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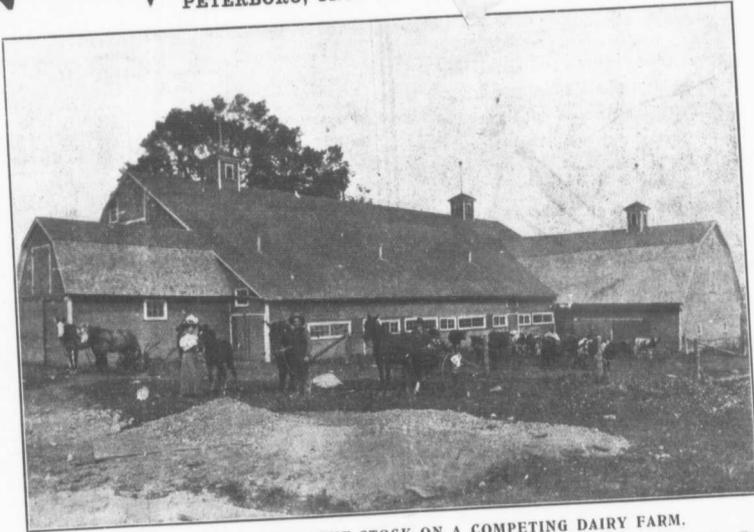
FARM AND DAIRY

&

RURAL HOME

PETERBORO, ONT.

JANUARY 6, 1910.



THE BARN AND SOME OF THE STOCK ON A COMPETING DAIRY FARM.

The number of up-to-date, spacious barns and stables that are features of the farms entered in the Dairy Farms Competition conducted by Farm and Dairy last year was a point especially commented on by the judges. A good barn and stable is a prime essential where dairying or stock raising is practised. The competitors had recognized this fact. The barn illustrated is owned by Mr. J. A. Anderson of Stormont Co., Ont. He describes his barn and farm practice on Page 6.

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CANADIAN COUNTRY LIFE

Hard Work and Worry

Are entirely eliminated in the dairy when you use a Separator that will not during this cold weather balk or refuse to perform its work. Many Separators at this time of the year are worse than white elephants. They take up room, cost good hard earned money, but never pay for their outlay.

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Let us tell you what they will do and why they are better. We also build Cow Stanchions, Steel Stalls, Hay Carriers, Forks and Blings.



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It is desirable to mention the name of this publication when writing to advertisers

Prize Farms Competition—Some of the Winners

Just before going to press, the scores of the successful competitors in the prize farms competition in Eastern Ontario were received from the judge, Mr. R. N. Ness, Howick, Que., and are given below. As the scores for the competition in Western Ontario had not come to hand, we are unable to publish them this week, but expect to publish them next week together with the detailed scores of the competitors in all four districts of Ontario.

These scores, as our readers will understand, are those for the special Prize Dairy Farms Competition that was conducted during the past year by Farm and Dairy, assisted by many leading dairymen and dairy farmers of the province. Our readers are asked to bear in mind that this competition was open to all dairymen in the various districts. It was well advertised, not only through the press but through the farmers' institutes and agricultural societies. Thus the honor that these men have won in scoring as they have, is a great one and they are deserving of every credit. The detailed scores will show the total number of points secured by each competitor for house, barn, farm management, live stock, and so forth, and will furnish an interesting basis for comparison.

A number of competitors might have scored much higher had they had more time to prepare their farms. The announcement about the competition was such a short one that a number of the competitors had but little time in which to prepare for it. A few of the successful competitors in each district will be allowed to compete in a final competition this year to determine the best dairy farms in the province.

Before the successful competitors are given their prizes, they will be expected to submit at least three essays, describing any features of their farm work that the judges may call for. These essays will be published in Farm and Dairy during the present year and will be sure to furnish our readers with a great fund of valuable information, as the articles will be written by practical men who have made a distinct success of their farming operations as shown by the fact that their farms have won in a competition of this nature.

Three of the successful competitors in District No. 2, Messrs. Terrill, Anderson and Hume, will likely be presented with their cups at the Convention of the Eastern Ontario Dairymen's Association in Belleville this week. Some of the winning competitors in Western Ontario will be given their cups at the meeting of the Western Ontario Dairymen's Association that will be held at St. Thomas, next week.

Our readers are again reminded that Farm and Dairy proposes holding another general competition open to the whole province during the year 1911. Any farmers who intend entering their farms in this competition should get ready this year.

The successful competitors in District No. 1, which includes that portion of Eastern Ontario lying between the province of Quebec and a line running north from Kingston, Ont., and north of Eastern Ontario from Kingston to York County at Toronto, are given herewith as well as the competitors in the good farms competition open only to the farmers of Peterborough County.

DISTRICT NO. 1.

Name	Points
Victor Regg, Moose Creek, Stormont Co.	765
J. A. Anderson, Seeley's Landing, Stormont Co.	778
Angus Grant, Moose Creek, Stormont Co.	779
W. H. Caldwell, Fallowfield, Carleton Co.	750
J. E. O'Rourke, Clivew, Carleton Co.	754
A. A. McLellan, Lancaster, Glengarry Co.	728

H. Cumming, Russell, Russell Co.	700
W. W. Hicock, Seeley's Bay, Leeds Co.	697
DISTRICT NO. 2	
E. Terrill, Wooler, Northumberland Co.	830
Jas. E. Anderson, Mountain View, Prince Edward Co.	821
Alex. Hume, Montic, Northumberland Co.	805
G. A. Brothen, Norwood, Peterboro Co.	779
J. Locke, Campbellford, Northumberland Co.	775
A. D. Foster, Bloomfield, Prince Edward Co.	771
J. A. Caskey, Madoc, Hastings Co.	749
J. H. Clare, Chapman, Hastings Co.	746
PETERBORO COUNTY SPECIAL COMPETITION	

Name	Points
G. A. Brothen, Norwood	779
J. K. Moore, Peterboro	745
J. H. Garbutt, Peterboro	715
F. Birdsell, Birdsell	699
J. B. Moore, Hastings	679

Special descriptions and illustrations of the prize winning farms will be published in Farm and Dairy during the next few months. An illustration of Mr. Terrill's barn as published on the front cover of Farm and Dairy last week.

J. W. Richardson's Holstein Sale

The sale of Holstein-Friesian cattle on December 30th, held by Mr. J. W. Richardson at Riverside Farm, Caledonia, was a decided success. It was a greater success than the first great sale at Riverside, which took place three years ago, when Mr. Matt. Richardson retired from active business. Forty-six lots, about half of the Riverside herd, were offered. They sold at an average of \$5.50 more than those in the sale three years ago. Only five matured cows were offered; 29 were one year or under.

The 46 head realized in all \$6,200. Prince De Kol Posch (bull) went to Dr. English, Hospital for Insane, Hamilton, at \$225. Professor Dean of Guelph opened the sale with an address dealing with the merits of Holsteins as a dairy breed. Arrangements for the sale were complete in people were in attendance. Col. Wellington, of Peterboro, was auctioneer. Brantford, conducted the sale, assisted by E. J. Wigg & Son.

The signal success of the sale was fitting tribute to the high excellence of the Holstein cow as a profitable producer of dairy stock and products. It was also a tribute to the judgment of the breeder, Mr. Richardson. It was observed during the course of the sale that those animals having the strongest official lacking and coming from well known families of merit commanded by brisk bidding and an ultimately higher price. A. C. Hardy of Brockville purchased four animals for a total of \$940. The stock was all sold in a little over two hours. The individuals sold, their ages, price and purchaser are given in the following list:

DE FEMALES

Haida De Kol, Princess, 9 yrs. H. F. Patterson, Alfred Junction	\$245
Daisy Mechtild De Kol Pieterje, 7 yrs. A. C. Hardy, Brockville	\$200
Janina Wayne, Haida De Kol, 6 yrs. A. C. Hardy, Brockville	\$215
Nancy Wayne of Riverside 3rd, 5 yrs. A. C. Hardy, Brockville	\$215
Tuittilla Echo De Kol 6th, 3 yrs. Munro & Lawless, Thorold	\$200
Trixtilla Clothing De Kol, yrs. A. C. Hardy, Brockville	\$140
Red Deer, Alta., yrs. A. C. Hardy, Brockville	\$120
Mechtild De Kol Daisy, 3 yrs. W. J. Thompson, Langton	\$120
Casey Sutherland, 9 yrs. J. McKenzie, Wilton Dale	\$110
Elsie Mac of Grand View, 2 yrs. W. J. Thompson, Thorold	\$100
Janina Wayne Johanna 3rd, 2 yrs. F. Lawson, Aylmer	\$100
Alfreda Neuberger, Ashford, Bykyn's Corners	\$120
Sylvia Mechtild, 3 yrs. P. Merritt, Beausville	\$85
Daisy Mechtild Posch, 2 yrs. A. C. Hardy, Brockville	\$85
Hilda, Peterboro 3rd, De Kol, 3 yrs. W. J. Thompson, Langton	\$105

(Continued on page 18)

Issued
Each Week

FARM AND DAIRY & RURAL HOME

Only \$1.00
a Year

Vol. XXIX.

FOR WEEK ENDING JANUARY 6, 1910.

No. 1

THE IMPROVEMENT OF THE COUNTRY ROADS OF ONTARIO*

A. W. Campbell, Deputy Minister of Public Works, Toronto

Road Construction Should be Placed Outside the Sphere of Experiment and be Reduced to Recognized Standards, Such as Have Proved to Be Right Ones

MUCH has been accomplished throughout Ontario in agricultural methods. Agriculture in Ontario is to-day our most important industry. Vastly more capital is invested in it than in any other. The annual product exceeds many times the silver output of our famous Colalt, and the farmers are the most influential, wealthy and most comfortably situated of any class; and while all this has been accomplished it is not surprising to find that we cling so tenaciously to the older methods and ideals of road-building. Progress and improvement have been sought for greatly in everything else, but in this it has been almost sacrilege to suggest that we depart from any of the time-honored methods of our grandparents. These men, the early pioneers of Ontario, spent many a hard day's work in opening up and grading the roads, and it does not appear to me as reasonable that they should have expected their grandsons to look upon this work as of any less importance to-day.

