, gluten feeds, and the various kinds of bran, middlings, etc., are very much richer in protein than the original seeds or grains, because the substance extracted from them consists of fat, in the case of the first two, and of starch, or products rich in starch, in the case of the others, thus proportionately increasing the protein in the residues. All of these by-products have been found to serve an excellent purpose in the building up of rations. They are generally palatable and healthful and, if judiciously used, do not contribute any undesirable qualities to the products, beef or milk. They possess the further advantage in that, in many cases, the cost of the ration is reduced by their use. Their intelligent purchase and economical use, however, requires that the purchaser shall possess a definite knowledge of their composition. He should know, first, only how much protein and fat the genuine products cotton-seed meal, linseed meal, gluten meal, gluten feed, bran, and middlings contain. But also whether there is reasonable uniformity or wide variation in respect to these compounds in the composition of the products of the same kind or name; secondly, whether any of them are liable to be reduced in value by the addition of cheaper substances.

FEEDS EXAMINED

"At the Guelph Agricultural College we have endeavored to collect some definite data regarding the character and composition of these by-products. We gathered a large number of samples and analyzed them, the results of which were published in Bulletin No. 138. Since this bulletin was published, we have analyzed many more

samples, and the results show that a large number of the various products offered for sale are of good quality, but that those of the same kind from different manufacturers vary quite widely in composition. In some cases there is a tendency to mix residues of one grain with another and sell them under a trade name, or to add low grade by-products to those with which the farmer is familiar, as, for example, oat hulls to wheat bran. The purchaser cannot form a correct idea of the composition or value of a food from the name given it.

ACTION NEEDED

"Steps should be taken to have concentrated feeds sold in such a manner that the percentage composition rather than name will be the guide to their value. Laws have been passed in many of the states of the American Union making it compulsory for the seller of these mill by-products to print on the bag the guaranteed maximum percentage of protein and fat and the minimum percentage of crude fibre, and, also, the grains from which the feed was made. In this way the farmer knows exactly what he is buying, and if he is familiar with the composition of his own feed stuffs and the requirements of the animals he is feeding, he can purchase his supply of concentrates intelligently and with every assurance that he is getting full value for his money.

"It will pay farmers in good hard cash to make a thorough study of the whole subject of cattle feeding. They should make themselves familiar with the nature of the various feed stuffs now on the market in order that they may not only feed more economically, but that they may intelligently assist in the procuring of laws similar to those now in operation in the United States, which would make it possible to purchase feeds with a guarantee as to the amount they contain of the essential food constituents."

Winter Care of the Colt

W. F. Kydd, Norfolk Co., Ont.

Those who desire to meet with success in raising horses, must be willing to go to some trouble to provide suitable places in which to raise the colts. Colts should have exercise every day throughout the winter, if the weather is not too cold. I prefer to have one or two small fields, of about one acre in extent, in connection with a small wooden building. The roof of this building should be weather proof and the sides sufficiently substantial to prevent the wind penetrating through the cracks. If possible, the door and window should open to the south. There are very few days in the winter, when the door should not be left open after nine or ten o'clock to permit the colts to go out and in as they feel inclined. Put in plenty of straw for bedding and feed oats and bran and as much bright clover hay as they will pick up clean. This, I consider, is an ideal way of wintering colts.

Do not put a yearling and a foal in the same place to feed unless the yearling is tied. Otherwise, the yearling, being older will consume the most of the grain. It is much more satisfactory to winter colts of the same age together. An outside shed such as I have suggested, is a better place in which to raise colts than a barn full of stock. If the colts are kept in the barn with other stock, they generally are kept so warm that they feel the cold too much when they are turned

out to exercise and, therefore, do not do as well.

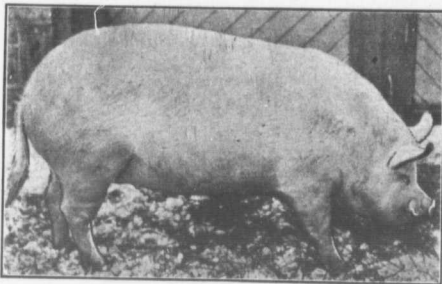
I never allow my foals to follow the mother while at work. About a week after the mare has commenced work, it is well to permit the foal to nurse during the middle of the forenoon and of the afternoon.

Feed the foal well the first winter on oats and bran. They are the best bone and muscle producing feeds and they can be fed in larger quantities than any other feed. Most other feeds have a tendency to produce fat. It is very necessary that the foal shall have an opportunity of exercising every day of the winter if it is not too cold.

Feeding Hogs Still Profitable

Geo. Martin, Mgr. House of Refuge, Waterloo Co. Ont.

Following is a statement re the raising and fattening of hogs for market. We have been in the business for nine years. The past year has



A First Prize Yorkshire at Guelph Winter Fair

Owned by J. E. Brethour, Brant Co., Ont. Note the trimness of the hog, its spring of rib, and its long, straight, even side.

been the most expensive in our experience to feed hogs, the feed being so dear. Still, I am of the opinion that where there is proper accommodation, plenty of good water, hogs will be fed and cared for, that even last year they would be handled at a profit. We do not think that we lost money in the business.

On the 1st of Dec., 1907, we had hogs to feed, valued at.....	\$ 450 00
From then to 1st Dec., 1908, it cost us.....	561 33

Total for hogs and feed..... \$1,011 33

On 1st of Dec., 1908, we had hogs on hand,	\$ 417 00
Fat hogs sold during the year 1908,	\$ 770 84
Killed and used ourselves....	170 20

941 04

Total,

\$1,358 04

Which left us a profit of..... \$ 346 66

Naturally we had more milk and swill than any private farmer would have, but then we get between 40 and 50 loads of good manure, which will even up for milk and swill. Feeding hogs pays about as well as feeding other stock taking one year with another. Farmers should not quit the business; it enables us to feed at home all the grain that we grow and every month or two we dispose of porkers, and get the cash which in most cases comes in very handy.

We keep seven brood sows and a boar, pure-bred Yorkshires. I have thought sometimes it might be better to cross with some other breed, thinking perhaps we might be able to secure a class of pigs that would mature earlier—but I hesitate to drift off into mongrels.

It might be a good thing to send a commission to Denmark and learn how to carry on this pork business properly.

Better Cows Needed

"Our Canadian farmers should endeavor to develop cows that will give greater results at the pail," said Mr. C. F. Whitley, of the Department of Agriculture, at a dairy meeting held recently in Peterboro county. "In Denmark, the Danish farmers in a few years, increased the milk produc-

Push Cow Testing Associations

The following is a copy of the resolution relating to the work of the cow-testing associations that was passed at the recent convention of the Eastern Ontario Dairy-men's Association:

Moved by Senator Derbyshire, seconded by Edward Kidd, and carried unanimously, "That this association, recognizing the great value of the present campaign instituted by the Dominion Government in favor of a large milk yield from better cows, urge upon the Dominion Minister of Agriculture the great need for a rapid extension of the work of the cow-testing associations."

tion of all their cows by 66 per cent. This means that all Ontario cows now giving 5,000 lbs. milk could be induced to give 8,300 lbs. a year.

"In Peterboro county alone, there are about 21,000 cows. Were the milk producing qualities of only half these cows increased, not by 66 per cent. but by only 50 per cent., it would mean that the Peterboro farmers would receive \$165,000 more for their milk than they did in 1908. This shows us what it would mean were the farmers throughout the dairy sections of Canada to increase the milk producing qualities of their cows in the same proportion. We must feed more corn and grain, and grow more soiling crops for summer feed. We must also use sires bred from cows having records as large milk producers.

"Our average Canadian dairy farmer with a herd of 20 cows has at least three in his herd that do not produce enough milk to pay for their keep. Were he to test his cows regularly, he would soon find which ones were not paying their way. By getting rid of them, he would make more profit from 17 cows than he now does from 20. This would save the labor that is now expended in looking after these three poor but costly cows, which would more than off-set the labor required to weigh the milk after each milking.

"One of our cow-testing associations showed that one man who had 28 cows, was keeping 11 that were not paying their way. After he got rid of these cows, his net receipts were larger from 17 than they had been from 28. That is why cow-testing associations are being formed in all parts of Canada, and why one should be formed in every section where there is none now."

An Ice House and How to Fit It

John Beemer, Brant Co. Ont.

An ice-house 12 x 12 ft. outside by eight ft. high would be ample for the needs of the average farmer. Such a house with a gable roof would require 2 x 4 scantling for studding. This should be boarded up both inside and outside with inch lumber, leaving an air space between the boards. The ice-house must have good drainage. To secure this necessary drainage raise the floor about six inches above the level of the surrounding ground with good gravel.

Before filling the house, place at least one foot of good saw-dust on the bottom, leave room for about ten or 12 inches of saw-dust between the ice and the boards at the side. This must be filled in as the ice is stored with either good saw-dust or cut straw. I prefer good fresh saw-dust if it can be got. If straw is used it must be well packed. After the ice is in, cover it over with ten or twelve inches of dust.

Occasionally after storing and frequently

throughout the summer months, the saw-dust or straw, between the ice and the outside of the house, should be well tramped to prevent the air from circulating through and thus melting the ice. Where it is possible, I much prefer to have the ice-house on the north side of some other building, thus having it protected from the direct rays of the sun. The cost of the ice-house of the size described above, using all new lumber at \$30 a M. with shingle roof, and counting the labor and time of building should not exceed \$60.

Harvesting ice should be begun when it is from 12 to 14 inches thick. Cut it 18 x 24 inches square and put in the house in good cold weather. All ice should be well packed to keep the air from circulating through it and thus insure its keeping. A small door should be placed in the gable of the house for ventilating.

For the average farmer it is much better and cheaper for him to buy his ice already cut than for him to cut it himself. I have proven from long experience that the best way to harvest the ice is to plow it one way and to saw it in the other, splitting off the blocks at the plow cut with a flat-pointed crow-bar. This is the only satisfactory way to get ice out and have it cut square. When cut by this method it will pack easily and at a minimum cost of labor.

Sanitation in the Stable

Dr. H. G. Reed, V. S. Halton Co. Ont.

Next to the plentiful supply of good food there is no more potent factor toward the maintenance of good health in farm stock, while in winter quarters, than an abundant supply of light and plenty of fresh air.

Many barns—especially those erected in the side of a bank—have been constructed without any adequate precaution to insure either light or ventilation.

Some think that cows will thrive and do well in dark, poorly ventilated stables, but while they will withstand such conditions better than horses, yet it will pay the stockman well to see that even his cows are not deprived of those two very important adjuncts of good health.

It is well known that all forms of germ-life will thrive better in darkness, while sunlight will destroy many of them. Cattle consumption (tuberculosis), is a germ disease and consequently is contagious, but while it is contagious it is not

highly so. A consumptive cow might herd with healthy animals all summer while at pasture without much danger of the healthy animals becoming infected, but if kept tied up in a dark and poorly ventilated stable during the winter, some of the healthy animals would be in grave danger of contracting the disease. In fact, even a well-kept stable is a favorable medium for the propagation of germ-life and in the case of a dark and poorly ventilated one the danger is intensified to a very great extent.

While cattle will withstand unsanitary stable conditions but poorly, horses will do even worse. An ordinary attack of strangles or influenza among horses in such a stable often develops into serious complications. A veterinary surgeon called to treat any disease of the respiratory system of a horse confined in such quarters will always see that his patient is removed to some place where he can get an abundant supply of fresh air because he understands the difficulty of successful treatment without it. And if pure air is a necessity in restoring a sick animal to health it must also be very needful in maintaining healthy conditions in animals which are not sick.

One of the strongest reasons for the fact that we have more serious cases of pulmonary diseases in the winter than in the summer is that the ordinary stable is very deficient in ventilation and the farm stock are compelled to breathe foul air altogether unfitted to maintain healthy conditions.

The question of light in a stable depends altogether on the window space and can easily be arranged, but in the matter of ventilation the remedy is much more difficult. Some sort of shaft or tube should extend from the stable to the external air, at least an opening should be made into the loft above and even this simple precaution is wanting in many barns. Ventilation, although a difficult problem is well worthy the attention of every stockman and the man who has mastered it has gone a long way toward the maintenance of good health in his barn.

When not working our horses we make it a practice to see that they are turned out each day for exercise. With collars it results in a better quality of bone, increases their lung capacity and keeps them in better condition.—A. G. McKenzie, Oxford Co., Ont.



A Familiar Winter Task on an Ontario Farm

In these later days of high-priced labor, all progressive farmers haul their farm yard manure to the fields as common use it is popular to haul the manure to piles, from whence it can be readily spread when the snow disappears. This illustration was taken on the farm of Mr. Kerwin, Huron Co., Ont.

Horse Show a Success

A large attendance of horsemen from all parts of Ontario, and many entries of horses, of high quality.

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which taxed the capacity of the accommodation provided, made the exhibition of the Ontario Horse Breeders' Association held last week in the Union Stock Yards, Toronto, a distinct success. The seating capacity of the arena was taxed to its utmost; hundreds stood around the show ring. A larger building will be required next year. All present were enthusiastic as to the quality of the exhibition. A large orchestra enlivened the proceedings throughout the show,

William Smith, Columbus, Ont.

The members of the Ontario Horse Breeders' Association, at their annual meeting in Toronto last week, re-elected Mr. William Smith, of Columbus, Ont. as their president for 1909, and to represent them on the board of the Toronto Industrial Exhibition. The success of the horse breeders' exhibition in Toronto last week, was due largely to the efforts of Mr. Smith, who is one of the leading breeders and importers of horses in Canada. Mr. Smith is a member of the well-known firm of Smith & Richardson, of Columbus, Ont.

while the tan-bark arena in which the horses were shown made a scene of much interest.

The number of entries in the various classes was as follows: Clydesdales, 66; Canadian bred Clydesdales and Shires, 34; Shires, 15; Hackneys, 10; Standard-breds, 12; Thoroughbreds, 12; Ponies, 9; Heavy Draughts, 20; total, 180.

CLYDESDALE CLASSES

The show of Clydesdale stallions was perhaps one of the best ever seen in Canada. Many breeders not formerly well-known over the province came out with stuff of extra good quality, while the amateur farmer felt that he stood a chance of competing as perhaps never before. One of the features of the show was the winning of the Clydesdale championship by Sir Marcus, now in the hands of Graham Bros., of Claremont, and the carrying off of the first honors by Morazian, the beautiful standard-bred stallion, owned by Miss Wilks, of Galt, and shown by her groom on horseback. T. H. Hassard's Hackney stallion, Atwick Astonishment and his pony, Royal Review, created much favorable comment, both animals being magnificent types.

Particular enthusiasm was exhibited when the Clydesdale came into the ring. Especially was this the case when the four-year-old stallions were being judged. Fifteen magnificent horses lined up, and if ever judges

were taxed this was a case in point. Every animal was a most commendable one, and the placing of the ribbons took a long time. Finally the awards took place, when Smith and Richardson's fine black son of E. everlasting, Black Ivory, won first place. Next to him came John Boag's bay by the same sire, Parnell. Baron Laird was third and T. H. Hassard's First Baron fourth.

Other exhibitors in heavy horses were Hodgkinson and Tisdale, of Leaverton; T. D. Elliott, of Bolton; John Wiggins, Guthrie; A. G. Clarke, Alton; Thos. Mercer, Markdale; Wm. Laking, Hamilton; C. B. Gibson, Ashur; J. M. Gardhouse, Weston; Dalgety Bros., London, and others.

There was strong competition in the Hackney stallion classes. The competing animals included a number of exceptional merit. The championship was won by Graham Bros., of Claremont. Graham & Renfrew, of Bedford Park, had some splendid individuals and were prominent winners.

Standard-breds were shown by Miss K. L. Wilks, of Galt; Crow & Murray, Toronto; Hales Bros., Chatham; Tilt & Ross, Ferry West, Ont., and others. Thoroughbreds were exhibited by Doane Bros., of Toronto; W. J. Stinson, of High Park; T. D. Elliott, Bolton; Patterson Bros., East Toronto; Jas. Bovaird, Brampton; Crow & Murray, Toronto; M. G. G. Barber, and others. Hackneys were exhibited by Graham Bros., of Claremont; Hodgkinson & Tisdale; T. H. Hassard; Dalgety Bros.; Graham & Renfrew, of Bedford Park; G. H. Pickering, Brampton; John A. Boag, of Queensville, and others.

A BANQUET

A most happy method of fixing public favor to a person was introduced by the Union Stock Yards Co., when they decided to tender the horse breeders a banquet which was successfully carried out in the big Home Exchange Pavilion. President J. D. Allan, of the Stock Yards' Association presided. The speakers upon the toast list were: President Allan, Senator Campbell, Hon. Jas. Duff, Supt. J. Locke Wilson, Alderman Score, Mayor Baird, J. J. Graham, Andrew Smith, V. S., Pres. Wm. Smith, W. F. McLean, M.P., Dr. Grange, J. M. Gardhouse, W. L. Smith, W. J. Brown, W. Chapman, and others. The enterprise of the Stock Yards' Co. was commended by the whole gathering as the creation of these yards saved the live stock trade to Ontario and gave the farmers a broader market for their produce.