Your Experimental Union is a strong body and its strength and influence are increasing from year to year, yet it appears to me that the original Experimental Union of Canada, the one in which experiment was the outstanding feature, was the Road Making System of Ontario with its statute labor and army of path masters. It contained no fixed methods or plans to be followed year after year. It is as though road building were something entirely new and every path master had a license to indulge his taste for experiment in this particular.

What is urgently needed throughout Ontario to-day is that in road construction we get outside of the sphere of experiment. It is of the utmost importance that this work be reduced to recognized standards, which experience the world over has proven to be the right ones, and that these standards be followed by men of experience. Road construction is a work requiring experienced men in charge. There is no work where incompetent direction can produce more waste than in road building. The greater part of the cost of road construction is made up of the work of men and teams and with the capable use of labor of this kind, there is every opportunity for the highest success or complete failure. The experiment where carried on should be undertaken by

*An address delivered before the recent annual convention of the Ontario Experimental Union.

men who have mastered the standards that experience has guaranteed.

FOLLOW FIXED STANDARDS

For the great mass of road building to-day, we require that the expenditure be made, not as a series of experiments, but along the recognized lines directed towards established results. In urging that fixed standards be followed, I do not mean that all roads should be built alike; there are no two municipalities in the Province that are situated in exactly the same way in regard to material available, present road conditions, traffic and other details that influence the work of road construction, but there are certain principles to be followed and certain methods of labor management which should be closely studied and followed in all road building.



A Steam Roller is needed in every Township Municipality where Road Work is being done

After a road has been crowned a heavy roller should be used to compact it thoroughly before traffic is allowed on, otherwise the traffic causes ruts, which collect water and start damage forthwith. The illustration shows part of the Lincoln Co., Ont., roadmaking equipment.

Material is an important question in many districts. Crushed stone is the most satisfactory road making material, provided it is used in the right way. Crushed stone roads, however, cannot be satisfactorily made without the use of a steam road roller. If a roller is not used the stone must be crushed too fine, otherwise it will not pack for a long period. If a roller is used the stone can be crushed more coarsely and a stronger road bed will thereby result. If a roller is not used, the stone has to be drawn into place from time to time until it is consolidated, the road sides have to be trimmed up for they are cut up and mutilated by traffic that refuses to drive along the stone so long as the earth track in the ditches or close to them is passable.

Steam rolling is not wholly an item of ex-

pense, for the saving use of coarsely crushed stone and the subsequent care of the road will largely repay for the use of the steam roller; to this is to be added the increased durability of the road produced by consolidation with a steam roller.

GRAVEL INFERIOR TO STONE

Gravel is, as a rule, inferior to stone. In few instances can gravel be obtained that will at all equal stone in wearing qualities. That it packs quickly is rather a detriment to it since gravel that packs too quickly as a rule contains too much clay and earthy material to make a strong wearing surface. A great many townships have in the past used gravel lavishly on the roads to such an extent that their gravel pits are becoming exhausted. In many of these cases there are to be found mounds of older gravel too coarse for use on the roads in its natural state. A stone crusher in a pit of this description will produce material at very little additional cost and gravel of this kind put through a stone crusher and screened is in almost every case, superior to the natural pit gravel. The excess of screenings can be wasted; or, on a new road, if the screenings

have any value, the excess may be placed underneath the wearing surface of the coarser stone.

STONE RESISTS WEAR

The common mistake in the construction of crushed stone roads or roads made of crushed gravel, is the use of too much screenings on the surface of the roads. It is the stone that is required to get a road service to resist wear; screenings are needed simply to bond this material. Where too much screenings are placed on the surface they make a good summer road, but in fall they are quickly torn into ruts that hold water, interfere with surface drainage and permit traffic to cut through the coarser stone beneath. There should not be enough screen-

ings placed on the surface of a road to allow wheel tracks to develop to any extent in the fall and spring. There are many localities unfortunately situated in the Province which have neither stone nor gravel for use on the roads and which are under the necessity of importing crushed stone by rail. The cost of such roads is not expensive in the vicinity of towns and railway stations and in view of the greater durability of crushed stone, it is frequently desirable to use that material particularly close to the station where it can be brought in by rail even where gravel may be obtained. The greater strength of crushed stone and the greater durability will in the end repay abundantly the additional cost.

THE KEY-NOTE OF ROAD CONSTRUCTION

It should scarcely be necessary at this stage to urge upon the public who have to do with the

roads, the necessity of thorough drainage. Good drainage is the key-note of road construction. First, the road should be so crowned as to shed water to the side drains; every drain should have a free outlet. Drains without outlets are useless, they are merely elongated ponds beside the roadway and permit the accumulated water to soak into and soften the earth subsoil. Unless the subsoil is kept dry underneath the stone it will not support traffic and in the spring of the year especially, wheels will cut through such soil and create ruts, no matter how complete a covering of stone may have been placed.

In constructing a new road it is of the utmost importance that the earth grade be first put in perfect condition. This is the first essential to permanent work. Before putting stone on the earth grade it should be thoroughly graded in order that all future surface coverings may have a permanent worth. By grading in this connection, I mean that the road should be straightened, the hills cut down, the hollows filled up and all inequalities of the road surface removed as far as possible.

BEGINNING THE WORK

In starting to improve any road the first thing to be done is to stake out the work, find the central line of the road and place side stakes on a uniform basis from the central line, in order that the ditching and grading may be carried out in conformity with this line. Roads should be straight; that they are crooked merely makes the road longer, more difficult to travel and in the majority of cases is a sign of carelessness and neglect. When the work has been staked out look for your drainage outlets and grade to them. The drainage is a refinement of road construction that will repay the cost manifold. There are many sections of road throughout the Province, especially of hills, which can only be permanently improved by the use of tile drains. There is absolutely no other method of drying out the subsoil and preventing vehicles cutting through the stone and sinking to axles in the spring.

Let me urge that in our modern road-making of to-day we seek to find and employ experienced men in the work; that we use modern road-making machinery; that we select our material with care; that we drain thoroughly; that we grade in a workmanlike and permanent way and that throughout all, we seek economy in efficient management of men and teams in this work.

Peterboro Soil Adapted to Alfalfa

Henry Glendinning, Ontario Co., Ont.

There is possibly no another district where alfalfa would do better than on farms in Peterboro county. There are hundreds of acres in that county that would grow alfalfa well. Protein feeds we need and must have for the dairy cow if she is to produce a large yield of milk. These protein feeds as commonly got are most expensive. Alfalfa is the one crop in which protein can be had comparatively cheap. The experience of one more year with this great crop has confirmed my former contentions that it is one of the best and one of the most profitable crops that we can grow.

More alfalfa seed was sown last year in Ontario than in any two previous years. It again was a good crop. A noteworthy thing about alfalfa is that where it has been grown the longest, the land is going up in value. I can point out a section much the same as Peterboro county where the land used to go begging for a buyer. Now it is worth from \$65 to \$75 an acre and it will soon be rated at \$100. That section is in Halidmand County, Ontario. It is strange that farmers in that district who do not grow alfalfa ask a higher price for their land, though they still grow timothy. There is one farmer in that district who grows over 100

acres of alfalfa and he is making more money out of his farm than anyone I know of.

Trees on the Farm

W. J. Stevenson, Ontario Co., Ont.

One of the most striking features of the scenery of many of the farming districts of old Ontario is the general absence of well-cared for plantations of shelter and timber trees. We are more familiar with the giant dead forest giants that stand like mystic sentinels of a glorious past. Farmers! cannot you, when you are bound by every tie of gratitude to the trees for their kindly shade during the hot noondays and to their warm shelter from the cold winter blasts, do something to encourage the growing of them? Your influence at the agricultural meetings and conferences would do much to forward the movement.

It sometimes happens that portions of one's farm are of no agricultural value. These parts may probably be planted with forest trees. In setting out these trees one will have three objects in view. First, that they serve as a windbreak for the shelter of stock; second, as an invest-



One of the Few Big Ones that Remain

Twenty-one feet, six inches, in circumference, seven feet two inches in diameter, these are the dimensions of the tree illustrated, which is growing in North Dummer, Peterboro Co., Ont., in Mr. Z. Payne's farm woodlot. Note the foot rule at the end of axe. The photo is but another evidence of the pleasure and benefit of having a camera on the farm.

—Photo by Wm. Z. Payne.

ment; and third, as an ornament to property. The forester has other aims, such as the amelioration of the climate and the forestalling of floods. The farmer settled on some exposed district with hot and cold winds sweeping over the land envies the man whose good fortune enabled him to locate himself in a part of the country where belts of timber shield his stock from the cutting winds of winter and the scorching suns of summer. Trees are nature's own means of protecting both beasts and birds from storms, and why do we not profit more from so great a teacher and apply the knowledge gained to practical account? Where shelter is absent it seems to be the farmers' imperative duty to protect his crops, fruit trees, stock and buildings by planting suitable trees.

Only those trees suitable to the locality and soil should be planted. It is not advisable for farmers to experiment with trees which may prove unsuitable afterwards. A tree may serve two or more purposes. It may be useful as a windbreak and later on may be suitable for timber, or it may be valuable for firewood.

The planting of trees is one of the simplest means the farmer has of beautifying his farm and visitors get a good impression of the place and the country that is well provided with this.

Comments on the Feed Problem

Geo. Laitkwaite, Huron Co., Ont.

I often wonder why farmers thresh, fan and haul oats to get them ground and then haul them back to the farm and feed the meal, while they coax the animals to eat the straw or waste

it. This extra work costs about seven cents a bushel of grain. In our experience the feed even then is not as good as a nice clean oat sheaf which is handy to feed.

The feed problem is a double one. We must supply the kinds of feed that will give the greatest returns and supply those kinds at the lowest cost. Though a feed be perfect, if it is too expensive, it cannot be fed without loss; hence stock owners should make a study of feeds. Bran is one of our best feeds but is often so high in price that it is too expensive to be fed to our ordinary farm animals. Then again one animal can consume expensive feed and return a profit, while another will take the same feed and prove to have been fed at a loss.

Some Merits of Holstein Cattle

R. F. Hicks, York Co. Ont.

The editorial reminder in a recent issue of Farm and Dairy that the Dominion Experimental Farm at Ottawa has no representatives of the Holstein-Friesian breed of dairy cattle was most timely. That this breed should be represented has been emphasized in the strongest manner possible to all who read your editorial and who have since had the pleasure of attending the winter fair at Guelph. The forcible and eye opening demonstration made by the large number of Holstein cows and heifers in the milk test conducted there could not help but make an impression upon many thousands of farmers and dairymen who cast their eyes along rows of veritable milk and butter machines, which is about what these cows are in appearance and it is amply proved by the score cards showing their production of milk, butter fat and solids for the three days that they were under test.

Any person at all interested in the production of butter or cheese, or milk for domestic consumption, and who understands the ordinary quantities produced by the average dairy herd must of necessity become aroused when they read the records of many of these cows. These records are for instance, 72 pounds of milk a day testing 4.3 per cent. butter fat; another cow produced 86 pounds of milk in one day; many of the cows tested around 4 per cent. butter fat. The total number of entries of all breeds was reported to be 38 and of these 25 were Holsteins.

HOLSTEINS AT SALES

This we consider pretty strong evidence that the Holstein-Friesian cow has taken a very important position as to her ability for milk production and in regard to increase numerically. If any one is at all skeptical as to the prominent place now occupied by this breed of cattle let him attend half a dozen ordinary farm sales and observe the unprecedented demand for good grade cows of the black and white breeding. These cattle are reported to have been sold recently at public auction in some instances above the hundred dollar mark. Witness also the prices that have prevailed at the auction sales of purebred herds during the last two years. The majority of these have averaged above \$150 a head.

On the face of this let the person who has been interested in the progress of dairying take a look over the past 10 or 15 years, which is a short space of time to accomplish much in the improvement of any breed of animal except swine. What were the conditions 15 years ago as to values? Those who were buyers of Holsteins then were not required to pay much in advance of the value of the common cow of mixed blood. Those in the secret know of one successful breeder who purchased 10 head of Registered Holsteins for the sum of \$400 at a public auction sale and these were not inferior animals, but have proved since capable of going to the top in both the milk tests and in showing ring work. We have witnessed in the short space of 15 years the advancement of values from about \$50 a cow to what is now an average value not less than from \$160 to \$200,

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cows of proven merit selling readily for much higher prices.

THE REASON FOR POPULARITY

Here then is a condition of affairs decidedly worthy of investigation. What is the reason for such a phenomenal advance in selling values? Have the Canadian dairymen taken a fancy to the color (black and white) and do they stand ready to hand over their good money for color or any other feature connected with the appearance or conformation of these cattle? Not at all. The Canadian farmer has been attending institute meetings and also doing more reading than formerly. He has sharpened his lead pencil and the inside of the barn door has been scribbled over with figures of pounds of milk per day, pounds of milk per annum, percentage of butter fat, improved methods of feeding, in short, he has climbed out of the rut and has substituted more systematic methods in place of the haphazard methods of former years.

The official testing of Holstein cows came under his notice. Good records were constantly being made by a lot of cows, phenomenal records being made by a smaller number. The problem was easy of solution. The average production for the season of the Canadian cow was about 3,000 pounds of milk. Opposite this stood the fact that Holstein cows well cared for and well fed were producing 10,000 pounds per annum. In the face of such facts what would be more probable than that the Holstein cow should find an unlimited demand from the more enterprising and calculating buyer of dairy cows? Official test-

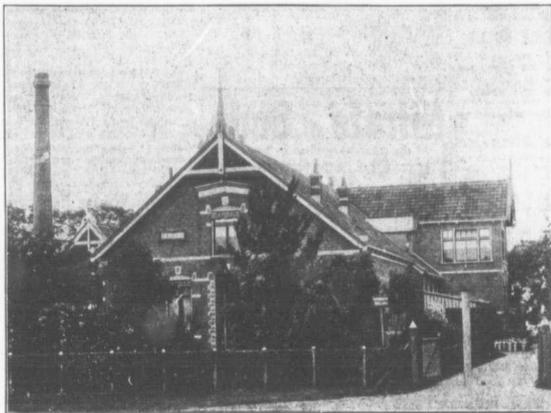
any government. The directorate has of necessity been composed of men who required to earn the "hawbies" before spending them. The finances of the association are therefore in good shape, sufficient revenue for all requirements being available and a substantial surplus to ensure stability. Thus the position of the black and white cattle is assured.

Just why there is not a good representation of the poor man's cow in the stables of the Dominion Experimental Farm at Ottawa we cannot answer. However, in view of the important position this cow fills in the great dairy industry of Canada we take the position that the general public is entitled to the statistics that would naturally be available were these cattle put at work under the official eye of that worthy institution revolve slowly. It is however incumbent upon all who see the desirability of having Holsteins at Ottawa to unite in an effort to have this oversight corrected. Holstein breeders will do well to attend the annual meeting in large numbers when united action can be taken if deemed advisable.

Draft Horses Pay for Liberal Feed

T. Baker, Durham Co., Ont.

There is not another class of stock that will pay better for liberal feeding than will draft colts. They should get a grain ration from the time that they are foals until they are at least two years old. The loss from allowing a colt to



Another Co-operative Combined Cheese Factory and Creamery in Friesland, Holland

During the past year Farm and Dairy featured a number of these illustrations showing the substantial well-kept buildings in which cheese and butter are manufactured in Holland. For the most part our own cheese and butter factories suffer in comparison with those in other countries that are competing in the British market with our dairy products. Buildings and equipment are a large factor in influencing the quality of the product manufactured. The cut was kindly furnished by Mr. J. A. Huddick, Dairy Commissioner.

ing has been done in herds scattered over the length and breadth of the land. Each herd, producing good results, has been an object lesson in their immediate locality and have demonstrated their suitability of the breed to the conditions found on the average dairy farm.

STAND ON THEIR MERITS

Fads have been avoided. Economical production is the feature upon which the popularity of this breed of cattle rests. The black and white cow has come to the front because of her ability to assist the farmer who is obliged to fight his own way. Not until recently have men of wealth shown interest enough in Holsteins to possess many of them. The breeders have managed to conduct the affairs of the Holstein-Friesian Association without financial assistance from

rough it or in getting a setback, can never be fully recovered.

A farmer should never sell a draft horse thin in flesh. Every 100 pounds over 1,600 means from \$25 to \$50 or from 25 cents to 50 cents a pound. The farmer can condition horses cheaper than can a dealer and he should do so. It will pay far better than feeding hogs at eight cents or cattle at six cents a pound.

The fountain pen I received from Farm and Dairy for securing only one new subscription to that paper, is first class in every respect. It seems like finding one to get it with so little trouble as the securing of only one new subscription. I thank you for the pen.—Roy N. Martindale, York Co., Ont.

Farming Ranked as a Profession

W. J. T. Hamilton, Nanaimo Co., B.C.

The occupation of farming should be elevated to the rank of a profession. This, however, can only be done when a proper education for all undertaking this work is made compulsory. I can imagine the outcry that any such suggestion would meet with amongst farmers at the present time, but it must be remembered that scientific farming is but in its infancy. The time will soon come, may be now at hand, when the unscientific farmer will be not only unable to make a living, but will prove a detriment and source of loss to his neighbors and to the whole community. In fact he will stand to his educated rival as the quack doctor does to the duly qualified medical practitioner.

Again, scientific methods will, in some instances, need universal co-operation, and educated cooperation at that, to be successful. For example take the different insect pests which cause trouble to our stock, our crops, and our fruit. At present our weapons for fighting all these pests are very crude, such as spraying. But already we hear whispers of other and more natural modes for exterminating some of these pests by pitting nature against herself.

The anopheles mosquito, the purveyor of malaria to human beings, hitherto combated by draining swamps, by coal oil, and by potassium permanganate, is now being attacked by one of its natural enemies, a small fish which lives on its larvae, which is being introduced. The San Jose and the other scale insects are being destroyed by the California two spot lady bird, whilst the aphid has many enemies, such as the larva of the Syrphus fly, of the lace wing fly, and of the common lady bird. The tent caterpillar has, as one of its parasites the larva of the Tachina fly, and in common with many other caterpillars, the cutworms included, is largely destroyed by the larvae of the many Ichneumon flies.

If space allowed this list might be greatly extended. If, by careful breeding and protection of such insects, our pests can be removed without labor on our part other than the knowledge of how to protect these our friends, one of our chief difficulties and expenses will be removed. By the time this happy state of affairs has arrived, spraying, at present so necessary, will have either become a thing of the past or be greatly modified, and require expert knowledge, and the man who has not this requisite knowledge will be constantly undoing the work of his neighbors by the indiscriminate slaughter of their friends and will prove just as great a menace as does the non-spraying orchardist now prove to his spraying neighbors in this, our present crude state.

Let me then conclude by pointing out the importance of every farmer seeing to it that the son who is to succeed him has an adequate education to fit him for his profession of farming and has also by pointing out the crying need there is for the wide circulation of bulletins fully describing and illustrating not only our insect foes, but also our friends, their parasites. There is a great deal of truth, and a sound scientific knowledge shown by the great poet who wrote:

"Little fleas have lesser fleas
Upon their backs to bite 'em,
And these again have lesser fleas
And so ad infinitum."