Shire Horsemen Meet

It was decided upon last week at the meeting of the Shire Breeders' Association held in the King Edward Hotel, Toronto, that from July 1st, the cost of registration for Shire Horses up to three years old will be \$1 for the members of the Canadian Shire Association and \$2 for outsiders. For all animals over that age the cost will be, for members \$2 and for non-members \$4.

This is calculated to put a stop to the practice of the farmers and breeders waiting till a horse has grown old before registering it. The old-fashioned constitution of the association was changed to the same form used by all other breeders' associations in Canada.

OFFICERS

The officers for the ensuing year were elected, and are: President, Wm. Laking, Haliburton; 1st vice-president, John Breckon, Appleby; secretary-treasurer, G. de W. Green, Toronto; Directors—Thomas Mercer, Markdale; J. M. Gardhouse, Weston; J. Dalgety, Glenora; C. E. Porter, Appleby; James Henderson, Belton; C. K. Geary, St. Thomas; John Gardhouse, Highfield.

J. M. Gardhouse was appointed delegate to the Industrial Fair.

Clydesdale Men Meet

Resolutions favoring the sending of a committee to Chicago to bring about some better regulations regarding the recording of Clydesdales in the American books, were passed at a largely attended annual meeting of the Ontario Clydesdale Association held in the King Edward Hotel last week. Henceforth persons making application for registration of four-cross Clydesdale mares must make a statu-

John Bright, Myrtle Station, Ont.

The members of the Dominion Clydesdale Breeders' Association, at their annual meeting in Toronto last week, re-elected Mr. John Bright, of Myrtle Station, as their president for 1909. Mr. Bright is one of the best known breeders of Clydesdale horses and Shorthorn cattle in Canada. He farms on a large scale in Ontario County, and has at times managed three farms at once. Mr. Bright is a well known figure at the leading exhibitions and is generally popular.

His declaration to accompany the application.

Much business of importance was done. Considerable feeling was expressed against fraudulent pedigrees and persons casting aspersions on the certificates of the board.

The election of officers took place and resulted in the following: President, John Bright, Myrtle; vice-president, Robert Graham, Bedford Park; vice-president for Ontario, P. Christie, ex-M.P.; directors, Messrs. Wm. Smith, James Torrance, John Boag, Thomas Graham, James Henderson, A. G. Gormley and A. E. Major.

The treasurer's statement showed total receipts of \$11,055.37, and a balance on hand of over \$3,000.

Annual Live Stock Meetings

Dominion Cattle Breeders' Association—Temple Building, Toronto, Monday, February 1st, 2 p.m.

Ontario Large Yorkshire Swine Breeders' Association—Palmer House, Toronto, Tuesday, February 2nd, 7 p.m.

Dominion Swine Breeders' Association—Temple Building, Toronto, Wednesday, February 3rd, 9:30 p.m.

Ontario Breeding Society—Palmer House, Toronto, Wednesday, February 3rd, 1:30 p.m.

Ontario Sheep Breeders' Association—Temple Building, Toronto, Friday, February 5th, 9:30 a.m.

Dominion Sheep Breeders' Association—Temple Building, Friday, February 5th, 1:30 p.m.

Ontario Horse Breeders Association

The members of the Ontario Horse Breeders' Association, at their annual meeting last week in Toronto, decided unanimously to have their officers press for legislation restricting the travelling of unsound stallions and ultimately, possibly, grade stallions as well. The association has had this matter under consideration for two years and is supported in the stand it has taken by the report of the commissioners that examined the stallions of the province two years ago.

OFFICERS ELECTED

The following officers were elected: President, Wm. Smith, Columbus;

Continued on page 17

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if you count the results it gives. Livingston's Oil Cake is just what cows need.

It tastes good—is easily digested—keeps stock in prime condition all the year round—actually increases the percentage of Butter Fat by 15% over Pasture Grass. The richer the cream, the more money you make. Livingston's is the feed that pays for itself.



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The Feeders' Corner

The Feeders' Corner is for the use of our subscribers. Any interested are invited to ask questions, or send items of interest. All questions will receive prompt attention.

A Word About Corn

I have been following with much interest the various questions on feeding which come out in this Feeder's Corner from time to time. One peculiarity that has struck me is the comparatively small number of questions having to do with the food value and methods of feeding either corn silage or dry corn fodder. I am wondering whether this is due to the small number of persons using corn as feed for cattle or to such as do use it having fewer troubles and, therefore, needing less information than others. Let us hope as is probably the case that the latter is the true explanation. Such accepted as the reason for fewer enquiries it would seem evident that corn is the right thing to feed. I, at least, am of the opinion that no better crop can be grown by our Canadian dairy farmers, that no better feed can be fed our Canadian dairy cows, be they scrubs, grades, Ayrshires, Brown Swiss, Canadians, Dutch Belted, Guernseys, Jerseys, Holsteins, or Shorthorns, than this same strong growing, nutritious and palatable crop, corn.

NO CROP LIKE CORN

After 30 years' experience on dairy farms with from 20 to 150 cattle, I am also firmly convinced that no other crop will begin to approach corn as a crop to permit of carrying a large stock on a small area. My experience extends to its use in practically every way imaginable. I have fed it summer, autumn, winter and spring. I have fed it as green feed in summer and as silage in all seasons. I have used it by first harvesting the grain, then letting the cows eat the stalks as they stood uncut in the field during the fall and early winter. I have shocked the crop where it grew and hauled it in from the frozen icy fields as needed through the live-long weary winter. I have stockpiled it in long rows near the barns and wrestled with it day after day, foul or fair, getting for the cattle what little was left from the milled, the mice, the frost and the rain. I have stacked it in the barn, I have buried it in straw—then precipitately dug it out again when things started to warm up. If there is any other way of using it any of you ever heard of, I guess I have tried it and tried it over again, only to come to the conclusion that while it is well worth while, no matter how saved, so long as it is well saved, yet to get the most good it must be ensiled. Corn well preserved in the silo is more palatable than when saved in any other way. It is always ready to feed, always at hand and always a welcome part of the ration to horses, cattle, sheep or swine.

GROW CORN THIS YEAR

Now gentlemen, you, who grew no corn last year, let me urge upon you that you get to work and grow some this year. This is going to be a pretty good if not a remarkable good year

for corn. I know it, for in 30 years, I have never seen it a complete failure and I have often seen it a bumper crop. Yes, this is the right year to start. Do not think of growing less than one acre for every five or six cows in your herd. You will grow more after a while, but that is a pretty good start. And you, who are growing corn, but have no silo, get busy right now, and make preparations for building one this year. If you have not got the money or material, why look them up. No live stock man who keeps many head of live cattle should think of trying to get along without one. It will save its cost in—well I was going to say in one season, but very certainly in two seasons and will last you a life time. There are two kinds you can build, stave or cement. The former is more cheaply and more easily built. The latter is more durable and probably more economical in the long run. When you build, do it well, whether stave or cement.

If you are really interested in your business and can possibly raise the cash—a dollar and a half to two dollars a ton keeps man, that is, you will follow the recommendations of yours truly, who like yourself is "After Results."

Dairy Herd Competition

The directors of the Western Ontario Dairymen's Association again promoted dairy herd competition during 1908 denoting \$100 in cash prizes for patrons of cheese factories and creameries in Western Ontario. Ryan Bros., of Toronto, again very kindly donated a silver and a bronze medal. The prizes offered and the rules of the competition were published some months ago in these columns. The prizes were for patrons of cheese factories: 1st, a silver medal and \$15 in cash; 2nd, \$15; 3rd, \$10; 4th, \$6; 5th, \$4. The prizes for patrons of creameries were: 1st, a bronze medal and \$15 in cash, and \$15, \$10, \$6 and \$4, in the order named as for patrons of cheese factories.

No herds of fewer than eight cows was allowed to compete. The figures upon which the awards were placed were taken from the cheese factory or creamery books, the number of cows in the herds and the total and average amounts of milk or butter-fat produced during the season. The average amount of milk or butter-fat per cow was calculated on the basis of the total number of cows from which milk or cream was sent to the factory during the season of six months, from May 1st to October 31st, 1908. No substitution of one cow for another was allowed.

A director of the association or one of the instructors visited the farm of the winning competitors, examined the books of the secretary of the respective factories and satisfied themselves so far as possible that each competitor has complied with the rules and regulations.

The prizes were awarded as follows:—Class 1, Sec. 1, Cheese Factory Patrons.

1st.—Jno. W. Cornish, Sprucedale Farm, Harrietsville, 8 Holstein grade cows, 67,940 total pounds of milk, 7,343 lbs. of milk per cow, \$548.02 total money, \$68.50 money per cow.
2nd.—Seymour Cuthbert, Aberdeen Farm, Swenburg, 14 Holstein cows, 100,822 total pounds of milk, 7,200 lbs. of milk per cow, \$946.19 total money, \$67.55 money per cow.

3rd.—W. E. Thomson, Leslie Farm, Woodstock, 11 Holstein and Holstein grades, 77,000 total pounds of milk, 7,068 lbs. of milk per cow, \$652.92 total money, \$59.44 money per cow.

4th.—Geo. W. Pearce, Hillside View, Tillsonburg, 14 grade Holstein, 1 grade Durham, 15 cows, 95,021 total pounds of milk, 6,401 lbs. of milk per cow, \$926.52 total money, \$61.76

money per cow.

5th.—Mason Bros., The Maples, Turrell, 20 Holstein and Holstein grades, 125,322 total pounds of milk, 6,266 lbs. of milk per cow, \$1,657.50

total money, \$52.87 money per cow.
F. W. Woodley, Fairview Farm, Boston, 5 pure Holstein, 3 grade Holstein, 8 cows, 48,726 total pounds of milk, 6,090 lbs. of milk per cow,

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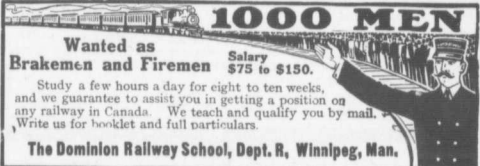
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FENCE TALK No. 5

Page Fences have "high-carbon" horizontal 9-gauge wire. Other fences have only "hard drawn" wire.

High-carbon wire is harder, tougher, and far stronger—from a third to a half as strong again—stands 2,400 lbs. strain-test.

Hard drawn wire is softer, weaker—stands but 1,800 lbs. strain-test.

Page Fences, because of this extra strength, have ample spring in reserve to hold a long panel tight and sagless with fewer posts by a third.

Other fences thus lack springiness, need three posts to Page Fence's two and then sag and give.

Page Fence uprights are fastened to horizontals by a positive lock, clinched so tightly as to make a solid joint that cannot work loose nor slip—even under the severest strain. But the intersecting wires are not injured.

Other fences half-fasten the crossing wires together with a mere twist of wire that will slip. Some use locks that dent and weaken the wire.

These are the reasons why Page Fences cost less and wear best, because they need a third less posts and a third less labor to erect, and yet make a tighter, sightlier, sag-proof and more enduring fencing. Go by the book—it tells all about every style of Page Fences and shows how to prove fence-value before you buy. Ask for it (it's free) from Page Wire Fence Co., Ltd., Walkerville, Toronto, Montreal, St. John, Vancouver, Victoria.

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\$440.83 total money, \$55.10 money per cow.

J. W. Earley, Pleasant View, Kerwood. 11 grade cows, 52,690 total pounds of milk, 4,790 lbs. of milk per cow, \$491.80 total money, \$44.70 money per cow.

Alfred Thomas, The Maples, Golsipic. 14 grade Durham, 55,673 total pounds of milk, 3,976 lbs. of milk per cow, \$586.45 total money, \$41.29 money per cow.

Class 1, Sec. 2, Creamery Patrons: 1st.—R. M. Bovine, Maple Lane, Beachville, 11 Common Grade cows, 2,165.5 total pounds of fat, 199.6 lbs. of fat per cow, \$640.27 total money, \$58.21 money per cow.

2nd.—Frank Wrigut, Kerwood, 14 Grade Durham, 1,779 total pounds of fat, 137 lbs. of fat per cow, \$429.81 total money, \$30.70 money per cow.

Increased Make of Cheese and Butter

The production of cheese and butter in Western Ontario has increased in spite of the facting off in our exports of dairy products. This was pointed out by Mr. John Brodie, of Mapleton, the president of the Western Ontario Dairyman's Association when presenting in the director's report to the convention of the association held last week in Brantford.

"According to the trade returns," said Mr. Brodie, "it is shown that the amount of cheese exported from the whole of Canada for the season of 1908, is reduced about 154,000 boxes. This is probably due to the unfavorable climatic conditions which prevailed in different parts of the cheese producing section, both 1907 and 1908. Increased home consumption has had a marked effect on the exports, particularly that of butter. The increased

consumption of milk and cream in our various cities, whose population is rapidly increasing, also has its effect. Notwithstanding this decrease in export trade the producers receive through higher prices nearly as much total money.

"From census Statistics Bulletin No. 7, we find that for the Province of Ontario from the year 1900 to the year 1907, there was a decrease of the total amount of cheese made in Ontario amounting to 1,137 tons, but while the value of the large quantity in 1900 was \$13,440,957, that of the smaller production in 1907 was \$15,106,030 or \$1,665,073 more owing to the larger price obtained per pound. In the manufacture of butter we find that in the same period there was an increase of 651 tons, with an increase in value of \$392,522. However, we wish to emphasize the point that it is not so much an increased price that we should look to for future increase in profits, but an increased production from the individual cow.

A GAIN IN WESTERN ONTARIO
"In Western Ontario, we find that in 1907 we produced 16,827 tons of cheese, and 9,939 tons of butter. From reports of the instructors and from other reliable information we find that although two more milk condenseries were established in our best dairy districts in 1908, still the production of cheese was maintained and in many sections increased, and the production of butter increased by 338 tons. Thus the production of cheese and butter in Western Ontario in 1908 shows an increase rather than a decrease.

SOME FACTORIES NOT NEEDED
"Several new factories will be erected before next season opens, some of these in sections where formerly the co-operative factory system had not to any extent been in vogue. We de-

plere the fact that several of these factories are to be built in sections already well served by existing factories. We fear that the building of these factories in districts where the facilities seem adequate is not in the best interests of either the producers, manufacturers or of the trade in general.

"BACON HOGS PROFITABLE"
"Notwithstanding anything that may be said or written to the contrary we believe that the raising of bacon hogs is a profitable adjunct to the cheese and butter making industry, and when combined is the most remunerative and staple branch of agriculture in practice in Western Ontario at the present time. We therefore beg to point out to the producers of milk that it would be well to think seriously and look into the matter closely before discarding the bacon hog industry.

SKIM MILK CHEESE
"It might be mentioned that some attempt has been made by a few factory men during the past year to introduce a system of manufacturing skim-milk cheese. So far as we can learn the enterprise has not been successful from a monetary standpoint, either to producer or manufacturer. We wish to place on record our disapproval of such a system as it is injurious by the production of the highest quality that we can hope to maintain our prestige as a cheese producing country. The prospects for the future of the dairy business in Western Ontario are bright and so long as we can furnish goods of satisfactory quality our dairy products will continue to meet the approval of the consuming public both at home and abroad.

Renew Your Subscription Now.

Inoculation of Seed

The Ontario Agricultural College has in press a bulletin from the bacteriological laboratory, giving the results of work on the inoculation of seed with bacteria to increase the chances of the crop. This work has been in progress since 1905, and has increased in amount each year. It has been known for many years that the nodules or tubercles on the roots of alfalfa, clovers, peas, beans, etc., are inhabited by bacteria that have the power of taking nitrogen of vast amount in the atmosphere, and storing up this most valuable fertilizing element in the plants, thus enriching the soil when these plants are plowed under.

In the college laboratory these bacteria are cultivated under artificial conditions, their full power of nitrogen accumulation being conserved, and these cultures, as they are called, may be applied to the seed to be sown. On old established fields where clovers or alfalfa have been previously grown, the soil is well supplied with these desirable bacteria, and the use of artificial inoculation would be of little benefit. On new ground, however, or where the crop to be sown has not been successfully grown before, the inoculation of the seed usually helps to secure a better stand. During 1908, over 2,100 of these cultures were sent to farmers all over the Dominion to be used on their farms. The results as reported by the farmers, and compiled in the forthcoming bulletin showed that the inoculation of the seed was beneficial in 83 per cent of cases tried. Many farmers tried the culture on old established fields, and as was to be expected the results here showed no increase in the crop from using the cultures.

During the coming spring, the college will send similar cultures for alfalfa, red, white, and alsike clover, peas, beans, and sweet peas, the only cost to the farmer being a normal charge of 25 cents for each culture sufficient for 60 pounds, or less of seed. The cultures, of which there is but one size, are sent in glass bottles with full instructions for their use. Applications should be addressed to The Bacteriological Laboratory, O. A. C., Guelph, and should be sent at once so that ample provision may be made by the college to supply all demands. The kind and amount of seed to be inoculated and approximate date of sowing should also be stated in the application.