The Ontario dairyman and the farmer generally is away behind the times in the matter of ventilation of their stables. There are very few stables well ventilated. Stables are shut up so closely during the colder part of the year that they get very little fresh air. Animals must have air in order to live. They can go without food, but animal life will not exist five minutes without air. We need to give our cows fresh air and lots of it.—Hy. Glendinning, Ontario Co., Ont.

HOLSTEINS

MAPLE LEAF STOCK FARM GORDON H. MANHARD

Breeder of Choice Holsteins-Friesian Cattle.
At present I will sell 20 young cows, due to freshen in the early part of the winter. Also a few young bulls. E-11-3-10

FOR SALE, HOLSTEIN BULL CALF
Born, Dec. 31. Official record at 2 1/2 years old, 485 lbs. of milk and 21 lbs. of butter. Bull calf, born August 18th, dam Canadian Cow, Ontario age; of fetal record at two years, 434 lbs. of milk and 20 lbs. of butter. Also my two year old stock bull, grandson of Saracota Ltd. Bif DAVID CAUGHILL, Yarmouth Centre, Ont.

RIEVIEW HERD

FOR SALE, 2 Bull Calves, sired by Sir Angie Heels Begis, son of King Begis, world's greatest 5 year old sire, dam Aggie Lily Pieterle Paul, champion Jr. 4 year old—25 lbs. butter 7 days. Dam or calves a 10 lb. 7 year old, and 23 lb. 4 year old. Price reasonable considering breeding. E-10-6-10

P. J. SALLEY

Headed by Prince Hengerveld Pictel, a son of Pictel 2nd's Woodcrest Lad—out of Princess Hengerveld, a daughter of Hengerveld De Kol with record of 20.4 lbs. butter at 23 months. We also offer some fine young Yorkshire pigs of choice breeding. E-10-6-10

ARTHUR C. HARDY, Brockville, Ont.

AYRSHIRES

work a specialty; young bulls from R. of P. cows, and cows that will go on at next freshening. Milk records of dams, for everything. E-10-6-10

JAMES SEGO, Box 80, St. Thomas

FOR SALE AYRSHIRE BULLS

From one month to two years old; all bred from large, good-milking stock. Also Yorkshire pigs. Apply to DANIEL WATT or to HON. W. OWENS, Manager, 6-29-10 Riverside Farm, Montebello, Que.

"La Bois de la Roche" Stock Farm

Here are kept the choicest strains of AYRSHIRES, imported and home bred Yorkshire pigs, and also a few good young bulls. Fosters Holms, Imp., son of Hengerveld De Kol, with greatest sire, head of herd. Come and see them. H. E. GEORGE, CRAMPTON, Ont. Putnam Str. 1 1/2 miles.—C.P.R.—E-10-1-10

HOLSTEIN CATTLE

If you are thinking of buying a choice young cow or heifer in calf, come and see our herd. Will sell anything. Have down beautiful heifers sale in calf to Hunter Hill, Choice Holsteins who has five sisters averaging 85% lbs. butter in 7 days and one sister that held world's record at 4 year old with 31.6 lbs. butter. Write us what you want. We will guarantee everything. All sales on a few young heifers met at Hamilton by appointment. D. C. FLATT & SON, Millgrove, Ont. L. D. Telephone 2471, Hamilton

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A Stormont County Farmstead

J. A. Anderson, Stormont Co., Ont.

The barn illustrated on the front cover of Farm and Dairy this week is 122 x 60 feet, with carriage shed 24 x 18 feet and manure shed with straw loft 30 feet square. The stables are in the form of an "L." The horse stable, running along the west side accommodates six horses and has a box stall and a harness room at the north end. The cow stable at the north end of the full length of the south side being lighted by windows shown in the photo. It accommodates 40 head of stock, which are tied with chains. The walls of both stables are white-washed every spring and fall. The floors are cemented throughout.

In front of the cows is the silo 24 x 12 feet inside. It is built of 13 feet of stone and 20 feet cedar, 2 x 4 in. laid one on top of the other and spiked together, making a total height of 33 feet. It has given perfect satisfaction. The barn floor is in the centre of the building running north and south. West of the barn floor is the root cellar 20 x 20 x 15 ft. The walls of the cellar are lined with brick. A door leads into an alleyway in front of the cows.

Just west of root cellar is a room for a one-horse tread-power, which operates the root pulper in the root cellar, pumps the water into a tank overhead from which it is let into troughs in front of the cows and also into the horse stable, separates, churns and turns the grinding stone to sharpen tools. Back of this room is a feed room and three large box stalls running parallel with the horse stable. There is a six foot alleyway in front of the horses. The hay is let down through iron chutes. The horse stable and box stalls are partitioned off tightly from the cow stables.

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RECORD OF PERFORMANCE COWS

PRICE 1—\$35 when one month old

GUS. LANGELIER

0-6-3-10 Cap Rouge, Que.

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FOR SALE—Bull calves, sired by Netherhall Milkman, the champion bull of Canada. One bull calf two weeks old, sired by Berkshire male, an approved Champion at Toronto, 1908, and by Netherhall Dowie 3rd, a grand Imp. heifer, and a good milker. Also females any age. Satisfaction guaranteed. Nothing but the best, in stock, values and welcome. P. D. MCGARTHUR, North Georgetown, Howick Station 0-6-2-10 Que.

EVERGREEN STOCK FARM

Prize-Winning Holsteins

Offers for immediate delivery TWO CHOICE BULL CALVES, nine months old, and TEN HEAD OF FEMALES, all ages.

We need the room for the next crop of calves and will make the prices right and terms to suit the purchaser.

A. E. HULET, Norwich, Ont.

The horse stable door leads into the carriage shed. Our ventilation system is most satisfactory; we never have any foul air in the stables. The barn was completed two years ago.

The foal shown in the illustration is a Hackney. We are breeding Clydes and Hackneys. The gentleman in the buggy is my father who lives on an adjoining farm; my wife and I are holding the foal and its mother. The cows are mostly grade Ayrshires headed by a pedigreed Ayrshire bull "First Choice of Woodroffe." In the summer we keep about 31 milch cows and in the winter we usually stables 45 to 50 cows, the extra number being beef cattle and young stock. The pigs are Berkshire.

LOCATION OF THE FARM

The farm lies along the St. Lawrence River just opposite Long Point Rapids. Our farm buildings are situated about the middle of the work land, giving us easy access to any field. A bay stretches into the farm. This bay is fed from the Cornwall Canal and always gives our cattle plenty of good water.

At the north end of the farm is a sugar bush of 1,200 trees from which we make syrup with an evaporator. We find it a good paying department as we can attend to it before the spring work begins.

We practice a three year rotation; first year, corn on sod; second year, roots, oats and barley, third year, seeded down to clover and timothy mixed. The manure is hauled out and spread on the field every day as it is made except in spring when the ground is too soft; then it is kept in the manure shed. It is carried into the shed by one of London's litter carriers. This manure shed is also used in the winter as a run for young cattle and pigs.

We have all the necessary farm machinery such as a six horse power gasoline engine, threshing separator, grain grinder, circular saw, hay loader, tedder, etc. We cut our straw and hay for bedding and use it with ensilage. We always store ice. This is used for cooling our milk in a tank in the milk house.

Ottawa Winter Fair Program

The programme for judging and addresses at the Eastern Ontario Live Stock and Poultry Show to be held at Ottawa, Jan 17th to 21st has been issued. The lectures commence on Wednesday morning, Jan 19th. These comprise an extended list of most practical subjects, coupled with the names of authoritative lecturers, such as Mr. J. H. Grisdale, D. Drummond, Prof. G. E. Day, Prof. F. C. Efford, Dr. Henry G. Reed, T. G. Raynor, John Gardhouse, A. W. Smith, Capt. T. E. Robson and others. Dairy subjects, seed and poultry will be dealt with on Wednesday. White sheep, horses and beef cattle will be discussed on Thursday.

Programmes can be had for the asking from Mr. T. Eldorbin, secretary, 21 Sparks Street, Ottawa.

Renew your subscription now.

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.

Barley Straw and Concentrates for Cattle

I have a large pile of barley straw, near cattle stable, which I am feeding I also have a large quantity of barley (and wild oats) chop. Will it be all right to feed cattle straw and chop for the winter? If I got some cottonseed meal, in what quantity should I mix with feed for horses, cattle or pigs? Would you give cottonseed meal in feed for poultry? Which is the better, flaxseed meal or cottonseed meal? Would you be more expensive?—R. W. A. Lamberg, Sask.

Cattle may be expected to do well on the barley and wild oat chop fed along with barley straw. The amount fed will depend upon the condition in which you wish to keep your cattle. About three-quarters of a pound of the chop for each 100 lbs. in live weight of the animal feed might be expected to give good results. That is to a 1,000 lb. cow, feed whatever straw she will eat and seven or eight lbs. of the meal or chop in question. If some other grain or straw were available to mix with the barley much better results might be anticipated.

I would suggest oil cake meal or flax seed much rather than cottonseed meal to mix with barley chop for all classes of live stock, but more particularly for horses and swine. I do not know whether cottonseed meal will prove satisfactory for poultry or not but I imagine that it would. Cottonseed meal is likely to prove more expensive than oil cake meal.—J.H.G.

Ration for Dairy Cows

How much of the following feeds would you advise feeding dairy cows daily? The milk is sold for cream use.

Corn ensilage fairly well cobbled, red top and clover mixed hay, oat straw cut, home grown barley and oats with little buckwheat in barley mixed, two of the former to one of the latter, in bulk.

Also what concentrated feeds would you advise me purchasing at the following prices, to feed with the above mentioned home grown feeds and how much of each a day?

- Bran at \$2.00 a ton
- Oil cake meal \$3.00 a ton
- Gluten meal \$5.00 a ton

—M. E. Sax, Ont.

Cows may safely be allowed all they will eat of a mixture of good corn silage and cut oat straw. Good sized cows would probably eat about 45 pounds a day of a mixture of 100

pounds silage to seven or eight pounds cut straw. The amount of hay to feed is optional but allowing a fairly liberal ration of hay may be expected to prove satisfactory, say eight or 10 pounds a day. The cows will do very well with less hay but will probably require somewhat more meal.