Treatise on Ventilation

"Ventilation for Dwellings, Rural Schools and Stables," is the title of Prof. F. H. King's latest book recently to hand. The book is a brief treatise which is intended to reach parents, teachers and officers of rural and elementary schools, and the owners and caretakers of all classes of live stock, and lay before them the foundation facts and principles underlying the growing and imperative demand for a more nearly adequate supply of pure air than is being continuously maintained in the vast majority of homes, offices and stables to-day.

Owners and caretakers of live stock will find the treatment of stable ventilation, in this work, sufficiently explicit and illustrative to enable them to readily and effectively solve their own problems. The book should be in the hands of all who can be obtained through Farm and Dairy at the regular retail price of 75 cents a copy postpaid.

If I were a Farmer I would rather be known as the man whose cows yielded more milk than the cows of any other patron sending me to your factory, than as reeve of the township or mayor of Toronto.—President G. C. Creelman, O. A. C., Guelph, Ont.



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HORTICULTURE

Short Course in Fruit Growing

The short course in fruit growing to be held at the Ontario Agricultural College, Guelph, Jan. 26 to Feb. 5, promises to be of great interest and value. All persons interested should arrange to attend. The following is the program as arranged to date:

FIRST DAY—JANUARY 26

Locations, Sites and Soils for Fruit Growing.—Harold Jones, Maitland and J. L. Hilborn, Leamington. Drainage.—W. H. Day, O. A. C. Preparation of Land for Fruit.—Harold Jones and J. L. Hilborn.

SECOND DAY—JANUARY 27

Selection of Nursery Stock.—J. W. Crow, O. A. C. Laying Out Plantations.—Harold Jones. Soil Moisture.—W. H. Day, O. A. C. Planting and Care of Young Orchards.—Harold Jones.

THIRD DAY—JANUARY 28

Propagation of Fruit Trees and Plants.—W. T. Macoun, Horticulturalist, Central Experimental Farm, Ottawa. Strawberries for the Canning Factory.—S. H. Rittenhouse, Jordan Harbor. Judging Fruit.—W. T. Macoun. Fertilizers for Fruit Plantations.—R. Harcourt, O. A. C.

FOURTH DAY—JANUARY 29

Pruning.—W. T. Macoun. Commercial Pear Culture.—J. E. Orr, Fruitland, Ont. Top-working.—W. T. Macoun. Fertilizers.—R. Harcourt.

FIFTH DAY—JANUARY 30

Management of Bearing Orchards.—H. S. Peart, Jordan Harbor, Ont. Question Box. Insects Injurious to Fruits.—T. D. Jarvis, O. A. C. Orchard Diseases.—L. Caesar, O. A. C.

SIXTH DAY—FEBRUARY 1

Apple growing in the Northwest Pacific States.—Prof. John Craig, Cornell University.

SEVENTH DAY—FEBRUARY 2

General conference on the preparation and application of spraying materials. The important fungicides and insecticides will be prepared on a commercial scale. Demonstrations will be conducted by experts and the best informed men in the province will contribute to the experience meeting.

EIGHTH DAY—FEBRUARY 3

Conference on varieties worst growing. The best information available on this subject will be presented by men of experience.

THINNING FRUIT

—J. Gilbertson, Simcoe; Wm. H. French, Oshawa. Conference on Box and Barrel Packing. Demonstrations of proper and improper methods of packing conducted by A. McNeill, Chief, Fruit Division, Ottawa, with the assistance of other experts.

NINTH DAY—FEBRUARY 4

The fruit crop of 1908: What became of it, with practical observations by growers, shippers, dealers, and inspectors regarding difficulties encountered.

Experiments with Long Distance Shipment of Tender Fruits.—J. B. Reynolds, O. A. C. Cold Storage for the Fruit Grower.—J. A. Rudolph, Dairy and Cold Storage Commissioner, Ottawa.

TENTH DAY—FEBRUARY 5

Conference on co-operation. A thorough discussion of the present status and future possibilities of co-operative work in Ontario.

Managers of co-operative associations, including J. E. Johnson, Simcoe; R. Thompson, St. Catharines; D. Johnson, Forest; Elmer Lick, Oshawa; and J. G. Mitchell, Clarkburg; and A. W. Peart, Burlington,

will be assisted by such authorities as W. L. Smith, Toronto; A. McNeill, Ottawa, and P. W. Hodges, Toronto. The phases of co-operation discussed will be: 1. Does it pay? 2. Forms of organization. 3. Systems of management. 4. Selling methods. 5. The next step.

EVENING MEETINGS

The evenings will be devoted to special discussions and to addresses by prominent speakers. Illustrated lectures on Home and Rural Improvement, by H. L. Hutt; "Insect Enemies," by T. D. Jarvis, will be included. Other special addresses are "Commercial Overhauling," by A. McNeill; "Apple Cankers," by R. M. Winslow, Picton, Ont. An effort is being made to secure a speaker for an evening of the second week who will discuss in western methods of growing and handling the apple crop.

Reduced railway fares.—In buying tickets for the single fare first-class ticket and secure from the agent a standard certificate. This certificate when signed at the college enables you to return trip at reduced rates.

POULTRY YARD

Picking Good Layers

A subscriber sends the Poultry Department the following clipping, which he would like to have published. It refers, as most of our readers will recognize, to systems which the inventors claim are reliable in picking out the good layers from the bad layers, or those pullets, or hens, which it will pay to keep, and those which should be destroyed.

The clipping is taken from "Gleanings in Bee Culture," published at Medina, Ohio, and, if there is as little in the system as the writer claims, it should save a good many poultry men, who anticipate purchasing, considerable money:

SECRET FOR SELECTING LAYING HENS

I have succeed in getting both the \$10.00 and the \$1.00 secrets for selecting laying hens without signing any contract not to divulge anything without giving any promise whatever. It is true I did have some correspondence with Walter Hogan, and I sent him \$10.00, telling him I could not sign any contract. He returned the money, told me of his misfortunes in disposing of his invention, etc., and said a would like to have me test his discovery. It then gave him my promise not to divulge anything he might submit to me. He has, however, at this date, Dec. 18, never submitted anything; but one of our subscribers sent me some time ago Hogan's seven-page (\$10.00) pamphlet which he purchased for one dollar, and that, too, without any promise to keep the secret. I have given you the above particulars lest any one may accuse me of getting the secret by any dishonest means. I procured the \$1.00 "Potter secret of selecting the laying hens" by simply sending \$1.00 for the little pamphlet of 32 pages. I did not sign any contract not to "divulge," but they wrote my name in the contract with a typewriter. Had they put my name in with pen and ink it would have been forgery.

Now, friends, what do you think of this whole business—taking \$10.00 for a seven-page printed pamphlet, and \$1.00 for a 32-page printed pamphlet, and extorting a "promise not to tell"? According to their printed claims they have been hundreds if not thousands of dollars from poor hard-working poultry men (and women), for these celebrated secrets. It is horrible, and in it is keeping with the spirit of the times, with the usual mode, let us say, of giving and receiving knowledge?

Killing Birds

1. Do you prefer dislocate or sticking for killing fowl? 2. Is it best to draw the bird if it is to be kept for some time? 3. I am told that the head should be left on; is that so?—G. A. Halton, Do. Ont.

1. If the bird is to be eaten at once, dislocation is easier, and cleaner. If the bird is to be kept or put in storage, the bleeding is more preferable. 2. Don't draw the bird until it has to be used, and the flesh will be sweeter and more juicy, and it is more sanitary; keep the air and microbes out by making no incisions through which they can enter. It is taken for granted the bird has been thoroughly starved. 3. Yes. If the buyer wants to be sure he is buying a healthy bird. For the same reason, the intestines should remain. Disease can be detected by either the head or intestines. People buying birds with the heads off and drawn are never sure that the bird was healthy when killed.—F. C. E.

Poultry Convention

A poultry convention similar to the ones held in previous years is again slated for the poultrymen this year at the Ontario Agricultural College, Guelph. It will be held from February 15th to the 11th, inclusive. The speakers for the occasion will be: Dr. G. B. Morse, Washington, D. C., U. S. A.; T. F. McGrow, Scranton, Pa., U. S. A.; C. K. Graham, Hampton College, Hampton, Va., U. S. A.; Victor Fortier, Experimental Farm, Ottawa, Ont.; Miss Yates, Guelph, Ont.

Hatch Chickens by Steam

Small Hatchery, 250 Eggs. Steam Hatchery, 1000 Eggs. Steam Hatchery, 2000 Eggs. Steam Hatchery, 5000 Eggs. Steam Hatchery, 10000 Eggs. Steam Hatchery, 20000 Eggs. Steam Hatchery, 50000 Eggs. Steam Hatchery, 100000 Eggs. Steam Hatchery, 200000 Eggs. Steam Hatchery, 500000 Eggs. Steam Hatchery, 1000000 Eggs.



Dr. Morse will talk on poultry diseases; Mr. McGrow on "Ho who succeeds in Poultry," with an illustrated address on types, etc. "Keeping Fowl at Hampton College," and an illustrated lecture on "New England Poultry Plants" by C. K. Graham. Mr. Fortier will give an address and take part in the discussion. Miss Yates will give a trussing and carving demonstration and will speak on "English Methods of Fattening."

Those who have attended these conventions in former years need no further introduction to the good things which are to be had on this occasion. All who are interested in poultry who have never been privileged to attend these annual gatherings should strain a point to take it in this year.

Stimulants in Food.—There is no advantage in stimulating hens to lay if the food is of a varied kind. The best stimulant is the food itself, not the quantity but the kind. A hen may be well fed and yet lack the materials required to produce eggs. For this reason the food should be as varied as possible, one of the best being plenty of green food, if hens are not on the range.—F. C. E.

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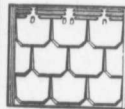
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FARM AND DAIRY

AND RURAL HOME

Published by The Rural Publishing Company, Limited.



FARM AND DAIRY is published every Thursday. It is the official organ of the British Columbia, Manitoba, Eastern and Western Ontario, and Bedford District Quebec Dairyman's Associations, and of the Canadian Holstein, Ayrshire, and Jersey Cattle Breeders' Association.

2. SUBSCRIPTION PRICE, \$1.00 a year, strictly in advance. Great Britain, \$1.20 a year. For all countries, except Canada and Great Britain, add 50c. for postage. A year's subscription free for a club of two new subscribers.

3. REMITTANCES should be made by Post Office or Money Order, or Registered Letter. Postage stamps accepted for amounts less than \$1.00. On all checks add 25 cents for exchange fee required at the banks.

4. CHANGE OF ADDRESS—When a change of address is ordered, both the old and new addresses must be given.

5. ADVERTISING RATES quoted on application. Copy received up to the Friday preceding the following week's issue.

6. WE INVITE FARMERS to write us on any agricultural topics. We are always pleased to receive practical articles.

CIRCULATION STATEMENT

The paid-in-advance subscriptions to Farm and Dairy exceed \$300. The actual circulation of this paper, including copies of the paper sent subscribers who are but slightly in arrears, and sample copies, varies from 600 to 1,000 copies, never being less than that to 15,000 copies. Subscriptions, when renewed from any of our advertisers, are not subject to the above conditions. No subscriptions are accepted at less than the full subscription rates. Thus our mailing lists do not contain any dead circulation.

Sworn detailed statements of the circulation of the paper, showing its distribution by countries and provinces, will be mailed free on request.

OUR PROTECTIVE POLICY

We want the readers of Farm and Dairy to feel that they can deal with our advertisers with the assurance of our advertisers' reliability. We try to admit to our columns only the most reliable advertisers. Should any subscriber have cause to be dissatisfied with the treatment he receives from any of our advertisers, we will investigate the circumstances fully. Should we find reason to believe that any of our advertisers are unreliable, even in the slightest degree, we will discontinue immediately the publication of their advertisements. Should the circumstances warrant, we will expose them through the columns of the paper. Thus we will not only protect our readers, but our reputable advertisers as well. All that is necessary to entitle you to the benefits of this Protective Policy is that you include in all your letters to advertisers the words, "I saw your ad. in Farm and Dairy." Complaints should be sent to us as soon as possible after reason for dissatisfaction has been found.

FARM AND DAIRY

PETERBORO, ONT.

TORONTO OFFICE:
Room 306 Manning Chambers, 72 Queen St., West, Toronto.

ATTEND THE BREEDERS' MEETINGS

Members of the various breeders' associations, and others, will do well to keep in mind the annual meetings of their particular breeders' association which meets in Toronto next month. In the past these annual meetings have not been as well attended as their importance would warrant. Discussions of vital concern to all breeders of stock and to all interested in the different branches of live stock take place at these meetings.

Aside from the general business conducted at these meetings they have another value too frequently overlooked, especially by the smaller breeders and by younger men in the business, namely, the privilege of coming in personal contact with the best and most successful breeders

that our country affords. The information that one can pick up from these men old in the business, and the value of their personal acquaintance, cannot be lightly estimated. Time alone can tell what such men may mean to you individually. We urge all who have an interest in live stock to attend the annual meeting of the association that has to do with their particular breed.

DAIRY HERD COMPETITION

Not only the possibilities of what average cows can do but the actual returns of what cows have done are brought out in the results of the dairy herd competition as carried on by the Western Dairyman's Association during the season of 1908. The results of the competition are published elsewhere in this issue.

Factory returns per cow of 7,243 lbs. of milk, having a money value of \$68.50, for a period of only six months in a herd of eight cows should start many cow-owners thinking seriously of the returns they are getting. Those patrons who have furnished only from 2,500 to 3,000 lbs. of milk per cow to their factory in the past season, should sit up and take notice. The Western Dairyman's Association have acted wisely in conducting this dairy herd competition and thus bringing before the public the actual returns of some of our better herds.

There is no reason why others cannot obtain as good results as were secured by Mr. J. W. Cornish, of Hargettsville. The thing is to have good cows and then to give them good feed and plenty of it—in addition to good care. The Dominion Government has provided a means, in the cow-testing associations, whereby we may find out the good cows that are capable of paying their way throughout the year. The machinery thus provided is of little use unless we take advantage of it. It behooves us to adopt cow-testing and start in to make our herds equal to the best.

PROFITABLE CO-OPERATION

Not in all sections of our country has the principle of co-operation in connection with the breed of stock kept been considered. In most every locality are to be found representatives of many breeds of cattle. Practically every well-known breed of dairy cattle and several of the beef breeds as well are represented in most districts. Ask a man, in one of these communities, why this condition of affairs exists and we are told at once that he likes his particular breed of cattle. His next neighbor informs us that his preferences are for his special breed. These two have dairy cattle. The man on the next farm adjoining pins his faith to a beef breed giving as his reason, that he likes his stable filled with well-fed steers.

Why do we like any particular breed of stock? It is not because of their particular color but in most cases for the money that we see represented in the breed which we have adopted. The man, instanced above, who feeds the steers would not think they looked so well, were they each sinking him \$5. If they carried this

on long enough, he would soon change his preference for a more profitable line of the live stock industry. The same principle applies with the dairy cattle. A man chooses a particular breed, not so much for their color or for their fine looks as for the money which he is convinced they will produce for him.

The principle is well known and is supported by our best breeders that the more one's neighbors engage in the same line of breeding, the more profitable this whole business becomes to all. It is well enough in choosing a particular breed to suit one's fancy. One should, however, make sure first of all, that the conditions in his neighborhood will allow him to do so. If a particular breed of cattle predominates in your locality, and, provided they are a profitable breed, that is the breed for you to adopt.

Co-operation of this kind should be more largely practised. By having a large number of representatives of a particular breed as a centre, where such can be obtained. As a result, buyers will flock there, knowing that they can satisfy their wants with a minimum outlay for travelling and other expenses. Give heed to this principle of co-operation if you are about to adopt a new breed.

FARMERS' INSTITUTE CLUBS

Some general particulars as to the organization of Farmers' Institute Clubs and suggestions as to the work to be taken up are outlined in an appendix to the annual report of the Farmers' Institutes for Ontario. When we consider the great movement which is taking place towards organization among farmers, this treatise is particularly timely, as it deals with all questions pertaining to the successful organization and the running of Farmers' Institute Clubs.

The bulletin gives brief statements as to the benefits to be derived from the establishments of local clubs. A number of these clubs have already been formed. To meet the needs of those enquiring for information as to the methods of organization, lines of work to be taken up, etc., this bulletin has been especially prepared. It is believed that the work of the Farmers' Institute Clubs will appeal very strongly to the farmers of Ontario and that they shall prove a strong adjunct to the regular work of the Farmers' Institutes. Such cannot but result in much benefit to those who take an active interest in this work.

We commend the Farmers' Institute Clubs to our readers. If you are interested obtain a copy of this bulletin which may be had free from the Department of Agriculture at Toronto, place the matter before your neighbor farmers and if thought desirable, plan to organize a club at the next meeting of your Farmers' Institute, or at a specially called meeting. Those men who are desirous of doing a real service to their community, both from a financial and social standpoint, cannot do better than organize a Farmers' Institute Club.

\$50 LYING IN THE ROAD

An American exchange features an article in a recent issue under the above caption. It says:

"We were a little surprised a few days ago to find \$50 lying in the road beside the hedge at the corner of one of our prominent business farmer's homes, and the more so to find that it had lain there several months unclaimed, but beginning to look much the worse for the exposure. The money was in the shape of a corn planter that will have to be replaced by a new one before many years, unless cared for better than that."

Unfortunately, for their owners, many such finds as this are not uncommon on many of our farms. It is not always a corn planter, but often machinery and implements of a more expensive nature. Since winter has set in we have noticed much machinery that has been neglected and left out of doors. Such must surely bring joy to the heart of the implement agent as he contemplates a sale, if not this year, then surely the year following.

While perhaps the entire value of the implement is not lost through being exposed for one season, it is only the matter of a very few years at best until it is necessary to replace the neglected tool with a new one. Tools cared for in this way represent the loss of good, hard earned money. It is difficult to understand why people will continue to allow such serious leaks in their business. No other industry would stand such. How can the farmer afford them?

The question of sending a commission of leading farmers to the old land to investigate the bacon industry as it is carried on in Great Britain and in Denmark is of paramount importance. Danish farmers are beating us in the production of bacon for the English market, and it is said that they are doing this with feed that we have produced and which we think unprofitable to feed to our hogs. A commission to investigate this matter at first hand would be quite in keeping with the importance of the bacon industry to this country. If you are in favor of this suggestion, say so by writing us to that effect. Let us have your views upon this subject of vital concern to all dairymen and hog raisers.

The accommodation furnished for the dairy cattle at the recent Winter Fair at Guelph, was so poor that the management of the exhibition had no reason to wonder at the fact that the breeders of dairy cattle are thoroughly dissatisfied with the treatment that they have received at the fair. The buildings at Guelph should be enlarged, if only to provide larger and better accommodation for the cattle in the dairy test.

Avail yourself of the benefits of our protective policy as published on another column of this page. In writing to advertisers always mention the fact that you saw their advertisement in Farm and Dairy. Reliable advertisers only, are admitted to our columns so you need have no hesitation in dealing with them.

Creamery Department

Butter Makers are invited to send contributions to this department, to ask questions on matters relating to butter making and to suggest subjects for discussion. Address your letters to the Creamery Department.

The Dairy Exhibit at Brantford

The exhibition of cheese and butter, that was held last week at Brantford, in connection with the Western Ontario Dairyman's Association, was unusually meritorious. Not only was there a large exhibit but the quality of the prize winning exhibits was so close it was no easy matter for the judges to make their decisions.

President John Brodie, stated in his annual address that the directors of the Western Ontario Dairyman's Association consider this annual exhibition one of the most valuable features of their conventions and that it has had a beneficial influence in improving the quality and finish of the cheese and butter made in Western Ontario.

CHEESE AWARDS

The prize winners were as follows: September White Cheese.—1. Jno. Cuthbertson, Sebringville, 95.32 points; 2. Mary Morrison, Newry, 95.15; 3. G. R. Stone, Carries, 94.95; 4. A. W. Daroch, Zenda, 94.82.

September Colored Cheese.—1. J. T. Donnelly, Union, 95.83 points; 2. C. Donnelly, Scottsville, 95.32; 3. Mary Morrison, Newry, 94.75; 4. Harry Donnelly, Union, 94.50.

October White Cheese.—Tie for 1st and 2nd prize, J. T. Donnelly, Union, and Mary Morrison, Newry, 94.82; tie for 3rd and 4th prizes, Jos. Skelton, Thorndale, and C. A. Barber, Hicks, 94.49.

October Colored Cheese.—1. J. E. Stedlbauer, Listowel, 94.92; 2. H. B. Doan, Birnam, 94.16; tie for 3rd, W. J. Goodwin, Ripley, and C. Donnelly, Scottsville, 94.11.

BUTTER EXHIBITS

56-lb. Box Creamery Butter.—1. Jno. Cuthbertson, Sebringville, 94.96; 2. R. Johnston, Bright, 94.65; 3. A. G. Patterson, St. Thomas, 94.1; tie for 4th, R. A. Thompson, Atwood, and J. B. Doan, Birnam, 93.48.

20 One-pound Prints, Creamery Butter.—1. Jno. Cuthbertson, Sebringville, 94.65; 2. R. A. Thompson, Atwood, 93.99; 3. A. G. Patterson, St. Thomas, 93.82; 4. E. M. Johnston, Inkerip, 93.65.

56-lb. Box, Creamery Butter.—1. A. G. Patterson, St. Thomas, 95.65; 2. W. G. Mead, Winchelsea, 93.99; 3. J. R. Almont, Welland, 93.48; 4. F. J. Sleighthorn, Strathroy, 92.99.

SPECIAL PRIZES

By the Ballantyne Dairy Supply Co., Stratford, Ont., the case of Hansen's Bannet Extract—the cheesemaker securing the highest score on September White Cheese, Class I, Sec. 1.—J. Cuthbertson.

One case of Hansen's Cheese Color.—To the cheesemaker securing the highest score on October Colored Cheese, Class II, Sec. 2.—J. E. Stedlbauer.

By the J. B. Ford Co., Wyandotte, Mich.—One Three-piece Carving Set with Stag Horn Handles, Sterling Silver Mountings.—To the cheesemaker who is a regular user of Wyandotte Dairyman's Cleaner and Cleanser, having the best finished and most stylish looking cheese on exhibition.—J. T. Donnelly.

One Three-piece Carving Set with Stag Horn Handles, Sterling Silver Mountings.—To the buttermaker who is a regular user of Wyandotte Dairyman's Cleaner and Cleanser, having the best finished and most attractive exhibit of butter.—G. Patterson.

By the Canadian Salt Co., Windsor, Ont., E. G. Henderson, Manager.—\$30 in Cash.—to the buttermaker securing the highest score on butter ex-

hibited in any class.—A. G. Patterson, \$20 in Cash.—To the buttermaker securing the second highest score on butter exhibited in any class.—J. Cuthbertson.

A Medal.—To the cheesemaker securing the highest score on cheese exhibited in any class.—J. T. Donnelly. Cheese Buyers' Trophy.—Challenge Cup, valued at \$150.—to become the property of the exhibitor of cheese at the Winter Dairy Exhibition who shall receive the highest score three times, or twice in succession.—J. T. Donnelly.

Won 1903 by Frank Boyes; won 1904 by R. H. Green; won 1905 by O. Schweitzer; won 1906 by J. Patton; won 1907 by J. E. Stedlbauer; won 1908 by Mary Morrison.

Instructions at Creameries

Seventy-five creameries operated in Western Ontario during the past year, four more than last year. Nine of these made both cheese and butter. Patrons to the number of 14,143 sent milk and cream to these creameries, only 2,150 patrons less than are sending milk to the 217 cheese factories. This makes a total of 30,440 patrons engaged in producing milk and cream for the factories of Western Ontario.

In 1907 there was produced in Western Ontario 2,932 tons of butter. In 1908, 3,270 tons, a gain of 338 tons. There were 184 patrons on the average to the creamery, 46 tons of butter to the average of the creamery, 82 lbs. of butter average to the patron. This does not include the dairy butter made or the milk and cream supplied to the different cities.

There were 218 full day visits and 93 call visits made, making a total of 311 visits. There were 405 patrons visited, 245 more than last year. Sixty-eight creameries are cream gathered, 9 both cream gathered and separator. There are no entirely whole milk creameries in operation. Sixty-five creameries pay by the Babcock test, 6 more than last year, only 12 creameries are now paying by the oil test. It is hoped this system of paying patrons will soon be entirely a method of the past. Seven creameries are using the scale for sampling cream for testing, 3 more than last year. Seventy-four creameries are using the combined churn, the box churn has practically gone out of use, 14 creameries are using a pasteurizer, 7 more than last year. Thirteen creameries are using large cans for collecting cream, 12 are using individual cans, 6 are using jacketed cans, 15 ordinary cans, and only 18 are now using cream tanks.

INFLUENCE OF CREAM HAULERS

Thirty-eight creameries have first-class cream haulers, 36 only have fair class haulers, 16 of which have a very poor class of cream haulers. The cream hauler has a wide influence among the patrons, since on him depends to some extent at least the responsibility of getting the patrons to handle the cream in better condition and he should be well informed on creamery conditions and other practical points in order to give the patrons necessary information for improving the quality of the cream. Twenty-five creameries are using a cooler, 46 degrees was the average temperature of the storages, this is far too high, and some effort should be made to maintain a lower temperature, butter soon loses its fine flavor if allowed to stand even for a short time at high temperature. Twenty-seven creameries kept the butter-milk tanks clean, 22 in fair condition, 21 in very bad condition, an effort should be made to keep these tanks clean as far as possible. The average per cent. of fat in the cream was 22 per cent., for the Northern creameries 20 per cent., for the Southern creameries 24 per cent.



The Frog that was in it

A frog fell down a well and in attempting escape slipped back two feet every time he jumped three. That's the situation of the penny-wise party who buys a cheap Cream Separator. It may be better than the old crock and pan way, but what with his jumping and slipping, it's a long way out for the Dairyman, and the chances are—like the frog—he'll be worn to a frazzle if he ever does get to the top.

Separator. It may be better than the old crock and pan way, but what with his jumping and slipping, it's a long way out for the Dairyman, and the chances are—like the frog—he'll be worn to a frazzle if he ever does get to the top.

THE EASY WAY

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UNIFORM METHODS NEEDED

More uniform methods should be adopted by the creamery men. It would be well to cut measuring the cream in inches and adopt the method of weighing. Decide on a uniform system of paying patrons with butter-fat or pounds of butter. Do away with the oil test, and all adopt the Babcock test. Have a system as nearly alike as possible in charges for manufacture. Then the patrons would know that every creamery was trying to do a good straight business.

There were 648 tests made by the Beaker method for moisture in the butter, the average per cent. of moisture for the season was 14.33 per cent. There were 61 samples with over 16 per cent. of moisture, these 61 samples, however, came from 19 creameries, 6 in the Northern Group, and 13 in the Southern Group.

Further improvements are reported in the quality of the cream, in the quality of the butter, and in the general equipment of the factory. The total amount of money expended in creamery improvements was \$8,240. I wish to also thank the creamery men and instructors for their kindness. The instructors have worked hard to improve the quality of the butter and did everything they could to make the season a success.—Frank Hens, Chief Instructor.

Convention Notes

Mr. J. H. Singleton, of Smith's Falls, who has attended the convention of the Eastern Ontario Dairyman's Association for many years, said that the address of Mr. George H. Barr was the best of the kind he had ever heard at a convention of the association. Dairy Commissioner Ruldicke was requested to have copies of Mr. Barr's address printed for distribution.

A resolution was passed expressing satisfaction with the work of the special officers who had been appointed to take charge of the prosecutions against farmers detected watering their milk and recommended to the board of directors for 1909, that the services of the prosecutors should be continued.

Mr. G. A. Putnam expressed the belief that the time has come when legislation should be adopted in Ontario, somewhat similar to that now in force in Saskatchewan, by means of which restrictions will be placed upon the erection of new factories in sections already well supplied with good buildings. Mr. Putnam stated that we will never make the progress that we should until action of this kind has been taken.

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Butter comes
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At all grocers.

Cheese Department

Makers are invited to send contributions to this department to ask questions on matters relating to cheesemaking and to suggest subjects for discussion. Address all letters to The Cheese Maker's Department.

Western Dairymen Meet

The annual meeting of the Dairymen's Association of Western Ontario, held at Brantford on January 13th and 14th was a very successful one. There were no frills and furberlows about it. It was a business convention from beginning to end. The attendance was good, though we have seen a larger attendance of farmers at previous conventions.

Mr. Wm. Brodie, President, combined his address with that of the director's report. This report reviewed the work the association had accomplished during the year in the interest of the dairymen. There were several cheese factories in course of erection in districts where they were not needed. The report urged factorymen to beware of introducing the same conditions that exist in some parts of Eastern Ontario, where a factory at every crossroad has about ruined the business. Reference was made to the attempt made last season in producing skimo-milk cheese. The effort had not been wholly successful and perhaps would not be repeated. The directors warned dairymen in regard to this matter as being likely to injure the reputation of Canadian cheese. The report strongly advised farmers to stick to the bacon hog and especially those engaged in dairying. While the make of cheese in all Canada last season was short, Western Ontario had about held its own.

Secretary Hertz read the financial statement which showed a balance on the right side of \$87.54.

Many of the addresses delivered at Brantford were the same as those given at Prescott. Some of the addresses appear elsewhere in this issue; others will be published later.

MILL FEEDS FOR CATTLE

In the absence of Ex-Governor Hoard, Professor Harcourt, of Guelph, was asked to give another address. His excellent paper upon milk by-products and their importance in cow-feeding will be found on page 3 of this issue. These products are rich in proteids, and are therefore very suitable for feeding with coarse dry feeds, such as hay and straw for milk production. Many of these products vary considerably in the amount of proteids they contain and consequently the buyer is not always able to tell what he is getting. The Ontario High Court stated that legislation was needed compelling the vendor to put on each package of mill by-products sold its exact composition.

M. Geo. J. Putnam, director of dairy instruction for the province reviewed briefly the work of the past

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THOS. SOUTHWORTH,

Director of Colonization, Toronto

MON. JAMES B. DUFF,

Minister of Agriculture.

season. More progress had been made during the past two years in improving the quality of dairy products than during the four years previous. We are only making a start in improved dairy methods yet and much needs to be done. There were too many factories in the western part of the province. Legislation must be necessary to regulate the number of factories that should be erected. In regard to why butter he was afraid that its manufacture was not a premium on carelessness on the part of the cheesemaker.

Professor Dean also stated that experience conducted at the college showed that they lost 25 per cent. in feeding value when the fat was removed. Dairymen should take this into account when contemplating making whey butter.

GOOD BUTTER NECESSITY

Dealing further with the outlook for the creamery, Professor Dean said it was very hopeful. Good butter had become a necessity on the consumer's table and demand was bound to increase. The notion of the hour was to bring home truths to the man on the farm and the maker in the factory. There was a need for more milk and cream, and this cream was too much tainted and more cheaply. To produce cream is not hauled often enough. At the O. A. C. creamery it cost last year 26 a lb. to haul the cream. More education was needed in creamery work and better dairy legislation.

The evening sessions of the convention were given up to addresses of a less practical nature. These were interspersed with music. Hon. J. S. Duff, C. C. James, President Creamery and Dairy Commissioner Rusdick were among the speakers. Miss Laura Rose gave a valuable illustrated address on the good and bad in dairying that was much appreciated.

The convention was held in the new open space, where there was ample accommodation for delegates. The cheese and butter exhibit was in a room adjoining, which made it convenient for all concerned.

OFFICERS FOR 1909

The following are the officers for 1909:
J. J. Parsons, Jarvis, Simcoe Group, president; Jno. H. Scott, Exeter, Western and Southern Creamery Group, vice-president; Wm. Waddell, Kerwood, London Group, 2nd vice-president; D. Campbell, Stratford, Stratford Group, 3rd vice-president. Directors—J. N. Paget, Cambridge, Brantford Group; Geo. M. McKinnis, Ingersoll, Stratford Group; S. E. Fahey, Harriestville, Woodstock and Ingersoll Group; S. R. Wallace, Burgessville, Woodstock and Ingersoll Group; J. B. Smith, Alton, Eastern and Northern Creamery Group; W. S. Stocks, Britton, Listowel Group, Auditors, J. A. Neeles, London, and J. C. Hegler, Ingersoll; I. W. Steinhoff, Stratford, Representative Western Fair, London, and J. Robinson, Woodstock, Representative Canadian National Exhibition, Toronto.

RESOLUTIONS PASSED

The following resolutions were passed: 1. Whereas the success and educational value of this convention and the interest taken therein is due in a marked degree to the presence of the speakers, who have kindly addressed our meetings, we desire to express our sincere thanks for their assistance and presence throughout the various sessions.

2. That we the members of this association desire to express our appreciation of the kindness of the Mayor, Board of Trade, and citizens of Brantford in furnishing the use of the opera house, together with the excellent musical part of the program free of charge for the convention and dairy exhibition.

3. That the thanks of the convention and is hereby tendered to the Canadian Salt Co., of Windsor, Ont.,



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through their general manager, Mr. E. G. Henderson for the very handsome badges presented by the company to the association.

4. That the thanks of the members of this association be and are hereby tendered to the Heller & Mert Co., New York; The R. M. Ballantyne, Ltd., Stratford; C. H. Slavson & Co.; Ingersoll; J. B. Ford Co., Wyandotte, Mich.; The Canadian Salt Co., Windsor; The Western Salt Co., Mooretown; Bryie Bros., Toronto, for the special prizes kindly donated for our dairy exhibition.

5. That we feel as dairymen we are under great obligations to the Ontario Department of Agriculture for the assistance they have rendered the dairy industry, through the system of instruction that has been given and also in providing speakers to attend annual meetings of these factories and creameries.

6. That we wish to express our appreciation of the work of Mr. Nelson Monteith, while Minister of Agriculture for Ontario, and extend to him our best wishes for the future.