As a suitable meal mixture I would suggest barley, 100 lbs.; oats, 50 lbs.; buckwheat, 100 lbs.; bran 200 lbs. and oil cake meal 50 lbs. Feed at the rate of one pound of meal for four and a half pounds of milk produced per diem, that is to a cow producing say 45 pounds of milk you should give about 10 lbs. of the meal mixture daily.

Gluten meal at \$55 a ton is too dear unless guaranteed to contain over 30 per cent. protein. Most brands



The Kind We Ought to Get Rid Of.

"Tiny"—The individual records kept of the milk production in the breed of which this one was proved hard to be a boarder. This cow is not so poor in appearance as the photo would indicate. She would pass for a good cow with the many who "guess."

of gluten do not contain such a percentage. Oil cake meal at \$38 is dear but a small amount is very valuable both as a milk producing food and as a wholesome concentrate for your dairy cattle.—J. H. Grisdale.

To Feed Hogs at a Profit

I have a bunch of hogs four months old which I wish to fatten and have the following home grown feeds: Barley and buckwheat and oats ground together, two of the former two, with one of the latter, how much per hog should I feed? Kindly mention any other feeds which you would advise me purchasing.—Farm and Dairy Reader, Russell Co., Ont.

I would suggest the following as probably the best plan to follow in feeding pigs for profit this winter.

To 800 lbs. of the home grown mixture of barley, oats and buckwheat ground as fine as it is possible to get it done, add 200 lbs. shorts and 100 oil cake meal. To this add at time of feeding a small amount of pulped roots or potatoes. Do not cook meal but if warm water can be secured for mixing with meal at feeding time so much the better. Feed in fairly thick slop. Give what they will clean up nicely. Never leave any in the trough from one feeding time to the next.—J. H. Grisdale.

Fattening Lambs

I have 20 lambs, half of which are wethers and half ewes. I wish to keep the ewes and fatten the others. Would you please advise me how to proceed? Would you shear lambs to fatten them or not? Also attention to feed, straw and ensilage for roughage and what grain and roots would you advise? Would you let me know how long it would take to run or older breeding ewes, as I still have to do one or the other?—S. L. Jayne, Northumberland Co., Ont.

Wether lambs had better be separated to fatten. Let the ewe lambs run with the old ewes provided there is no ram running with them.

The lambs for fattening need be given but a small run. They need not be short. In fact unless a very warm run is provided it would be cruel to shear at this time of the year. Care should be taken however to fresh them from ticks if any are to be found on them.

The ration best to start with will be somewhat as follows. Straw, four or five pounds a day or what they will eat up fairly clean. Corn silage about four pounds a day and roots (turnips) two to four pounds a day. Meal should be fed in moderate quantities to start with, say half a pound a day the first week and gradually increasing till they are getting about a pound and a quarter a day in about two months.

The best meal mixture to feed would be one made up of about equal parts of whole oats, nutted oil cake and wheat bran. If nutted oil cake seems difficult to procure then you might use in the place of it cracked corn or very coarse corn meal.—J. H. Grisdale.

Farmers that have been engaged in dairying have not made one part of the success they might.—J. W. Newman, Victoria Co., Ont.

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HORTICULTURE

The Killing of Dormant Buds

W. T. Magoon, Central Experimental Farm, Ottawa

While the killing of dormant buds evidently comes about partly from a drying out in cold weather, it is evident that buds are more tender than wood and their life is destroyed at certain minimum temperatures. Not only are fruit buds destroyed when the trees or their buds are as well. The buds being more exposed to the air may dry out when the wood does not.

In the province of Quebec and the colder parts of Ontario the buds of the European and Japanese plums, and cherries, are nearly always injured more or less in winter. This seems to be due to the drying out of the twigs, for when these fruits are grown near bodies of open water in winter they do well.

The marked success of Mr. Aug. Dupuis, and others in growing the European plums along the lower St. Lawrence is well known. It is only when the conditions there? But what are the conditions there? It is only when in a comparatively short distance from the river that these fruits succeed.

When we get farther back from the river the buds are killed as in other parts of the province. The reason of the successful growing of plums and cherries is evidently due to the fact that from the water there rises in winter a fog which blowing over the land keeps the air moist enough to save the buds from death.

In a previous article it was mentioned that it required dryness with cold to kill the roots of trees. Even the roots were moist they were little injured, even if exposed to the same temperatures. Cherry, plum, and peach buds are not so well protected from cold, and hence are killed from frost freezing more readily than apples and pears.

There is, as yet, no very practicable way to prevent this drying out of the fruit buds. The best thing to do is to plant the trees which are under the snow produce fruit when the parts which are exposed to do not, suggests the plan of bending over the trees so that they will be covered, which has been done successfully by some growers. Another plan which we think deserves further experiment is the low training of plums and cherries growing them with horizontal arms, for instance, which would be under the snow. A third plan is the breeding of varieties having harder fruit buds. This we believe should, and is being done. The Montreal seedling plums, such as the Mount Royal and Raynes, are examples of varieties with harder buds.

How to Treat a San Jose Scale Infested Orchard

The San Jose scale is one of the worst pests of the orchard. It reproduces itself so rapidly that an orchard once attacked soon becomes completely infested unless means are taken to control it. For such cases, a practical method of procedure is given in a bulletin of the Com. Agr. Expt. Station as follows:

"Suppose we have a badly-infested orchard of peach or apple trees, how shall we treat it? This is a problem confronting many commercial fruit-growers, as well as a large number of persons who have small orchards for the home supply. In the light of our present knowledge of what has been accomplished by the following treatment seems to be the proper one to apply:—

"Remove the worthless trees. It will not pay to treat them. If you do not cut away severely, especially the branches that have lost a portion of

their vitality because infested. This will enable the trees to make a strong growth in the spring and reduce the area to be covered with the spray. The remaining portion being near the ground can be sprayed more economically than the ends of the twigs. Burn all the cut off, fire is an effective destroyer of insects and fungous diseases.

"Spray the pruned trees during the winter months, with the lime and sulphur mixture, or one of the miscible oils, taking pains to coat thoroughly all portions of the trunk from the ground to the ends of the branches.

"Peach, plum or pear trees which have smooth bark, should be sprayed with lime and sulphur, which kills the scale and is also a good fungicide; oil preparations are often preferable on rough-barked apple trees. Badly-infested trees sometimes need to be sprayed twice the first season, in which case the oil may be applied in the second spraying. In fall and lime and sulphur in the spring. The oil mixtures should be diluted with not more than fifteen parts water. Both lime and sulphur mixtures and oil preparations may be used in the fall.

"When growth begins, fertilize liberally, spray apple trees to preserve the wax, and cultivate thoroughly to promote the vigor and health of the trees."

St. Thomas Fruit and Vegetable Business

At the commission house of Steele & Co. of St. Thomas, Ont., the writer made some enquiry about the past season's business in fruit and vegetables. The manager willingly imparted the following. He said: "It has been a satisfactory season in every way. During the past season we sold about six weeks we distributed between 500 and 600 baskets per day, or in all about 20,000 baskets. While we got our money nearly all directional, our very best ones in color, texture and other attractive qualities we invariably get from near Grimsby. There is something about the air or water here that imparts a delicious flavor to the people's most popular fruit, the peach. Our plums also come mostly from the east, they do not keep nearly as well as the peach and are very often sold at a loss to the growers. When shipped a little too ripe they begin to go fast and often we are glad to hustle them out at 15 and 20 cents per basket. We handle large quantities of grapes, splendid grapes are grown at Leamington and vicinity. In fact any place along the shores of Lake Erie, seems very adapted to the production of an abundant crop of luscious and fast selling grapes.

"For the growing of early vegetables such as tomatoes, cabbages, celeris, radishes, muskmelons, and everything in that line Leamington can excel all other places in Canada, as it is the most southerly point. We get our produce principally from there, and find them two or three weeks earlier than our home grown products. For looks, quality, and growing agreeable to the taste we none of us place that can approach Leamington in growing musk melons. Throughout the southern counties, most anywhere corn appears to be congenial to the soil and it will pay crop. From here the canneries get their principal supply. For growing celery as a winter article of commerce, Strathroy appears to be the best, with Bedford a close second. From these two centres we have shipped to us our principal supply. This celery is crisp, has the proper color, and the taste it has the proper nutty flavor.

"Our cranberries come from the Walpole Island and some parts of New Ontario. It grows there in a wild state and are picked by the Indians. We know of no place in Can-

ada where they are cultivated and cannot understand how it is for we think it would pay well. Strawberries are principally locally grown and fine crops are produced around St. Thomas."—J.E.O.

Apple Packers Criticized

Mr. P. W. Hodgets, head of the horticultural branch of the Ontario Department of Agriculture, has been "trousted" by the apple shippers of the province for their dishonesty in shipping apples. In his last letter of the season Mr. Hodgets says, "A number of shippers who were supposed to put out an honest pack have fallen from grace, and it will mean a loss of many dollars before their reputation will be re-established. Such unscrupulousness seems difficult to understand from this end, and any association or independent packer deserves to suffer severely for deliberately attempting to deceive the buyer, which seems to have been done in a number of cases." "Associations are warned to select their employees with care, for the concerners are in business to stay, and to create a reputation

careless packers are very dangerous." SAVE THE REPUTATION "For exactitude in this reputation do not let a barrel go out of your packing house which is in the least doubtful," says Mr. Hodgets. "The Hood River apple growers would still be getting 35 cents a barrel with which they started, if they had followed the methods of so many of our Ontario farmers.

"It is impossible to pack a decent grade of apples from much of the fruit grown in Ontario is not accepted as a matter of fact.

"If they cannot find time to look after the orchards, either themselves or with efficient labor, then in the long interests of the association cut them off. Don't risk your reputation on poor fruit. Send it to the evaporator, where it belongs.

"To the man who cares for the trees may be expected a return far above the amounts received from the ordinary market, but the honest farmer who is content with the average in production of his ordinary crops need not think that he can make even a decent living out of fruit growing."

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More than ten thousand users of Peerless Incubators in Canada alone—and every one of them satisfied. Satisfied that the Peerless is the machine for practical hatching. Satisfied that Poultry-Profit is easiest made the Peerless Way. Fully satisfied that the Peerless people not only make good with their hatching and brooding outfits, but actually do give the most valuable kind of help to their customers—help in rearing the chicks after they are hatched; help in feeding them right; help in bringing them quickest to market in the best condition, and help in finding a cash buyer who pays highest prices for Peerless poultry-products.

STANLEIGH, ALA.

"Bought 200 eggs in the store at Leamington and sent per them in a lumber wagon and took a 4-day journey to my home town. Then put incubator under a tree and set the temperature ranged from 90 to 95 degrees at night up to 98 during the day and after all this the chicks were perfect. I think your performance is as good as any."

SARBY POST, N.S.

"I started the machine with 100 eggs. At the end of the month I reared out twenty-eight and opened the shells I found every one fertile. This led 72 to the incubator, of these 44 came out the balance added to the stock of 400 were too weak to get."

BURTON, ONT.

"My second brood with the 120 Peerless incubator I got 80 strong chicks. I am more than pleased with the machine. M.B. TIMMS

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POULTRY YARD

Too Few Eggs

My 60 hens are only giving six eggs a day. Why don't they lay more? They should give at least three dozen.—G. E. P. Q.

Have patience. Three dozen eggs a day from 60 hens is an exceptionally good lay at any time. Just now, which is possibly the worst time in the year for eggs, if you were getting a dozen you would be going mighty well. In fact, if you get any at all you are doing better than some poultrymen. You have no right to be discouraged. Take it easy. If your hens are well fed and you have a little patience I do not think you will have to wait long until you get more, though you will not get the three dozen for some months yet.—F.C.E.

Hens Won't Lay

Will you be good enough to tell me what you think can be the matter with my hens? I have not had an egg since the 15th of September; there are 30 hens; they have been living on the "fat of the land," wheat, oats and corn, etc. Is there anything I could give them to make them lay?—M. G. P. Q.

The trouble with your hens is not that they are not sufficiently fed, but simply that they have been laying practically all summer and did not go into moult until late in the fall and it may possibly be that they will not lay for another month or six weeks. As a rule hens do not lay every month in the year. They have at least one general moult, when they shed their old feathers and take on a new dress. Just at this time of the year hens that is, birds that are from a year old and over moult very little owing to the fact already mentioned. Pullets or late laying chickens are the ones that lay early eggs during the winter. As I presume you have none of this kind, your hens are doing just what is natural, and are taking time to get into their new suit of clothes. They will possibly begin laying in January again.—F.C.E.

Giving Salts to Hens

You advised me to give my hens salts, in drinking water, I presume, but how much to a quart of water? Do you give salts to your stock regularly, or only when they are ailing?

What are the symptoms when they need the same? Had a lot of very green droppings some time ago. What is this a sign of? Also, whole osts on dropping board in the morning?—Subscriber, Que.

In feeding Epsom salts, we author give it in the drinking water or in the mash. A mash is really the better plan, as they take all the salts. About one pound of the salts to 100 hens ought to give good results. It is well, however, to dissolve the salts in water or milk and use the solution for mixing the mash. We give salts to our laying hens several times during the winter.

Should the hens get a little dumpy standing around and not taking their meals as they should, comb turning a little dark, and feet that stand on end, a dose of salts will help them.

Probably owing to the lack of grit, or fowl out of condition. See that they have plenty of grit; give a dose of salts, roots or something else for green food; give a variety of grain in a good thick litter, plenty of fresh air and clean quarters and they should improve.—F.C.E.

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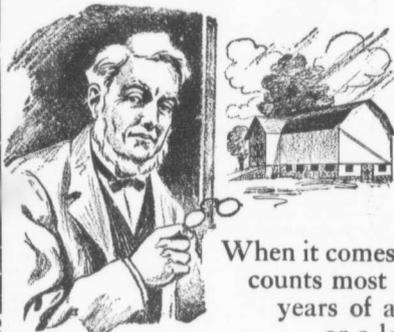
A Straight Talk To Farmers

By a Farmer

Subject :

The actual test or the doubtful guarantee—WHICH?

When it comes to buying shingles, which counts most with you—twenty-five years of actual wear and tear or a leaky guarantee?



The Actual Test—What It Proves

"Eastlake" Steel Shingles have proven their durability by the actual test of time. A quarter of a century ago scores of public and private buildings were roofed with "Eastlake" Metallic Shingles.

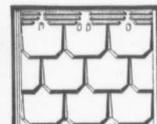
These roofs are in excellent condition and certified as such by practical building inspectors.

Think of it! For over twenty-five years scores of "Eastlake" shingled roofs have withstood the ravages of all kinds of weather—the lightnings and torrential rains of summer—the hail,

snow and sleet of winter, and yet they are in perfect condition to-day.

Isn't that conclusive evidence that "Eastlake" Steel Shingles make a permanent roof?

The "Eastlake" is the ONLY steel shingle that can boast of such a record.



you send a postcard at once—if you don't you will forget.

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Did you ever stop to figure out one of those so-called metal roofing guarantees? Did you ever discover really what it guaranteed?

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He rightfully demands proofs. He wants to know on what grounds the claims are based.

Unless the article has successfully undergone an actual test, a paper guarantee appears a joke.

Many times it is a cloak to hide some weakness of the roofing it guarantees.

Ask your lawyer about it. He will tell you that, stripped of its exceptions and provisions, all high-sounding phrases, little else remains.

It really guarantees nothing.

Kind of risky when the guarantee is as leaky as the roof it guarantees.

You're not asked to buy the "Eastlake" on any paper guarantee—not asked to believe a single claim which the shingles have not proven.

You're only advised to buy the "Eastlake"—if you want a permanent roof, because the durable and weatherproof qualities of "Eastlake" Steel Shingles are positively known. They have been proven by actual wear and tear test.

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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, Ontario, Quebec, Dairyman's Associations, and of the Canadian Holstein, Ayrshire, and Jersey Cattle Breeders' Association.

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FARM AND DAIRY

PETERBORO, ONT.

OUR OWN FAULT

A farmer wrote recently to the Toronto News, claiming that the apple shippers must be defrauding the farmers because at the time of their recent annual meeting in Toronto, they had claimed to have made profits as high as \$2 and \$3 a barrel on their apples. The farmer's contention felt that our farmers as a class were being robbed by the shippers inasmuch as the majority of farmers have not received more than \$1.25 a barrel for their apples.

If our farmers are not receiving all they think they should for their apples they have, for the most part, only themselves to blame. The Ontario Co-operative Apple Growers' Association is composed almost entirely of farmers and these farmers save all the profits now being reaped by the shippers who handle the crops of other farmers. The only difference between them and most of our farmers is that they know how to co-operate. Instead of selling their apples on the trees, as most of our farmers do, they have co-operated with their neighbors, constructed central warehouses, engaged competent men to

gather their crops and to grade and pack their product, and thereby they are able to hold their apples until the season when they can sell them to the best advantage. This is why these farmers, through their apple shippers' association, have realized the profits of \$2 to \$3 a barrel out of their apples as compared with less than \$1 for the average farmer. As long as we have it in our power to co-operate and thus save the middleman's profits, we have only ourselves to blame if middlemen do step in and take profits that we could retain if we would. There are now some thirty-five of these co-operative associations in Ontario. They are to be found in almost all parts of older Ontario. We should have more of them.

PUSH COW TESTING WORK

Those responsible for the managing of these factories and creameries have been far from the right track in past years in seeking to increase their business by going over the territory that rightly belongs to their opposition. The average cheese factory and creamery needs not so much the milk and cream from more cows, as more milk and cream from the cows already in their territory. Efforts should be put forth to induce patrons to produce more milk and cream in a given radius. The Cow Testing Associations under the direction of the Dairy Division, Ottawa, offer a ready solution to this problem—seeking to increase the milk production.

It is in the direct interest of all creamery and cheese factory men to push this Cow Testing work. Under present arrangements the Department at Ottawa pays five cents a test for each test made in connection with the Cow Testing Associations. Thus there is material inducement for makers more generally to take up this work. Wholly aside from this consideration, the greater welfare of the patrons, the community and the dairy industry at large, should induce all dairymen to energetically push the work of cow testing.

LOSS IN THE CREAMERY BUSINESS

Those who patronize creameries should give heed to the facts as brought out in the discussion of the creamery business at the recent meeting held at the Guelph Dairy School. We have suffered large losses in past years through not having taken proper care of cream so that it might be delivered at the creamery in first-class condition. The statement made by Mr. G. G. Poulton, that only two per cent. of the cream sent to creameries in eastern Ontario would grade first-class, while seventy-five per cent. would grade second class, and the remainder third class, should bring the question of responsibility home forcibly to creamery patrons.

That Mr. Newman, of Lorneville, should be able to make the statement that he could not gather sweet cream did he send his haulers out each day with ice-jacketed cans, gives us some inkling of where we, as patrons, stand. Who bears the loss of this low grade cream? Except in isolat-

ed cases, it is not the creamery man. The patron must stand the loss.

We cannot too soon learn that it is to our advantage to produce only first-class cream. If we would deliver first-class cream, we must cool it. Let us make provision for a supply of ice to tide us over the forthcoming creamery season and let us make sure that we make use of it for cooling cream.