7. That we as dairymen believing that the work of co-operating associations is conducive to increased production, we wish to express to the Hon. Sydney Fisher, Minister of Agriculture for Canada, our appreciation of his work, and would humbly suggest that it be continued.

IN MEMORIAM

8. That this association in annual convention assembled, desire to place upon record their sincere appreciation of the services which the late Hon. Thos. Ballantyne, former President of the Association, has rendered to his country, and more particularly for the efforts which he put forth to promote the interests of the dairy industry.

9. That this association desire to place on record their sincere appreciation of the services which the late Harold Eagle, former President of this Association has rendered to the dairy industry in the territory under jurisdiction of this association, and also that copies of these memorial resolutions be made and forwarded to families of deceased.

Dairy Questions Answered

The following questions were asked and answered at one of the sessions of the convention of the Eastern Ontario Dairymen's Association held recently in Prescott.

Question—What size should a cheese factory be before it installs a butter plant for the manufacture of whey butter?

Mr. Pulow.—It should receive an average of 10,000 lbs. of milk a day. A good maker is required to run such

a factory and he should be paid a good salary.

Question.—Do you believe in paying for milk by the test?

Mr. Pulow.—Emphatically yes, but until our makers are better qualified to undertake the work the system of payment by the test had better be extended slowly.

Question.—Would you advise paying by the straight test or by adding 2 per cent? (Laughter).

Mr. Pulow.—By the straight test. Our investigations lead us to believe that it is the most accurate system.

Question.—Why are the makers not qualifying to do this work?

Senator D. Dorval.—Because we do not pay them enough. This year in the Madoc section, for instance, a joint stock factory which had had a competent maker for nine years, let him go and hired an incompetent man because he was willing to work for a quarter of a mill a pound less.

As long as we treat our best makers in this way we cannot expect them to go to too much trouble or expense improving themselves. They now have no protection against the competition of incompetent makers who are willing to work for low wages. Factories before engaging such makers should find, through Chief Instructor Pulow, if the new men understand their business. He knows the record of every maker and factories should take advantage of his knowledge. (Applause).

Have Saved \$1,000

It is estimated by Mr. J. A. Holgate, of Foxboro, Ont., that the cooling room that the patrons of his cheese factory erected some two years ago, has netted them already about \$1000 through the saving of the shrinkage of he cheese, and the increased value of the cheese manufactured. "Dairymen who continue to make cheese without having a proper cool curing room," said Mr. Holgate, at the annual banquet of the Belleville cheese board, "are making a great mistake. Since we have had a cool curing room in our factory we have had no trouble in selling our cheese, as it has been in great demand among the buyers."

"Where factories have a good cheese maker," continued Mr. Holgate, "they should keep him, even if he should want nine mills. A careless cheese maker, who lets the rust from his equipment remain on his cheese, should be got rid of. The dairy instructors have done much to help the factory men. They should now go on the farms and show the farmers how to cool and care for their milk, and how to keep their yards and stables clean."

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COLD and reserved natures should remember that though not infrequently flowers may be found beneath the snow, it is chilly work to dig for them and few care to take the trouble.

The Domestic Adventures

By Joshua Daskam Bacon
(Continued from last week)

"**W**HAT nonsense," said I. "Heaven knows I argue enough with him—I am in love with him? She is paying all his attention to him merely to make Mr. Van Ness jealous. The girl is a born coquette."

"If that is the case I should say she has failed conspicuously," Sabina returned. "for I have never seen a person who exhibited fewer signs of jealousy."

"In this connection it seems to me that you, too, lack perspective!" I said snappishly.

Sabina and I were quarrelling!

And meanwhile, in the living room, Chloe, with bursts and gurgles, and all those little nods and gestures that make listening to her so pleasant, was describing Mary's hygienic room, and Mary, eating in the dining room, heard every word. You see Editha Evans had suggested that perhaps it would be easier for Mary to take her meals at the table after we had left it, and though Sabina felt from the beginning that any departure from the ordinary course was unwise, and that Mary had better conform to the general usage, she admitted that there was no serious harm in it, and so Mary used to draw the portiere ceremonially as we left the room, and for some time afterward we would hear the subdued clink of her solitary feeding. If it is true that Mr. Gladstone was accustomed to devote three or two bites to each mouthful, it would have been an object lesson for a gorging and dyspeptic generation to see him and Mary Bostwick dining together: I used to think she would never finish.

Chloe flatly refused to apologize to Mary for making fun of her, and I don't know that she should have gone quite so far as that, but I did hope she could find something to say to make her feel better; and to please me, she tried.

"Just jolly her along," Mr. Ogden suggested. "Talk about the dear old you used to spend doing Sanskrit together! Remind her of the mad rush for the basket-ball, when the whole field was against you, and you and she fought shoulder to shoulder and saved the day! Call to her mind those moonlight nights when you sang arm in arm across the campus, exhilarated with chocolate candy and ice-cream soda!"

"I suppose," said Chloe coldly, "you think that this is very funny, and I don't doubt you believe it is true. As a matter of fact, I might have spent four years in the place and never laid eyes on her. I don't know much about the Sanskrit part,

but if you think Mary Bostwick ever wasted a moment on anything so foolish as basket-ball, or ate anything so hygienic as ice-cream soda, you don't know her. You'd better jolly her along yourself—you seem to understand the process!"

"They have been wrangling like this continually of late, and Sabina says it is only a question of time now. She expects them to announce why, in that case, I cannot understand why, in that case, Mr. Van Ness spends the summer with his sister instead of at the Adirondack Club or abroad, which

is his usual custom, and directs her, as he evidently does, to invite us at least once a fortnight to her yacht or his steam launch. If Mr. Ogden and Chloe have come to any understanding, why does he allow this? And if he cannot prevent it, how can there be any understanding? And Van I have never thought that Mr. Van Ness' sister cares very much for Chloe; she would never invite her of her own accord. It must be admitted that the few people who do not think Chloe perfectly charming find her a little trying."

I am afraid Mary is one of these; certainly the "jolly along" was not a success.

"How was she? Chilly?" Mr. Ogden asked curiously, when the diplomat came back to us.

Chloe shuddered.

"I have caught a cold," she replied solemnly.

"Pret hard on you, eh?" he said sympathetically.

"She was stony," said Chloe sadly. "It wasn't on her account, she said, but she hated to have the college so misrepresented."

"Really," Sabina interrupted, with a disgusted glance at me, "think this is going too far. The girl is simply impertinent."

"Oh, no," Chloe answered, and it seemed to me she was honestly a little dispirited. I gave her the opportunity to say what she liked, you know—that was about all I could do, in her position, she supposed she must expect ridicule from the rich.

"Come, come, Mary" said I, "don't be absurd. You know very well you must expect no such thing. It is simply my way—I'll tell a funny story about my own grandmother, if I knew one! You know how I chatter."

"Why, certainly, Miss Randolph," she said in her stained-glass-martyr manner. No one would dream of attaching any importance to anything you said."

"Do you think she meant—" Mr. Ogden inquired vaguely.

"Heaven knows what she meant," said Chloe. "But it was probably true, whatever it was—she's very accurate. It started me for a moment, though, and I struck out on a new line."

"As for my dear rich, Mary," said I, "how much do you suppose I earn? I am paid exactly four hundred and fifty dollars a year, counting your board and lodging you make more than that and have far lighter expenses. Even with the hundred a year that I have of my own, you are really better off than I am."

I saw Mr. Ogden's eyes rest on Chloe's changing face with something more than mere pity.

"Do you mean to say that's all they pay you?" he demanded. "It's a rotten shame!"

"Oh, I don't know," she said lightly. "It's probably all I'm worth."

But that wasn't Mary's view of it. Mr. Ogden. She felt that she had qualified herself by severe study at college, instead of confining myself to—being popular, I could be earning a thousand dollars in a city year that I have of my own, and a fashionable private one. It shows that my public school, instead of teaching ideals are low.

"By George," Mr. Ogden remarked, looking apprehensively towards the dining room.

particularly appealing, in our ears, and her chair by ours just empty. But now that the moment had come, I deliberately escaped it. It made me too nervous; it seemed to me just then that the responsibility was too great. What business of mine was that? And yet I wanted to know as much as I could.

"Let me tell you," Chloe and let her tell me," I thought suddenly, and pushed my chair away from him.

"That is an odd adjective to apply to a girl as happy as Chloe," I said. "Aren't you growing a little sadder?"

"He is very quick at a suggestion, and I doubt if he will ever say anything like this again. How could I have been so foolish? Now I shall never know till Chloe tells me and I think I would rather know before then."

A week ago, to be sure, I thought we should not wait very long. For Mr. Van Ness did a most unbecoming thing: he invited himself to dinner.

"It has not been so long since the privilege was extended to me," he said, deliberately coming over by me; "and since I have been admitted to this charming intimacy, I venture to hope for a little more!"

(Continued next week.)

The Upward Look

But ye doers of the word and not hearers only, deceiving your own selves.—James 1, 22.

That is what command mean? That if we are Christians we must strive to live as followers of Christ should. There are many of us who deceive ourselves. We are apt to think that we do not commit any of the acts that the world commonly looks on as sin we are doing all that can be expected of us. We set our standards of living by the standards of the people we live with, and we associate. This is the explanation of the low plane of living of so many professing Christians.

There is only one standard for us to strive to equal. This is the standard that was set by Christ when He was on earth. It is high but the nearer we can come to it the happier we shall be. It is not enough that we shall refrain from committing acts of sin. We must strive to do good unto others. The mere lack of effort to help others is a sin. In James 4, 17 we read: "To him that knoweth to do good, and doeth it not, to him it is sin."

The first great commandment is that we shall love the Lord our God with all our heart, with all our soul, and with all our mind, and the second is like unto it, that we shall love our neighbor as ourselves. If we will fulfill these two commands, as they should be fulfilled, we will fulfill all the other commands we contain in the scriptures.

The place to start is in our homes. We must strive to be like Christ in our home life. If we can be good Christians at home we cannot hope to be consistent Christians in the church, or elsewhere. We must be loving and kind and anxious to help loved ones. We cannot fight great battles in the open for our Lord. We will not be competent to do so until we can gain the smaller battles that confront us every day over the little things of life. We must moderate our tempers, our pride, our selfish ambitions, our lack of faith. We must love unto others as we would that they should love unto us. In this way we should try to shine here and there that they will see our good works and glorify our Father which is in heaven. We will, also, lay up for ourselves a crown of righteousness that our Lord has promised to all who love His appearing.—I. H. N.

Exactly," said Chloe. "And now let's talk about something else."

But she was very subdued all that evening, and I wished so much that Mr. Van Ness might have seen her: there is a great charm for me in those shadowed moods of hers. I think he has never happened to me, she is so gay and effervescent with him, and I have caught him once or twice looking at her in a puzzled, uncertain way, as if he was not wondering whether that brightness and his perfect sincerity. If it is not, no one can blame the child; she has been so applauded and caressed for it, it has won her friends and admirers so easily, that she has never permitted to hide any different heart. I feel it is because she dares not do anything else. It is a mistake, I think, but one cannot very well tell her so: with all her chatterbox ways, there is a vein of deep reserve in Chloe.

"She seems almost pathetic to me sometimes," said Mr. Ogden suddenly. Chloe had stepped in from the porch to sing to us a little, and his reply to my thoughts startled me.

"Indeed?" I answered rather indignantly. I felt frightened, somehow, and extremely uncomfortable. Here was the opportunity I had been waiting for; now, in this confidential privacy—for Sabina had excused her self to read manuscripts, was my matters stood with Mr. Ogden and Chloe. He had begun just as I had imagined, he might some evening, with Chloe's voice, even, not especially well trained, but par-

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A Plea for the Women

Mrs. R. A. Ragan, Brant Co., Ont.

In a recent issue of Farm and Dairy there appeared an article entitled, "A Wife's Allowance."

Judging from my own observation, the average countryman's wife has the free use of the pocket book and in most cases is more anxious to sacrifice her own personal comfort in order to make a home than is her husband. She is generally the harder worker of the two.

I called at a neighbor's the other night about eight o'clock, expecting to find them looking over the week's papers or talking of the morrow. Instead the young mother and daughter were out milking cows, and afterwards did a good ironing, so that the four little girls could go decently to Sunday school. So it is all over the country.

I have just received a card from a friend announcing the burial of his wife, whose girlhood days in England had been spent in comparative ease and comfort. She came to Ontario twenty years ago to marry the man she loved. She had put in eighteen years of hard work, caring for her little ones, with never a holiday, and with little hope of seeing the old home, or parents, again.

ANOTHER PHASE OF THE QUESTION

Many are going to the lonely west, there to spend years in a little shack, with but few of the comforts of life. In many cases the husband is not in a position to furnish any luxuries whatever. The furniture must be plain, and gifts small indeed.

A young mother said to me the other day, (and their savings bank account would average about \$1000 a year), "See what my husband brought me from Brantford. You

know he always tells me to get what I want, but it was so thoughtful of him to remember me by bringing home these flowers."

I was dining with an acquaintance in the city not long ago whose whole possessions would amount to but a hundred dollars. He complimented the wife upon preparing the meal, and actually gave her a kiss when parting. Theirs was a happy home. But he was an Englishman. Whoever heard of a Canadian kissing his wife a year after marriage? I have seen apparently happy wives weep because of the lack of the little attentions which they had a right to expect from their husbands. Surely it would be well for the husband to give his wife a part of the allowance he promised her during his courtship days.

Let him remember how he always worked for her company at entertainments or outings. How careful he was to clean his clothing or shoes before entering her home, and let him plan ahead so that she may go and see her parents and friends once in a while. Last, but not least, though the wife may be the mother, she is still pleased to hear a word of praise, or have a kiss now and then.

Talks with Mothers

What mode of treatment would you recommend for a child of passionate temper? First, be very sure that a large part of the temper is not nervousness, pure and simple. Many children of nervous temperaments are blamed for what they cannot help. A slender, precocious child who speaks quickly, is quick in his movements, mentally bright, inclined to sleeplessness and given to reading, is almost

invariably easily irritated and is often tortured by things that do not trouble his children differently constituted. Such a child will naturally have a quick temper. Quick to manifest its feelings in other ways, why not in possessions would amount to but a hundred dollars. He complimented the wife upon preparing the meal, and actually gave her a kiss when parting. Theirs was a happy home. But he was an Englishman. Whoever heard of a Canadian kissing his wife a year after marriage? I have seen apparently happy wives weep because of the lack of the little attentions which they had a right to expect from their husbands. Surely it would be well for the husband to give his wife a part of the allowance he promised her during his courtship days.

As to mode of treatment, etc., I should give strict attention to the child's physical well-being; see to it that he did not study too hard in school or read too much at home; send him to bed early, let him sleep alone, under light but warm blankets, not too many of them, and always in a well-ventilated room. They should look after his diet; eliminate tea and coffee and give him healthful, easily-digested food.

The nurse his self-respect. I believe this is very important, for a child with a fiery temper feels degraded by it; partly because it is a fault so apparent to every observer and partly because it does some very unbecomingly ridiculous when in a passion. The child who "flies mad" sees the selfish child or the untruthful one able to hide his fault and escape censure while his of temper brings disgrace and reproof. So I would give him all the "backing" I possibly could, and if he is generous, truthful and kind, let him understand that a virtuous temper is at least equal to a kicking temper.

Do not let the other denizens of the nursery know that you consider this child's fault as a grudge against him. Allow no nagging. When in spite of all, a fit of passion comes, do not treat it as a big thing but encourage him to forget and try again. If, however, toys or other property is destroyed, require him to replace it if it belongs to another, or to feel the loss of it if it is his own. When it is possible arrange matters so that the particular things that upset the temper shall be avoided. Teach him to work alone and to play alone at least part of the time. If he is alone much of the time, he will be less likely to become angry when allowed to play in company.

Another help is to oversee the reading a little. A goody-goody book only excites contempt if offered as an example, but one which relates the struggles and triumphs of some child afflicted with a temper like his own will give an encouraging encouragement. Miss Cummins' Gerty in "The Lamplighter" is a case in point.

To be brief, do the things that increase his general contentment, gentleness and kindly feelings; build up his body and muscles as against his nerves and temper and look contentment forward for a blessing on your efforts.

Postal Motto Contest

What is the most helpful and inspiring motto that you have ever read or heard of, or if you were asked to compose such a motto, what would it be? If you will pass it along, for the benefit of others, you will be doing good. We have some very helpful mottoes in every issue of Farm and Dairy. For each one we can use we will extend your sub three months. A postal will do. Address: Household Editor, Farm and Dairy, Peterborough, Ont.

Have you joined our "Big Four" offer. It is one of the best clubbing offers yet. Take advantage of it during January.

A New Use for Bandannas

A Montreal friend admired very much the pillows I had on my lounge. When I told her they were bandanna handkerchiefs she could hardly believe it. Secure the ones having the palm leaf pattern; they are not exactly square, but I made the pillow the same shape as the handkerchief. Make a full ruffle; allow twice the difference around your pillow, and make very full at the corners. This ruffle I full of turkey red calico. I used the same kind for a high back rocking chair. Make for the seat the same as for the sofa pillow, and if it is too large, make a tuck on the wrong side of the handkerchief, leaving the border so it will show all around the edge.

For the back I took one handkerchief. This was the right length but too wide, so I narrowed it by a wide tuck, leaving it just the right width to have the border show all around. Put a padding back of this.

For the head rest take another handkerchief; buy a very soft roll of cotton, taking off the border, but leaving the ends long enough to gather inside on the border. Now, you have a handsome cover, and one that is easy to launder when soiled.—A Country Girl.

I received the alarm clock for securing one new subscription to Farm and Dairy, and am very much pleased with it. It gives perfect satisfaction in every way. It did not take me long to secure the subscription and I think my boy can secure a few subscriptions and receive premiums without trouble. Cecil Bert, Elgin Co., Ont.

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Published the 1st of each Month

THE COOK'S CORNER

Send in your favorite recipes, for publication in this column. Inquiries pertaining to cooking, and all other questions will be replied to, as soon as possible after receipt of each recipe. One cent sent free for two new yearly subscriptions at \$1.00 each. Address, Household Editor, this paper.

CELERY SOUP

Take 3 cups celery in half inch pieces, 1 pt boiling water, 2½ cups milk, 1 slice onion, 3 tablespoons butter, ¼ cup cream, salt and pepper. Wash and scrape the celery before cutting in pieces, cook in boiling water until soft, and rub through the sieve. Scald milk with the onion, remove onion and add milk to celery. Bind with butter and flour cooked together. Season with salt and pepper. The outer and old stalks of celery may be used for soups.

GINGER COOKIES

Put into a bowl a cup of butter and a pt. of molasses, beat soft and set aside on stove until the butter is soft enough to cream with the molasses. Beat very light, add a teaspoon of allspice and a tablespoon of ground ginger. Now stir in a teaspoonful of baking soda, dissolved in a tablespoon of hot water, add enough flour to make a soft dough. Mould with floured hands into cakes. Handle very lightly. Bake quickly.

POTATO PUFFS.

Two cupfuls of mashed potatoes put into a saucepan. Add the yolks of 2 eggs, ¼ cup of cream, 1 tablespoonful of butter and season to taste. Stir constantly over the fire until the potatoes are very light and hot. Remove from the fire, and stir in, carefully, the well beaten whites of the eggs. Put the potatoes into greased gem pans and bake in an oven until brown.

BRAISED BEEF OF VEAL

Take from 4 to 5 lbs. of breast of veal, and with a sharp knife cut a pocket in it. Make a dressing of 2 large cups stale breadcrumbs, 2 teaspoons summer savory, the rind of a lemon, grated, 1 tablespoon butter, and pepper and salt to taste. Mix these ingredients together with 1 well-beaten egg. Fill the pocket three-quarters full, and secure with a piece of string or a skewer. Blend 1 tablespoon beef dripping with 1 tablespoon flour in a saucepan, dust the meat with flour, and brown in the fat, turning around often, so that it does not burn. When browned all over pour in about 1 pt. boiling water, or enough to barely cover the meat, then cover down close, and let simmer gently 2 hours. Then take out the meat carefully and place on a hot dish. Skim off the fat from the gravy left in the saucepan, let it boil up again, and pour over the meat. This dish is nice garnished with slices of boiled salt pork, but that is a matter of taste. Serve with carrots and mashed potatoes. The carrots can be boiled with the pork.

Put the water that the pork is boiled in on one side until skim of the fat, add more water and a piece of lean beef and let it simmer the veal, a little rice, a few peppercorns, and there will be good soup for another day.—I. A. G., Man.

OATMEAL CRACKERS

Thoroughly mix ½ cup lard with 2 cups sugar, add ½ teaspoon soda dissolved in ¼ cup hot water, 3 cups oatmeal, and flour enough to stiffen. Roll thin and bake in quick oven.

LEARN DANCING—AT HOME

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The Fireless Cooker

Miss M. C. Belle

"What is a hay box cooker?" "What is meant by fireless cookery?" Such questions are constantly being asked of our Culinary Editor. From time to time Farm and Dairy has had articles about the hay box and fireless cookery, but perhaps these inquiries missed them.



This is just the time to make or purchase a fireless cooker, which will do the breakfast cooking over wood and require no attention, keep baby's bottle hot, or hot water for the infant "tricks" too numerous to mention here. Any housewife who has once tried it will consider the fireless cooker indispensable summer and winter in fact all the year around. "There's no time like the present"—do it now.

IT'S GOOD POINTS

The fireless cooker is a device that does more to solve one of the most vital problems of the people—the fuel question—than any other one thing yet invented. At the greatest boon to the housewife that has ever been discovered by modern science.

There is no doubt about this. The time that the housewife must spend over the hot coal stove—the trips back and forth—the care and attention required in the preparation of three meals a day, year in and year out—makes the daily cooking a dreary round—a job that ninety-nine men out of a hundred wouldn't stick to a week.

The Fireless Cooker does away with all that drudgery. It does more than just save the work of cooking—it cuts out the greater part of it—the most tedious, bothersome part—and so, taking it all the fireless cooker is one of the most important inventions of the age.

After personally watching the fireless cooker at work in many ways, I find it has proved itself to be not only a fuel saver, but a labor saver, but the best cooker for a great many of the staple foods used by every family. It far surpasses the old method of cooking many of these foods, inasmuch as all of the sweet juices—all the fragrance that makes things taste so good, are retained, and not boiled away in steam.

Ask any woman who has used a fireless cooker in her home, and she'll tell you that she doesn't know how she ever got along without it.

And when she tells you that, she's thinking not only of the bother it saves her in the preparation of the family meals, but she's also thinking of the immense improvement it makes in the taste of the food.

A CANADIAN WOMAN'S VIEWS

Personal experience from those we know counts for much. We are glad to hear that one of our good Ontario housewives, Mrs. E. W. Hodson, whose husband is so well known in agricultural circles in Canada, has recently found that a hot stove is not necessary in preparing meals. Having heard much about "Fireless Cookers" Mrs. Hodson decided to try one of those manufactured by Manson Campbell Co., Ltd. of Chatham, Ont. The cooker, Mrs. Hodson says, does everything claimed for it, the food retains

its natural flavor, it is cooked just right and with a large saving of fuel and labor. Mrs. Hodson is of the opinion, that if the women on the farm only knew how much a "Fireless Cooker" would help them in their work, they would not hesitate to have one sent on free trial.

We would suggest writing the above company for a copy of their illustrated catalogue, which will be sent free, if Farm and Dairy is mentioned when writing this firm.

Window Plants

Not all plants do well in north or northeast windows. Ferns and begonias, callas, *Primula obconica*, Chinese primroses and asparagus will flourish. The Pierson fern is another excellent subject. If you want to learn to train about the upper portion of the window, use one of the ivies. Plants having richly colored flowers require more sunshine than such a location affords.

In a window of this kind *Asparagus plumosus nanus* can be grown to perfection. It will furnish charming material for decorations for the table.

There is no better plant for the purpose. Its dainty, delicate foliage and its exceedingly graceful habit of growing make it an ideal table plant. It is ornamental in itself, but if a touch of bright color is desired, it can be supplied by thrusting the stems of a few carnations or roses among the wealth of ivy foliage. Grow it in a soil of sandy loam well drained. Shower frequently to keep down rod spiders. It is best grown in six-inch pots until the plants become too large for the use. Then separate them and make several plantings of each old one. When using for table decorations, keep a plant on the table only for a day or two, then return it to the window and let a fresh one take its place.

REX BEGONIAS

Among the many excellent subjects for window gardens are Rex begonias. There are various ways of growing and handling them. If grown in a soil of leaf mould and sand with good drainage, if watered moderately and kept somewhat back from the light, they will do well. Plants that do not have good drainage are almost certain to lose their foliage. The important point is to let them alone after they are started. Do not experiment with them. They will take care of themselves when kept moist—and moist only—at the roots. It is important to see that the soil never gets really dry. It is advisable, also, never to allow any water to get on the leaves. When sweeping or dusting it is well to throw a thin cloth over the plant.

WATERING PLANTS

At the season of the year, care should be taken to give over-watering plants of any kind. Give enough to saturate the soil throughout. Wait until the surface appears dry before applying more. An over-supply has a tendency to sour the soil, thus bringing about a diseased condition of the roots.

Plants in hanging pots and baskets should get all the water they need and no more. They will dry out much more quickly than ordinary plants, because they are near the ceiling where the temperature is much higher than at the window-sill. Evaporation is accelerated, also, by the plants being exposed on all sides. Hanging baskets may be watered by the use of a simple device. Take a small can or cup and push it into the bottom of it. Make the hole as small as first. Fill the can and place it on the surface of the soil. Vines can be so trained as to hide them. Observe the effect carefully. It is necessary to make the holes larger if no fresh water passes through to keep the soil moist.

ARRANGEMENT OF PLANTS

In the window garden, it is a good plan to arrange the smaller plants in



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front near the glass, and the larger ones at the sides and rear. This enables all of them to get the benefit of the light. Do not allow the plants to become one-sided by being drawn towards the light. Turn them at least once a week, so that all sides may have a chance at the sunlight.

USE OF FERTILIZERS

Fertilizers should be used with care. Because a plant is not growing, many amateurs will feed it with rich manure or fertilizers. This is a mistake. When a plant is not growing, it needs no fertilizer, because it is not in a condition to make use of it. Fertilize only those plants that are already in or have begun active growth. When a plant begins to grow, weak applications are in order. Increase the strength as the plant develops. Forcing rapid growth means weakness, from which there is almost sure to be a reaction sooner or later.



A Girl's Duties in the Home

Miss Ann Craig.

A very young girl's duties are soon stated: to attend school regularly, do her best to master her lessons during school hours and evenings; obey, without question, her parents and teachers; move lovingly among her schoolfellows; be always absolutely silent at home as to what passes at school except when speaking is a clear duty. She can also save her mother and sisters many a weary step in doing little errands and the like during her spare moments. This is part of her duty, and will gradually train her for weightier tasks later on.

Even as a little girl, she should learn self-control, curb her temper, resist sloth, cultivating a loving, unselfish disposition; wearing always a cheerful countenance, ready and willing ever to lend a helping hand; never murmuring, sullen or upward, and conducting herself generally as to win the love of all, both at home and at school.

The cultivation of unselfishness, gracious manners, and generous sympathies in early childhood, is an all-important duty, for the best future interests of every girl, and cannot begin too early or continue too long.

Bad tempers, envy, jealousy and the whole brood of failings in child should be nipped in the bud and her duty is to aid in the nipping. Let grow now, they will corrupt the heart, and disfigure the face. Yes, the face.

Wonderful how these faces of ours respond to the inner workings of the soul, making them lovely or repellent. Many a homely face has grown beautiful from the hidden operations of a noble nature within, and many a plain face is a magnet in spite of

its plainness. It is the pure soul behind that draws and captivates. And this fascinating power is within the reach of the humblest who will strive to cultivate beauty of mind and heart; the manifest interest and the bounden duty of every girl, be her features what they may. Indeed, I know of no higher duty for every girl than to see diligently to work at once to hoc out all weeds and sow the seeds of goodness, that is beauty. Easier to do now than years have given them deep root and a solid lodgment, and repugnance is stamped for life on their features and deportment.

As the little girl grows up her duties increase and multiply. She can be helpful in the home in a hundred ways, even before her school days are over. It will be her duty courageously to gird herself for her full shares of the cares and toils of the household, and this will do her no harm. On the contrary it will do her a world of good. I pity those girls who in what is called "fashionable society," who neither use their hands nor their brains. Noble lords cross "the pond," marry the daughters of millionaires, and then divorce.

The poor girls were bred for pleasure, sodden with idleness, fed on frivolity, and neglected all mental culture, except what is needed to amuse themselves or ride in an "auto," and now their "lords and masters" find them mere toys, empty shells.

BE BUSY

No idle person was ever yet happy. It is God's chief specific for the enjoyment of life. True, many a girl in this new land has had too much of it, but in moderation it is a choice blessing. It is her apprenticeship to qualify her for a home of her home, and what that home will be largely depend on her how hood, whether she has a quired habits of industry, economy, cheerfulness and amiability, and not neglected the culture of the mind, or is the reverse of this. I pity the man who is tied for life to an idle, useless, or uncultured woman. Add a cutting tongue, and the home is to be shunned, instead of looked up to. But it is no part of a girl's duty in the home to have it ALL work and no play.

Everybody needs relaxation, leisure or amusement now and then. Incessant toil and care is as bad as unbroken idleness. Mind and body need rest, quietness, peace, as well as work. A mere change of occupation is often a rest. If a girl has a taste for painting let her paint. If she likes music let her play, or sing. Let her have, in her choice, friends of either sex, of an evening, and let

her feel it to be her duty to receive and entertain them to the best of her ability, and yet without the faintest tincture of insincerity.

In all civilized society no one can dispense with the conventionalities, and these too often degenerate into hollow hypocrisy, or an empty show, but the woman of cultured head and honest heart will have the tact to press unscathed society's keenest scrutiny without recourse to aught that savors of the unreal or untrue. True politeness has its seat in the heart. If it has not in a bad state the finest manners are but veneer.

READING FOR GIRLS

It is also a girl's duty to keep on improving her mind after school or college days are over. So far, at least as her leisure moments will admit of the reading of good books. Some girls read only the papers, and only novels, save others nothing at all. I will not presume to dictate as to choice of authors, but this I will say—a book should be worth reading, or your time is lost. Novels are the general favorites. Some deem it wrong to read fiction, and no doubt much of it is vile and poisonous. But there are good, wholesome novels, and the evil lies not in the book, but in excessive reading, which tends towards a figurative softening of the brain. One now and again is unobjectionable.

A good story is a good thing taken in moderation. It is one of the best specifics for melancholy, or on one of those gray days when life has lost its relish, and all the world is dismal. No cure for the "blues" can match a rousing story that transports you to other scenes. It lifts the mind out of the rut that is wearing too deep, and its better remedy than the razor or pistol. But what vast amount of trash and poison goes under the name of "light reading." Light? Why most of it is as heavy as lead, and some of it a virulent poison. To shun it as one would adder, is the plain duty of every girl who would keep herself from all taint of evil.

(Continued next week)



A piece of dried orange peel, burnt on a shovel or a tin plate in a close, stuffy room, will immediately sweeten the air, and leave a pleasant odor.



I received the fountain pen O. K. you sent me for securing one new subscription to Farm and Dairy and was well satisfied with it.—Thos. W. Grievie, Wellington, Co., Ont.



Renew Your Subscription Now.

The Sewing Room

Patterns 10 each. Order by number and size. If for children, give age; if for adults, give bust measure for waists, and waist measure for skirts. Address all orders to the Pattern Department.

TWO OR THREE-PIECE SKIRT 6213



The skirt that gives slender lines is the one that is in the height of style. It is trimmed to give a tunie effect but consists of only front and back portions. It can be made as illustrated or with a seam at the center front and a 2 1/2 piece skirt, as liked.

Material required for medium size is 6 1/2 yds 24 or 27, 4 yds 44 or 42 in wide. The width of skirt at lower edge is 3 1/2 yds.

The pattern is cut for a 22, 24, 26, 28 and 30 in waist and will be mailed on receipt of 10 cents.

MILITARY COAT 6215



The coat that closes right up to the throat and is finished with a collar in military style is always smart. It is being extensively worn just now.

The pattern is made with the fronts, back and side backs, and includes regulation 2-piece sleeves.

Material required for medium size is 4 1/2 yds 27, 2 1/2 yds 44 or 2 yds 48 in wide, with 3/8 yds of braid. The pattern is cut in sizes for 32, 34, 36, 38, 40 and 42 in bust and will be mailed on receipt of ten cents.

COMBINATION UNDER GARMENT 6216



Snug fitting undergarment is absolutely essential to present styles. The drawers can be finished either with gathered or with circular frills. There is a choice also of plain drawers or those with a yoke, with the result that there are really two or three garments in place of one.

In the illustration are shown two styles, the corset cover without sleeves and the drawers with frills or embroidery, and the corset cover with narrow circular sleeves set in the arm and the drawers with circular frills. The garment consists of drawers and corset cover.

Material required for medium size is 2 1/2 yds 36 or 44 in wide with 2 1/2 yds of embroidery 5 1/2 in wide, 4 yds of beading and 3/8 yds of edging to make with circular frills as illustrated, 3 1/2 yds 36, 44 or 48 in wide, with 3/8 yds of beading to make with circular frills, as shown in the back view.

The pattern is cut in sizes for 34, 36, 38, 40, 42 and 44 inch bust, and will be mailed for 10 cents.

MEN'S OVERALLS 6211



The traditional blue jean, brown denims, galatas and similar sturdy materials are all suited to such garments as these. There are inserted pockets in the fronts and there is a patch pocket on the back.

Material required for medium size is 4 1/2 yds 34 or 37, 3 1/2 yds 44 or 46 in wide. The pattern is cut in sizes for a 32, 34, 36, 38, 40, 42, 44, and 46 in waist and will be mailed on receipt of 10 cents.