BENEFITS OF CROP ROTATION

The value of a well planned crop rotation is not ordinarily understood. Although the subject of rotation has been worn thread-bare by agricultural writers and institute speakers, even the most practical acquaintance with farm practice on the average farm, serves to indicate the fact that crop rotation means but little to many of us. While the virgin soil contained that wealth of fertility, which enabled a farmer to raise such crops as sold the most ready sale, or those plants whose needs and habits he knew best, there was not that urgent need of giving attention to the subject of rotation and to economizing fertility. But indiscriminate cropping has resulted in noxious weeds getting a firm foothold, in depleting the soil of certain elements, in robbing the surface soil of the necessary amount of vegetable mold, in leaving the sub-soil largely unused and in reducing the general productiveness of the land, and thereby causing it to produce in after years but a fraction of what it is capable under more rational management.

Crop rotation must be resorted to, if the production of the land is to continue to be profitable, except where the land is kept most liberally fertilized. The man, with a poor run-out soil, who is endeavoring to build it up, relies much on his crop rotation.

Many will concede that a crop rotation, especially a short one of say, three years' duration, is good for light soil. We may be certain that it is equally good for heavier soils, though they may not suffer from the lack of it to the same extent. Intelligent rotation, systematically carried on, can be made to destroy a large number of troublesome weeds and insects, and will render a maximum amount of plant food available for the particular crops that it is desired to grow. Since plants vary in their power to reach and appropriate nourishment, the rotation may be arranged so that those crops having the least power of assimilating plant food, or those which demand a large amount of plant food, may be on the soil when the land is most fertile—after clover or after manure has been applied.

Clover should be given a prominent place in all rotations. The oftener it can be worked in to the rotation the better it will be for the land. The increased productiveness of many farms to-day over their increase to the three year or to the five year rotation, into which clovers entered once or twice respectively, that has been adopted on these farms. Anything over a five year rotation should not be countenanced. A three or a four

year system approaches more nearly to the ideal. Farm and Dairy welcomes discussion on this subject.

A Series of Questions

(Hoard's Dairyman)

Why is it, when the proof is overwhelming that the heifers from a registered bull are worth a third more in the cow market; that a graded up herd is twice as productive in milk; that a great majority of farmers owning cows, with eyes in their heads to see these things, will still persist in using a cheap grade or scrub bull worth possibly for beef \$25 or \$30?

Why is it with the proof on every hand to confirm it, that it is worth while to feed a good cow all she will eat of a well balanced ration with milk, butter and cheese at present prices; that you will find a host of farmers who believe that they will lose money if they feed such a cow a liberal grain ration?

Why is it, when any common mind could easily reason to it that a cow needs just as good air as men and women do, that farmers shut up a stable of cows with all their urine and manure about them, without a supply of fresh air, and proceed deliberately to poison their cows to death?

Why is it, when it must be apparent before their eyes every day that the farmers who are the most intelligent are the most prosperous, that so large a proportion of men who keep cows will not read or take any pains to inform themselves on this dairy question? Why do such men prefer to be ignorant rather than intelligent?

Why is it, that when thousands upon thousands of farmers use silos and declare constantly that the silo is a money-making thing, it is so hard to convince a large portion of our farmers that it would be a wise thing for them if they built a silo?

Why is it that a great proportion of farmers will persist in feeding oats worth \$23 a ton and corn worth the same, when they could sell the grain and buy a better feed, that will produce a quarter to a third more milk, for a much less proportion in price?

Why is it that so many farmers will still use the dirty, uncomfortable rigid old stanchion, with all the danger of injury by one cow stepping on the teats and udder of the next cow when she is lying down?

Why is it that so few farmers will put in the King system of ventilation in their stables, and more will persist in building new barns and stables with no provision whatever for such a system of ventilation, when it would be very easy to provide this almost indispensable thing for the health and increased efficiency of the cattle.

Why is it that so hard and such slow work in getting farmers to take especial pains to produce clean, sweet cream for the gathered cream creamery, and see to it that the cream is sent to the creamery before it is spoiled and unfit to make good butter from it?

Why is it that farmers, as a class, are so slow and difficult to convince of the value of all these much needed improvements and of a change on their part towards such improvement?

After all the missionary work that has been put forth, but comparatively few of our farmers are alive to these questions.

Creamery Department

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

Creameries Discard the Oil Test

Four more Western Ontario Creameries will change from the oil test to the Babcock test next season. A meeting of the officers and directors of the Alstfeldt, Saugeen Valley, Ayton and Egremont Creameries was held at Ayton on Nov. 4th, when it was decided to take up this question at the Annual Meeting of these creameries. The meetings were held on Dec. 14th, 15th, 16th and 17th, respectively. At which time the patrons voted in favor of the change. The following agreement was drawn up and signed by the Presidents of the respective creameries:—

We, the officers, directors and patrons of the Alstfeldt, Saugeen Valley, Ayton and Egremont Creameries acting upon resolutions passed at our Meetings on the 14th, 15th, 16th and 17th days of December, 1909, respectively, do hereby jointly agree to adopt the Babcock Test as a basis of testing our patrons' cream beginning with the opening of the season of 1910. We solemnly pledge our business honor and integrity to carry out the above agreement.

Cool the Cream

J. F. Singleton, Kingston, Ont.

The great need of the creamery business from the farmer's standpoint is to cool the cream. In one particular creamery in Eastern Ontario, two patrons only, sent sweet cream. Patrons claim that cream is not gathered often enough. Creamerymen can not afford to draw the cream more than twice a week. If the separator is kept clean, however, and a thick cream taken and it is cooled, and that is all there is to producing a first-class cream, twice a week is quite often enough to haul it.

The Locust Hill creamery will take in only sweet cream. They haul but creamery furnishes good evidence that sweet cream can be delivered when hauled but twice a week. The latter from the Locust Hill creamery always commands a premium in price over other creamery butter.

Were more evidence needed to support the contention that sweet cream can be delivered when hauled only twice a week, the case of the two patrons in the creamery previously mentioned who sent sweet cream, should be ample. That these two out of 220 patrons can send sweet cream shows it possible for the others to send sweet cream also.

We should urge everywhere the gospel of putting up ice. Any kind of an old building will answer for ice, provided, it is given good drainage. The average cooling that cream receives on the average farm is by means of placing it in the cellar where it remains until the cream hauler comes.

Pasteurization of Cream

"When visiting Denmark in 1895, I came to the conclusion that it was pasteurization that was making the success of the Danish butter in the British market," said Prof. H. H. Dean, recently, in addressing the creamery men gathered at the Guelph Dairy School. "Butter from pasteurized cream has a mild flavor that might not suit the local markets al-

though the local markets are changing in this respect.

"There is no trouble about the texture of the butter from pasteurized cream if it has been properly cooled. There is a heavier loss of fat in the butter milk from pasteurized cream especially from sour cream. It costs something to pasteurize, approximately one-tenth of a cent a pound according to Danish experiments. The butter from the pasteurized cream, however, commands from one-half to one cent of a premium over the non-pasteurized article, which pays well for the cost of pasteurizing and leaves a good profit besides."

More Discussion on Grading Cream

Part of the discussion on the subject "Is the Grading of Cream Practical," which took place at the recent creamery meeting at the Guelph Dairy School was given in these columns Dec. 30. Other points of interest brought out in the discussion follow: "Grading could easily be practised did one buy cream outright," said Mr. J. W. Newman of Lorneville. "But in co-operative creameries, it would be a difficult matter to grade the cream. We have to deal with patrons and it is often difficult even to get them to patronize the creamery. In our part of the country, dairy butter sells readily and if the creamery man does not take the cream, the patron will make it up at home with the result that the cream hauler must go over the road for less cream. Grading is not practical under average conditions. Personally I practise visiting the patrons and give all the instruction I can and when possible give a prize or bonus for the best cream."

CHARY ABOUT CHANGING METHODS

Mr. McCreeters of the Owen Sound Creamery Company said that he had had very little experience in grading cream in a commercial way. He had found that it was unwise to change methods in dealing with the farmers any more than is necessary. The farmer is inclined to think that it is to the advantage of the creameryman rather than in his favor. "Some slight premium might be possible for cream that reaches a certain standard, some standard such as 26, 27 or 28 per cent., but the premium would need to be very slight."

"If you want your patrons to go to the opposition, practise grading," was the advice handed out by Mr. Aldrich, Selkirk.

"If we start to give one patron more than another, some of them would soon leave us and there would be difficulty forthwith."



STINGY!

The Farmer who gets every piece of labor-saving machinery possible for field work and lets his wife drudge along with cans and crocks in the Dairy is mighty mean. A

De Laval Cream Separators

Makes the Wife's Life Worth Living!

FREE CATALOGUE

THE DE LAVAL SEPARATOR CO.

175-177 William St.
MONTREAL

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"We have found it quite an advantage to grade the cream as it comes in," said Mr. Malcolm of Sheffield. "We started to grade cream in order to get sweet cream. All sour cream that was taken in was entered up in the books as No. 2. At the end of the season, the total was made up, and one cent a pound bonus paid to those patrons who delivered No. 1 cream. In July and August, we used to pay a bonus of two cents. Aside from the sweet cream shipped to Hamilton, the cream was all churned together. Sixty or 65 per cent. of the cream came in as first-class under the milk system."

Mr. G. G. Publow, chief dairy in-

structor for Eastern Ontario when called upon by the chairman said that information in regard to the condition of the cream coming in to the creameries in Eastern Ontario, were better not published. It had been said, however, that only two per cent. of the cream was first-class, 75 per cent. second class and the remainder third class. The greatest trouble is that the cream is not cooled. Less than two per cent. of our cream is cooled. Many do not wash their separators. The cream is not cooled because the butter makers do not demand that it should be cooled. Mr. Publow thought that butter makers should stand together more

The Opportunity to Share in the DISTRIBUTION OF "O.A.C. No. 21" BARLEY

is still before the readers of Farm and Dairy. The offer will shortly be withdrawn. If you wish to share in the distribution of this great barley on the conditions stated, it will be well to write Farm and Dairy at once to that effect. A limited quantity only of this seed is still available. The last advertisement offering this barley will appear next week. If you want seed of "O.A.C. No. 21," that great barley, which as Prof. C. A. Zavitz has said, is bound to become generally grown over Ontario and which has yielded as high as eight bushels an acre more than the common Mandscheuri barley, then take advantage of this offer:

Two Bushels of "O.A.C. No. 21" for only Four New Subscriptions to Farm and Dairy One Bushel for Two New Subscriptions

Subscriptions to be taken at \$1.00 each in both cases.