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This set consists of the following pieces: 12 tea plates, 12 dinner plates, 15 soup plates, 12 fruit dishes, 12 butter pats, 12 cups, 12 saucers, 12 plates 6 1/2 inch, 1 slip bowl, and 1 creamer. This set is genuine Royal Delft, decorated in a dainty green floral border, with embossed and scalloped edges.

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NOVA SCOTIA

KING'S CO. NOVA SCOTIA.

WATERVILLE—With the advent of the new year several of our students have been preparing to enroll at the Agricultural College for the short course. Those who attended last year were so favorably impressed, that many of them enrolled again, but induced others to go with them, so that it is expected that there will be many more students than last year, not only men but women. The winter has been unusually mild, with plenty of rain followed by frosts, which has made plenty of work for the blacksmiths, and the doctors. On January 5th the bees were flying as on a spring day, but were chilled before returning. Manure and wood are being hauled, and preparations are being made for root grafting. Feed and all farm produce is high. Farmers are going up. Hay is very scarce. Calf hides, 10c a lb.—Eunice Watts.

QUEBEC

COMPTON CO. QUE.

WATERVILLE—If the summer lacked rain, the winter certainly does not lack snow. Over thirty inches has already fallen, which is an unusually large amount for this season of the year. The prospect is that we will have plenty of it, for it is still snowing. There is enough for good sleighing, which enables the hauling of lumber and other winter occupations. The water question is not improving very much, and a good deal more will be wanted in many sections where the farmers have no water for their stock. Creameries are still running on a small scale, but feed being so dear, as bran is \$25 a ton, and other feed is high accordingly, farmers are feeding less than usual, consequently the milk flow is small.—J. M.

RICHMOND CO. QUE.

DANVILLE—January 18th in with its usual big thaw. It has done good instead of harm this year. It has increased the flow of water in rivers and brooks, and where the pipes were not frozen the water in the springs and wells has begun to flow in the houses and stables. The thaw did not spoil the winter roads, wood hauling is going on as brisk as ever. Haul is selling at \$4.50 a cord, pulp wood brings \$3 a cord, and cord wood \$2.50. Cattle are looking very well, although many farmers have to drive their cattle to water every day. Meal is high in price and as little as possible is bought by the average farmer, but those who have a milk supply to keep up buy in large quantities. Hay was a fairly good crop last year and is preserved in good condition. It is \$11 a ton. Turnips were an excellent crop on most farms and are being fed quite freely to stock; they sell well at 25c a bush. Potatoes were a fairly good crop on some farms and very small on others.—M. D.

ONTARIO

FRONTENAC CO. ONT.

PERNELL—Owing to the dry weather last fall, the farmers here have a shortage of water for their stock. The recent rains have filled the wells, and water is plentiful. We have splendid sleighing and farming, and very good hay, etc. The American Lumber Company has decided to move their mill from Ompah to Ardch where the farmers of this neighborhood which will help the farmers of this neighborhood that have timber to dispose of.—D. T.

HASTINGS CO. ONT.

SIDNEY CROSSING.

For the past few days is helping the feed and as everything points to an open winter now, the farmers are feeling more confident, although the prospects are anything but bright. Timothy hay, from \$14 to \$15; mixed hay, \$12 to \$14; straw, 9c to \$7 a load; oats, 50c to 50c a bush; barley, 48c to 55c a bush; corn 55c a bush; peas 90c a bush; wheat bran, 21c to 25c a bush; middlings, from \$22 to \$23 a ton; fresh eggs 35c a doz. Creamery butter, 25c; cheese, 15c a lb.; potatoes, 75c to 80c a bag; milk cows, \$25 to \$40; springers, \$25 to \$35; calves, \$5, beef, \$4 to \$5; chickens, 75c to \$1.25 a pair; hogs, dressed, \$8 a lb.; dressed beef, 40c to 5c a lb.—J. E.

NORTHUMBERLAND CO. ONT.

WICKLOW—The best cow in the neighborhood is a grade Jersey. She made for

her owner, John Dark, Wicklow, \$2 last year. The Wicklow Dairy factory is situated in the Township of Haldimand. Ours is the second oldest dairy section in Ontario. The first factory was built in the sixties by a stock company. The old factory was replaced by a new one about the year 1891. The output of this factory is from \$26,000 to \$30,000 worth of goods in the season. The cheese are sold on the Belleville Board of Trade. The factory is owned and managed by A. G. Massey and his wife who have spent 35 years in the business.—E. B. H.

PETERBORO CO. ONT.

APSLY—The water problem has been pretty well settled by the recent rains, as the wells, as a rule, are shallow, and do not require as much rain to help them as the deep ones do. The rain and soft weather has been a great blessing. It was followed by hard frost. The lakes and marshes have frozen about 100 miles north and have left the ice in first class shape for lumbering and those who have marsh hay to haul.—A. G. B.

HALIBURTON CO. ONT.

KINMOUNT—The sharp thaws which set in on the 6th was a great benefit by lessening the depth of the snow, which had already blown up. It also helped along the water supply. A sudden change came on the 6th, when it turned bitterly cold, 21 degrees below zero. It was welcomed by the farmers, as it was a tramp road. A large number of hewn boards have yet to have the hay drawn out. Buttes has been in poor demand since Christmas, 24c a lb. better than a few days ago. The stock on some farms already begins to show the effects of the short pasture late in the year. Too many farmers leave their cattle in warm stables over night, and at daylight turn them out to stand and shiver during the day, without feed, manure heat, which certainly is a very bad practice.—J. S. T.

VICTORIA CO. ONT.

MARIPOSA—The recent snowfalls have made the roads in excellent condition, and the farmers are tearing out their grain. The comparative scarcity of fodder has had the effect of raising the price of cattle considerably. As many a lot do not wish to run short of feed in the latter part of the winter, they prefer to sell their stock.—A. T. H.

WELLINGTON CO. ONT.

FERRIS—Elections are over for another year and everyone is settled down for work once more. The great quantity of our hay, grain and turnips is fed to the stock, but the number of cattle feeding this winter is less than in the average, feed being so dear. Hay is selling at \$9 a ton; turnips, 14c; oats, 30c; barley, 55c; peas, 55c a bush; butter, 25c a lb; eggs, 27c a doz.—W. B.

BRANT CO. ONT.

FALKLAND—The market for poultry for the Christmas and New Year's trade was good and most of the stuff offered was in good shape. Turkeys sold from 25c to 25c a lb; chickens, 10c to 12c; and ducks about 60c a pair; potatoes are worth 50c a bush; oats, 38c; live hogs are \$5.75; butler, 25c; eggs, 30c. There is a scarcity of eggs just now, as the hens do not seem to have begun laying since moulting. There is plenty of feed. There will be good conditions to carry the stock through in wells but everyone has suffered for a few weeks. Hay is quite plentiful, being offered at \$9 to \$10 a ton.—L. T.

OXFORD CO. ONT.

GOLEPIE—We had about two weeks good sleighing, then a thaw came; now we have more good sleighing. It has been very cold for a few days. Fresh milk is very dear, and feed of all kinds is

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very expensive. Beef cattle are also high. We are expecting a busy winter, as we have a sawmill this winter. A gang of Indians are cutting the logs and tops. They buy their provisions of the people around and pay cash as they go.—A.M.M.

MIDDLESEX CO. ONT.

TEMPO—The winter so far has been beautiful and the weather most of the time just lovely. The water difficulty has been overcome by the plentiful showers we have had lately. There is no lack of feed, so the stock is doing nicely. The butchers tell me there is an extra large number of hogs fattening for shipment. Farmers around tell me there is more than an average number of cattle fattening. Prices are good for all farm commodities and especially so for turkeys, butter, eggs, apples and oats. This is the farmers' visiting season and they're busy at it.—E. O.

BRUCE CO. ONT.

GLUNEY—There is hardly enough snow for sleighing, if heavy loads were to be drawn. Feed is plentiful. The straw was well saved on account of the light rainfall. Peas and oats were a good crop, as was also barley. Root crops were all right, the turnips being a complete failure in some parts. The growing of corn has been resorted to and proven a great substitute for other cereal crops. A num-

ber of silos have been built this year, the coming summer more will go up.—J. M.

THUNDER BAY DISTRICT
SIATE RIVER VALLEY—Municipal politics has recently been the principal subject for discussion. The municipality has been quite fortunate in past years by having men in the council who have given much attention to the improvement of the local highways. It is very doubtful if there is any municipality that can boast of much better roads. Nature has favored us from the fact that we have practically no stone to contend with. Some three or four years ago the municipality purchased a road grader, which by the careful manipulation of experienced road commissioners has given us roads that are a pleasure to drive on. Last year, for the first time, the system of statute labor on roads was done away with, and road work done by special levy and experienced road commissioners.—J. R. H.

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WINDMILLS

Towers five feet apart and double braced

Grain Grinders
Pumps
Tanks
Gas and Gasoline Engines
Concrete Mixers

WRITE FOR CATALOGUES

GOOLD, SHAPLEY & MUIR CO., LIMITED
BRANTFORD, - CANADA

SEED OATS

FOR SALE—A quantity of Improved American Banner Oats, grown from pedigree seed. Also some "Dew Drop," a splendid early white oat, that I have grown for several years with good success. Heavy, well filled, about same length and quality of straw as Banner, but four or five days earlier.

Samples and prices on application to the grower.

A FORSTER,
Markham, Ont.

PETER HAMILTON

Corn and Straw Cutters

are the safest, strongest, easiest to operate and best outputs made.

PLOWS

Farmers everywhere testify to the splendid work of our plows

Better Get One
Send for Catalogue.

The Peter Hamilton Co.
Limited
Peterborough, - Ontario

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INCORPORATED 1886

MARKET REVIEW AND FORECAST

Toronto, Monday, Jan. 18, 1909.—General trade continues to show signs of improvement. There seems to be more money in the country and more promptness in meeting paper. Orders for spring delivery are good and the outlook is bright for the spring trade generally. The money market is on an easy 4 per cent, being the general rate for call money. Discounts rule at 6 to 7 per cent, as to account. Loans on real estate rule at 5½ to 6 per cent.

WHEAT

Although there is a strong bull movement in wheat in speculative centres, the general situation is not as strong as a week ago. Large arrivals of Argentine and Australian wheat in Europe have caused an easier feeling in the export market. At Chicago speculators with lots of wheat on their hands have been making strenuous efforts to sustain prices but without avail, as there was a break of one cent at the end of the week. The visible supply in the United States and Canada shows some falling off as compared with a week ago and this, in connection with the condition of winter wheat and the extent of the 1908 crop, no serious break is looked for. But this continent is not everything just yet in controlling the wheat situation. Other countries have to be reckoned with as to the supply and buying power. It is safe to predict that the very high prices forecasted for wheat in some centres will not materialize, though they may go higher than at present before the new crop is ready to be taken up with prices strong. Red winter wheat is still in demand for export to Mexico. The amount shipped to that country from Canada since the date of the lowest estimate at 130,000 bush. Dealers here quote Ontario wheat at 94½ to 96 outside, which is an advance on last week. On Toronto farmers' market fall wheat sells at 92 to 95½c and goose at 91c to 92c a bush.

COARSE GRAINS

The oat market rules steady. At Montreal Ontario oats are quoted at 43½c to 45½c. Dealers here quote them at 39½c to 40c outside and 44c to 46c on the local farmers' market here. The barley market is firmer and the demand is better. Maltng barley is quoted at Montreal at 52c to 54½c, and feed barley at 57c to 58c. Here prices rule at 53c to 57c on outside points and 57c to 59c for malting, and 53c to 56c for feeding barley on the farmers' market. Peas rule steady at 86c to 87c outside.

FEEDS

There is a good demand for barley and the market is firm at quotations. At Montreal Manitoba bran is quoted at 82¢ and shorts at 84¢; Ontario bran at 81¢ to 82.50, and shorts at 82.50 to 84.50 per ton in car lots. Bran is quoted here at 82¢ to 81.50 and shorts at 82 to 84 a ton in car lots in bags outside. The corn market shows little change during the week. Car lots are quoted at Montreal at 70c to 70½c a bush, and here at 67c to 66c for American, and 64c to 65c for Canadian on track Toronto.

SEEDS

The seed trade is quiet which is a little unusual for this season of the year. Prices show no change.

HAY AND STRAW

The hay market holds steady, though on the local market here at the end of the week the market was strong on fairly heavy deliveries. Receipts of baled hay at Montreal rule as being not enough to meet the demand. Quotations here are un-

changed at 87.50 to 91 a ton in car lots on track there as to quality. Car lots of baled hay on track Toronto rule at \$11 for timothy and 89 to 91 a ton for underground timothy. Straw is quoted at 87 to 87.50 in car lots on track here. On Toronto farmers' market timothy hay sells at \$12 to \$14 a ton, and loose at \$11; straw in bundles at \$12 to \$14, and loose at 87 to 88 a ton.

POTATOES AND BEANS

Potatoes are firm at Montreal at 75c a bag for Quebec in car lots. The market is a little quiet here at 66c to 65c a bag for Ontario in car lots on track Toronto.

The bean market continues dull and unchanged. The demand seems to be very limited; \$1.65 a bush in car lots is quoted at Montreal.

EGGS AND POULTRY

The egg market rules strong at Montreal, where new-laid are quoted at 35c to 40c; select at 27½c to 29c, and No 1 at 24c to 25c. In car lots the market weather the middle of the week brought out a few more new-laid and the market had a quieter feeling towards the end of the week. But this is likely to disappear with the advent of cold weather again. Dealers here quote eggs in case lots as follows: New-laid, 35c; storage, 29c to 27c, and picked at 26c to 25c a dozen. On Toronto farmers' market new-laid sell at 40c to 50c and fresh and stored stock at 30c to 35c a dozen.

The poultry market is strong, and high prices rule; so high are they that the demand has fallen off considerably. Receipts at Montreal rule very light and are quickly bought up. Fresh killed turkeys sell there at 18c to 19c; frozen stock at 17½c to 18c; geese, 13½c to 15c; ducks, 14c to 14½c, plus chickens, 16c to 15c, and fowl on 10c to 12c a lb in a jobbing way. Receipts of chickens have ruled larger here during the week and the market is quiet. As taken off dealers' quotations are as follows: Chickens, choice, 15c to 16c; common, 11c to 12c; fowl, 8c to 10c; turkeys, 15c to 17c; ducks, 12c to 14c; geese, 12c to 13c. In Toronto farmers' market prices rule at from one to two cents above these figures.

DAIRY PRODUCTS

The cheese market shows the up turn and cable orders are more plentiful and business active. Sales are reported at Montreal factories at 12½c to 12½c and easterns at 12½c to 13c. Dealers here quote cheese at 13c to 13½c and 13½c to 13½c for twins.

At Montreal the butter market is quoted firm with creamery ruling at 22c to 25½c to 27c, and fresh make at 25½c to 26c. Receipts here have been more liberal of late and an easier feeling prevails. Dealers here quote creamery prints at 27c to 28c; choice dairy prints at 25c to 26c; store prints and large rolls at 22c to 24c; tubs at 22c to 24c. On Toronto farmers' market dairy prints sell at 28c to 30c and solids at 25c to 28c a lb.

UNION STOCK YARDS HORSE EXCHANGE

Increased activity in the horse market is reported for last week. The offerings were large at the Horse Exchange, West Toronto, and considerable business was done. Lots of colts were covered. Two overloads of horses were shipped to Brandon, one to Winnipeg and several smaller shipments to Cobalt and other places. From this and other points, a large amount of good and well-bred, and with an increased demand from the West, better prices may prevail.

LIVE STOCK

Trade was brisk at the live stock markets during the week and closed on Thursday with prices higher and an active market, though there was a fair run of stock this week. Dealers complain of shortage of good to choice cattle, more of which would have found ready sale had there been offered.

Fewer cars were being in excellent demand all week and prices are steadily advancing. On Thursday as high as \$5.75 was paid for an extra choice load of steers. Outside of this, prices ranged from \$5 to \$5.60 for steers and \$4 to \$4.90 for bulls. One extra quality bull sold on Thursday at \$9 a cwt. The market for goats to choice butchers' cattle ruled strong all week and prime lots sold at \$5 a cwt. Loads of

The **TABLETS BANK**
Capital and Surplus of Canada Total Assets
\$6,350,000 **\$34,000,000**

Now is the time to open a Savings Account. Make a good beginning, add to it as the proceeds of the year's work come in, and you will have a comfortable reserve, ready for likely-looking investments or unexpected expenses. \$1 opens an account.

THE BANK FOR THE PEOPLE

One of the 80 Branches of this Bank is convenient to you.

Your account is invited.

EXPORT BUTTER AND CHEESE

Montreal, Saturday, Jan. 16.—There is not so much doing in the cheese trade this week. The demand from the other side seems to have fallen off, and there is only no more of the same quantity of goods moving as last week. The slight advance in price seems to have been sufficient to stop the British importers from buying in further quantity. It may be that as the buying during the past few days was not all general, the few houses that were short of supplies have been filled up, and there are few other quick sell. If this is the case, the prospect is not at all bright, as there are quite a few cheeses left here unsold, and holders are not endowed with an unlimited amount of patience and may be inclined to cut prices a bit in order to bring on the demand again from the other side. There was a little more inquiry toward the week-end, and it is hoped that this indicates a renewal of activity for next week. Prices are unchanged from last week, and range from 12c to 12 1/4c, according to quality, although the quantity available at the lower figure is almost exhausted. The higher figure is for an unlimited amount for finest Septembers and early Octobers, although with an order in hand a few could be picked up at less money.

The butter market is quiet and steady, with prices unchanged. A few lots of creamery come in every day from factoring, however, it is for another province of Quebec, and these are being bought up at 24c. The quality, however, is poor, being fodder grade, of course. The trade is quiet and steady, and held goods and for these prices range up to 27c and 27½c for choice lots.

DOES LITTLE BELLS BICYCLE \$65

GILSON
GARLAND
ENGINE
Superior, Cheap, Well Made
All the latest styles in
TILLIA
W. W. GILSON, MFG. CO.
BILSON MFG. CO. 101 YORK ST. QUEBEC, ONT.

TO LET—ANNANDALE FARM

TILLSONBURG, ONTARIO, CANADA.

Consisting of 230 acres of land under cultivation, free from stumps, 280 acres pasture land and orchard of choice fruit; stable for about 100 horses, and a stock and pigery capacity for 200 hogs. The bright possibilities of the tenant of Annandale Farm are probably more widely known than that of any other farm in the province. It was brought to perfection as a model farm, and is being sold under the personal attention of the late E. D. Tillson. For more recently under the control of Mr. George Rice as a breeder of Holsteins, and the farm has continued to stand out as one of the finest private farms in the Dominion.

The barns and other buildings embody the most modern ideas in the construction of the mills, the perfect water supply, the north to first-class schools and business colleges, and the splendid surroundings, all close to five cities, coupled with the establishment here of Borden's Condensed Milk Factory and the Tillson Food and Canning Co., should make Annandale Farm especially attractive from the tenant's viewpoint.

For full particulars, address,
The E. D. TILLSON ESTATE, Limited
TILLSONBURG, ONTARIO

Black Watch

Chewing Tobacco

Rich and satisfying.

The big black plug.

2-13

THE BEST LINIMENT

OR PAIN KILLER FOR THE HUMAN BODY

Gamboull's Caustic Balsam IT HAS NO EQUAL.

For Inflammation... Sore Throat... Rheumatism...

REMOVES THE BURNING-STRENGTHENING MUSCLES... THE LAWRENCE-WILLIAMS COMPANY, Toronto, Can.

were \$3.049 prize money; \$713.00 printing and advertising; \$500.00 rent of show building.

The Pony Society was admitted to membership in the association.

ELECTION OF OFFICERS. The following directors were elected...

Hackney Horse Association

The Canadian Hackney Horse Association held their annual meeting...

President, W. C. Renfew, Bedford Park; 1st vice-president, B. A. Campbell, Bolton...

Items of Interest

The annual meeting of the Canadian Jersey Cattle Club will be held on Thursday, Feb. 4th, at 10.30 a.m. at the Walker Horse, Toronto.

The Ontario Motor League at their annual meeting recently pointed out that out of a total of 357 accidental deaths in the past 10 years that have taken place in Toronto, only three have been caused by automobiles.

Ontario Horse Breeders' Association

(Continued from page 6)

vice-president, John A. Boag, Ravenshoe; secretary-treasurer, A. J. Westervelt, Toronto; executive committee, John Bright, Myrtle Station; J. M. Gardhouse, Weston; Jas. Henderson, Bardon; John A. Boag, Wm. Smith, A. P. Westervelt.

This year the various affiliated associations will be represented on the directorate of the Horse Breeders' Association as follows: Clydesdales, 8 directors; Shire, 2; Hackney, 2; Thoroughbred, 2.

Mr. Wm. Smith was appointed as the representative of the association to the Canadian National Exhibition for 1909.

Last June the railways gave notice of the withdrawal of the privileges of unloading out of cars shipped to the western provinces of pure-bred breeding stock...

FINANCIAL STATEMENT

The financial statement showed total receipts of \$5,830.10 and total expenditures \$5,865.55, leaving a balance due to the treasurer of \$35.45.

Breeders' Directory

CARDS under this head inserted at the rate of \$2.00 a line a year. No card accepted under two lines, nor for less than six months.

SHEEP

ABRAM EASTON, Appleton, Ont., Leicester sheep, Show ring and breeding stock for sale. \$5-25-09

E. B. HARDING, Mapleview Farm, Thorncliffe, Ont. Down Sheep a specialty. Telephone. \$2-17-09

SWINE

JOS. PEABTERSTONE & SON, Streetville, Ont. Large Yorkshire Hogs for sale. \$1-15-09

CATTLE

JAS. BEGG, ST. THOMAS, AYRSHIRES Standard for this breed to 40 lbs. milk per day. No cull, 9c-10-09

J. A. DOVENLOCK, Forest Park, Ont. Herefords, Canada's greatest winners. Toronto and London, 1907-1908. Stock, all ages, for sale. \$3-12-09

HARRISON BROS., Mt. Albert., Hereford cattle, Oxford Down sheep. Stock for sale at all times. \$-3-25-9

ing has been tremendously exaggerated.

Holstein News

Keep in mind the 26th annual meeting of the Holstein-Friesian Association of Canada, which will be held in Association Hall, corner Yonge and McGill streets, Toronto, on Thursday, Feb. 4, 1909, at 9 o'clock a.m.

GEO. JACKSON, Auctioneer, Live stock a specialty. Address Post Office, Phone 31.

AYRSHIRES

NEIDPATH AYRSHIRES. Bull Gales dropped this spring. By imported bulls. First prize Toronto, Ottawa, and Halifax. Long distance phone \$3-25-09 W.W. BALLANTYNE, Stratford, Ont.

SPRINGBROOK AYRSHIRES. Are large double of milk, testing high in butterfat. 1908 ready for sale. Prices right. Write or call for 9-4-1-09 W.F. STEPHEN, Huntingdon, Que.

SPRINGHILL AYRSHIRES. Imported and home bred stock of all ages for sale. See our stock at the leading shows this fall. Write for prices.

ROBT. HUNTER & SONS. Long distance phone. Missville, Ont. \$2-59

BURNSIDE YRSHIRES. Are in such demand! Will make another importation. Will attend great dispersion sale of the world renowned Hardschick herd at Mt. Mitchell, Kincardine, Scotland, where some good choice Ayreshires here offered will be sold. Orders sent to me will be carefully attended to. Take advantage of this great sale and replenish with a few good ones. Correspondence solicited and satisfaction guaranteed. R.R. NISS, Howick, Que. \$2-15-09

STONEVROFT STOCK FARM. Harold M. Morgan, prop., Ste. Anne de Belleville, Quebec, Young Ayrshire Bulls and heifers for sale at \$10.00 per head, with imported Sires and Dams, February and March Hires. Largest selection. Highest net quality. Write for prices. \$2-26-09 E.W. BORKELAND, Manager.

JUST BULLS. For sale to 10 months old. Holstein and Ayrshires. Great milk and butter strain. GEO. RICE, Tillsonburg, Ont.

HUME FARM AYRSHIRES. On hand young bulls for service. Several very choice August, 1908, also heifers and cows of all ages as they are desired. Family cows a specialty. Orders looked for Yorkshires and imported Ayrshires solicited. Phone in residence. Hoards Station, G. T. R.

ALEX. HUME & CO., Monie P.O.

FOR SALE AYRSHIRE COW CALF. Dropped Jan. 12, 1909. Sire Scoutie, 19118, a son of Royal Peter of Ste. Annee, 1540, (imp. in dam), Daisy 1st of Auchenbrair, (imp.) 2923, with a record of 12.75 lbs. of milk or less than 10 months. The calf's dam is the grand young cow, White Rose 2nd, 1794, winner of 1st prize in three year old class at Ontario Winter Fair 2nd dist. Dec. 1907, where she yielded in the 48 hour test 95.58 lbs. of milk and 4.01 lb. of butter fat. H. & J. MCKEE, Norwich, Ont.

IMPERIAL STOCK FARM. Present offering 13 splendid bred Holstein Bull 10 to 12 months old, sire Tidy Sires Dam, Morocco 3rd, 27.65 lbs. Butter in 7 days. Sire G. D. Ailie Fosh 4th, 35.98 lbs. Butter in 7 days. Sire G. D. Tidy Aberkerk 27.38 lbs. Butter in 7 days. Also Fosh 4th, 35 lbs. Butter in 7 days. Sire G. D. Tidy Aberkerk 26.34 lbs. Butter in 7 days. Tidy Pauline Delco, 2nd, 25 lbs. Butter in 7 days. Sire G. D. Tidy Aberkerk 26.34 lbs. Butter in 7 days. Prices \$66.00 to \$100.00 on each quick sale. Harley Sta., G.T.R. W. H. SIMMONS, New Durham P.O. (2-10-09)

SHEEP AND SWINE

BERKSHIRES AND TAMWORTHS. Choice Berkshires born fine services and ready to breed, by imported sire, Choze Tamworths, all ages, by a Toronto and London prize winning boar. Prices low, considering quality. J. W. TODD, \$2-17-09 Maple Leaf Stock Farm Corinth, Ont.

YORKSHIRES

A number of young hogs from 4 to 6 months old from imported large English stock. These are exceptional. Some of our best young hogs are ready to right. Full particulars on request. Write for prices and literature. Also 3 AYRSHIRE BULLS rising 3 years. Applying Manager, FAIRVIEW FARM 651-09 LUMSDEN'S MILLS, QUE.

PINE GROVE BERKSHIRES

For Sale are my winners at the late Winter Fair, Guelph, Bora bred and ready to breed; boars fit for service, Younger ones of both sexes. Guaranteed as representative. Write your orders. Guelph, G.T.R. Milton, C.P.R. Halton Co. 65-60-09 W. B. BROWNRIDGE, Ashgrove

HOLSTENS

FOR SALE—One Holstein bull, two years old; one cow, 6 years old; two yearling heifers and bull calf.—SAMUEL LEONARD, 0-4-09 Lynden, Ont.

BERTRAM HOSKIN Mount Pleasant Farm, The Quilly, Ont. Breeder of Holstein Cattle, Tamworth Swine. High Class young stock for sale. Long Distance Phone 01-14-09

FOR SALE—30 HEAD OF HOLSTENS. If you are wanting a better young cow or heifer it will pay you to write me before making your selection, or better come and pick them out. GORDON H. MANLY, 0-8-5-09 Manhard P.O., Leeds Co., Ont. 7 miles south of Brockville on C.P.R. (Clark's Crossing)

HILTON STOCK FARM. R. O. MORROW & SON, Hilton, Ont. Breeders of Holsteins, Tamworths, and Swine. High class young stock for sale. Long Distance Phone 10-11-10-09

SPRINGBROOK HOLSTENS AND TAMWORTHS. 33 Choice Young with imported Kenoel bulls and several females. Barges to 10 quick returns. A. C. HALLMAN, Brestau, Ont. \$2-5-11-09

NETAL LANGSTER ORNSTOWN, QUE. Four excellent cows 10 to 16 months old, from Record of Merit cows, by stock from Canada. One of these has a record of performance test of 77.8 lbs. of milk in a year. They will improve your herd. Write for prices. \$-4-28-09

SUNNYDALE HOLSTENS. For Sale, First prize bull 9 months old, price \$40; also a few good cows in calf by Stock from the famous Sunnyside herd of one of Pietier Hengerfeld's Ooms De Kol, champion bull of the breed, the only sire of two daughters to be made over 30 lbs. officially in seven days. Prices mentioned. \$-4-28-09

A. D. FOSTER, Bloomfield, Ont. Mention Farm and Dairy when writing.

HOME-BRED AND IMPORTED HOLSTENS

We must sell at least 40 cows and heifers at once, to make room for the new arrivals of this breed. This is a chance of a lifetime to get a good bargain; we also have a few young bulls from the famous Sunnyside herd of one of Pietier Hengerfeld's Ooms De Kol, champion bull of the breed, the only sire of two daughters to be made over 30 lbs. officially in seven days. Prices mentioned. \$-4-28-09

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A. D. FOSTER, Bloomfield, Ont. Mention Farm and Dairy when writing.

Lightning Insurance Policy

With Every Roof Covered With SAFE LOCK SHINGLES

EVERY Canadian farmer who expects to build or re-roof his house or barn should write us to-day for details of our Free Lightning Insurance Policy in connection with Safe Lock Metal Shingles.

We give it to you without any conditions whatsoever, except that you roof with Safe Lock Shingles.

Such an offer is unprecedented, but we can afford to make it because we know absolutely that Safe Lock Shingles will insure safety from lightning.

It is absolutely free. You do not have to pay one cent for this protection, either directly or indirectly.

Insurance records show that nearly one-half the fire losses on barns in Canada result from lightning. This loss, running into the hundreds of thousands of dollars, can be entirely prevented if Safe Lock Shingles are used.

We know this, and we back up our statement with a Free Insurance Policy payable under its terms in cash.

Safe Lock Shingles are sold at the same price as shingles known to be inferior in quality of steel, galvanizing and construction.

We have been manufacturing Safe Lock Shingles for over ten years, and roofs laid when we started in business are still "as good as new," to quote from hundreds of letters we have on file in our office from our pleased and satisfied customers.

In all this time these roofs have not cost one cent for repairs of any sort. In all these years no building covered with Safe Lock Roofing has ever been destroyed by lightning.

Do you know that Safe Lock Shingles fully meet the rigid requirements of the British Government for Admiralty and other public service. Think what that means. Let us illustrate.

Every farmer knows from experience that ordinary galvanized fencing seldom lasts longer than two or three years without showing signs of rust. On the other hand, galvanized wire for Government use gives years and years of service, owing to the splendid galvanizing insisted upon.

Safe Lock Shingles are galvanized the same as Government wire, and therefore may be depended upon to give long service. We really do not know how long they will last. Safe

Lock Shingles in use for more than ten years show no signs of wear.

To-day we are using better material in their construction than ever, the steel is of higher grade, and the galvanizing is heavier. We have also made several improvements in manufacturing. For instance, every shingle is cut accurately to size before it is galvanized, thus protecting the edges of the shingles instead of leaving them raw and exposed to the decaying action of moisture.

We want you to remember the

thus causing a leaky roof.

Safe Lock Shingles cannot be blown off, nor can they be pulled apart by warping of the sheeting, or any other cause.

Study the small illustrations on this page, and you will be convinced of the truth of this statement.

Fig. 1
In Fig. 1 the solid black line shows the top lock, the shaded line the bottom lock. Notice that a

contraction due to heat and cold. They cannot unhook.

Illustrations 3, 4 and 5 show the construction of other metal shingles.

Send for our Free Book "The Truth about Roofing"

SAFE LOCK SHINGLES are the only shingles that—

1. Give you a positive guaranty against Lightning, backed up by a policy signed and guaranteed by the manufacturers.
2. Meet fully the rigid requirements of the British Government for Public work.
3. Lock on four sides, and cannot be pulled apart.
4. Have three (3) thicknesses of metal along upper edge at point of greatest strain.
5. Completely protect nails from weather.
6. Have edges galvanized after being cut to exact size.

name Safe Lock. No other shingle has that name.

No other shingle is a Safe Lock Shingle.

Safe Lock Shingles lock positively on all four sides. Other shingles grip only on two sides. This is not enough for a permanent, durable roof. We know of many instances of buildings covered with these shingles being entirely unroofed in a stiff breeze. Another objection is that these shingles are apt to spread apart owing to the warping of the sheeting to which they are nailed,

double fold forms the top lock instead of a single fold, thus giving twice the strength at the point where the greatest strain comes.

With Safe Lock Shingles the nails are driven full length into the sheeting, and are protected by the peculiar lock construction from any possibility of water backing up and starting rust.

Fig. 2
Fig. 2 shows the side locks. Note the deep firm grip which allows ample room for expansion and

Fig. 3
No. 3 is the old-fashioned cleat shingle now almost entirely driven from the market by the Safe Lock. These do not always shed water, and it is almost impossible to keep them from leaking after they have been on for a season or two.

Fig. 4
Note in No. 4 that the nail is only about half way driven into the sheeting, leaving a large surface exposed to the weather. This makes a very insecure fastening for a roof, and this is still further weakened by the springiness of the steel, which has a tendency to pull out the nails, causing a loose, leaky, rattling roof.

Fig. 5
No. 5 is a side slip pattern, similar to many now on the market. The one shingle slips into the other, but does not lock. Shingles constructed in this way pull apart easily and must not be confused with the positive lock in our Safe Lock Shingles, as shown in Fig. 2.

Safe Lock Shingles are absolutely uniform. We have spent time and money to perfect their construction, which is fully protected by patent. They are now easier than ever to lay, and a Safe Lock roof cannot leak, if the shingles are laid in accordance with our printed instructions.

The Metal Shingle and Siding Co.

Limited
Rd refers to the Farmers
e Canada
Over St. Factory
Freston, Ont.
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