The barley will be delivered f.o.b. Brantford, Ont.

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and demand good cream and not let competition interfere in this matter.

"The easiest part of the whole matter is to get a rich cream," said Mr. Newman. "Our cream averages over 27 per cent. We take no cream except that from separators. We scorn all other kinds. I have little faith in gathering up sweet milk to ship away. While we may gain at this end of the business, we lose on our butter, as we have only second class cream from which to make butter. Patrons have not been educated to cool their cream. We could not gather sweet cream if we sent our rigs out every day and had ice around the cans."

Cheese Department

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

Methods of Dividing Proceeds

J. F. Singleton, Kingston, Ont.

There are two methods of dividing proceeds at cheese factories based on the per cent. of fat contained in the milk, the straight fat basis by which a patron sending a 4 per cent. milk and one sending a 3 per cent. milk would get paid in proportion of \$4 to \$3 per cwt. of milk. On the straight fat basis, a variation of one-tenth per cent. in the test of milk will make a difference in the proceeds of 50 cents on a ton of milk. The other method is the fat plus two or as it is commonly known, "The Dean Method." Where this is in vogue, the patrons instead of getting paid in the proportion as indicated above, would receive their proceeds in the ratio of six to five.

In Wisconsin, the system of paying on the straight fat basis is universal. The same is true in New York and in other states, also in New Zealand. Why is the system not universal in Ontario? It is largely owing to the fact that our Canadian authorities do not agree upon which is the proper method.

Prof. Dean claims that paying by the straight fat basis is right only where the case in the different samples is in the same relation to the fat.

The objection to the "fat plus two method" is that it puts a premium on both watering and skimming. This may be illustrated in the following way. A patron might send pure water. Two plus nothing would give two, while a 4 per cent. milk plus

two would equal six and the two patrons would be paid in the proportion of two to six—and the one sent water only; in other words he would get one-third of the money and it did not belong to him. Nearly all the factories in Western Ontario that pay by test figure it on the plus two basis. Some authorities admit that Prof. Dean's method comes the nearest to being correct, that is when quality is not considered. Prof. Van Slyke and Prof. Robertson favor the straight fat method of dividing proceeds.

Where the pooling system, or paying by weight alone, is practised, there is a tendency for the milk to be poor. The quality of cheese is influenced by



The Northport, Prince Edward Co., Cheese Factory

Prince Edward county is noted for its many fine cheese factories and for the quality of the cheese manufactured. Many of the factories in the county are large, well equipped and are provided with cool curing rooms.

the fat it contains and by moisture. Where the fat is lacking, water must be put in to take its place, hence the quality is lowered. In a recent cheese scoring contest in Wisconsin, the highest scoring cheese contained the highest proportion of fat to casein and the lowest scoring cheese was the very opposite in every case.

Paying by straight fat, in the final analysis, is the better system as it puts a premium on the quality of the milk and prevents dishonesty; and from the better quality of milk, a better quality of cheese can be manufactured.

How to Improve the Quality of Milk Supplied to Factories

John Humphries, Frontenac Co., Ont.

My way to improve the quality of milk supplied to cheese factories is to instruct every patron, while he is around the factory, on the best way of caring for the raw material and supplying it in good condition at the factory. I would test each patron's milk by the Barthel reducing colorization method or Gerber filtration method. Both these are simple, practical and cheap and most efficient for testing the quality of milk supplied when paid for by the pooling system.

In this case the patron must carry his responsibilities past the weigh stand to the completion of the test. The maker then would willingly take up the responsibility of the resultant cheese. As conditions exist now it is about equivalent to buying a pig in a poke. The average patron should agree to shoulder his share of responsibility, especially in the face of the present unsatisfactory condition of the Canadian cheese market. It is most desirable for at least one representative from every factory in Ontario to go to the Dairyman's Convention at Belleville, January 6th, if only to hear our Dairy Commis-

sioner's address, his subject being: "Is the Cheese Industry in Canada in Danger?"

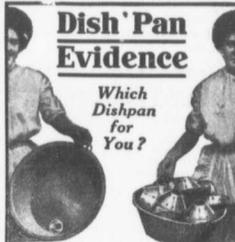
The time has come when patron and maker must combine and co-operate to turn out the finest goods possible. Such goods can only come from the best quality of milk made into cheese by skilled and efficient makers.

By the use of the suggested means or by some other better plan that will practically demonstrate to each patron the exact condition of his milk it will make him feel the necessity of taking proper care of and delivering his milk in sound condition or else bear the consequences.

The difficulty in finely discriminating between good and bad milk in

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make some cheese for exhibition purposes, we advised our patrons to take extra care of their milk and dip it or aerate it thoroughly. That milk was the worst ever. We never told patrons afterwards that they had been wrong and that the practice was wrong and that we must cool the milk as is now advocated by Mr. Barr—J. W. Newman, Victoria Co., Ont.

The creamery man is blamed for much more than is his just due. I believe that 75 per cent. of the hand separators in the country are not run properly. In consequence, considerable of the cream is lost and the man who tests the cream is blamed for it.—G. A. Gillespie, Peterboro Co. Ont.

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HE who feels contempt
For any living thing, hath faculties
That he has never used;
And thought with him
Is in its infancy

—Phillips Brooks.

"A MAN'S CASTLE"

By Emily Catrin Blake

IT WAS between the wedding journey I was being discussed that Helen broached her plans. And Helen had a charming way all her own, as her fiancé had discovered long ago. But it happened that in this particular instance the charming way was unnecessary for Leonard was quite willing to consent to her wishes.

"Mother and Father will be so lonely without me," Helen explained, wistfully, "and after the first year when they are accustomed to the thought that I belong to you, we might take up housekeeping for ourselves."

"Of course, dear, we shall do exactly as you please," the young man responded; "we'll be a happy family together."

So it was settled, and after the honeymoon, the radiant young persons returned to the parental home and settled down to real life.

Helen's parents were delighted to have their daughter with them. The mother's eyes were tearful when she clasped the returned Lrde and she kissed the glowing cheek tenderly.

"But it is hardly as it was, Helen," she whispered, tremulously, "for now you belong to someone else and are not my little girl any more."

Helen stroked the white hair fondly. "Just as much as ever," she declared; "everything shall be exactly as before."

As the only child, Helen had been somewhat spoiled. She was willing that the spoiling process should continue and Leonard did what was to be expected, blissfully unconscious that he might be laying up trouble for himself.

When dinner was announced on the night of the young couple's return, Helen trailed down the broad stairs looking especially bewitching. Her blue eyes sparkled and her lips curled entrancingly.

"Here's your place now, Len—opposite mine," she cried. "Well, move this vase so we can see each other."

Leonard attempted to retain the hand which he had caught as they descended the stairs, but half blushing the girl drew it from them. They were not alone, Leonard realized with a half sigh.

Helen's father beamed on them from the head of the table.

"Now, Leonard," he suggested, "don't forget to eat, just because Helen sits opposite to you. You require a little nourishment, you know."

Leonard smiled, but somewhere deep within his heart, there seemed to stir a remembrance of what he had dreamed of his home-coming with his bride would be. Yet the thought was intangible and elusive. Did it mean a slight disappointment?

But the dinner progressed merrily. The wedding trip was freely discussed. "Nothing was lacking," Helen said, vivaciously, "except that at times I missed you both and wished that you were with me."

The girl looked fondly at her parents and they, glancing back at her, seemed to smile a little sadly. Leonard felt decidedly out of it.

But he put unworthy thoughts from him. In marrying an only child and one worshipped as was Helen, he must to some extent share her with others. He accused himself vigorously.

Next morning he arose early and went downstairs. In the little sewing room overlooking the garden, Helen's mother sat. She looked up brightly as she heard Leonard.

"Oh," she cried, "I should like to talk to you for a moment. Have you time?"

Leonard sat down near her in answer to her question.

"Now," he said, "I have just five minutes to spare."

"I think I can tell you all I want to in this space of time," the mother replied. She looked steadily into his manly face before plunging into her subject.

"Len," she said, very softly, "you are Helen's husband and as that you are very dear to us. There are two or three little things that I should like to say to you regarding her."

In the first place, Helen has never been disturbed in the morning. I have always believed that she should sleep until she awakens. You will let this continue, won't you?"

Again a vague unrest clutched the young husband, but he answered brightly:

"Of course, Helen shall sleep as long as she desires. I want her to enjoy the same comforts now as before."

"Thank you," the mother answered; "and another thing: I don't desire Helen to feel any added responsibilities on account of this new life."

"It's hardly a new life, is it?" Leonard interposed gently. "Nothing is changed. Helen is still with you as before. In a way, nothing is changed."

Helen's mother agreed, "but, after all, we must admit that Helen is married, and marriage itself means the opening of new possibilities."

"Is that all you wanted to say?" he asked. "I am glad to know just how you like me to treat Helen."

Leonard rose.

"You are so dear and kind," she murmured, "an there is only one other thing. Helen has been used to having all that she desired in the matter of clothes. If—" the speaker moved uneasily as she caught the listen-

er's eyes. "If you feel at any time that you cannot afford a gown that doesn't tempt fancy, her father would be very willing—"

"He might be," the young man replied, "but I should not be willing. Helen knows my reasons and I shall trust her not to go beyond what I can afford."

Leonard walked away quickly into the dining-room, a hundred thoughts busy in his mind. His mother-in-law followed him, her voice raised in beseeching protest.

"My dear boy, she argued; "I did not mean to hurt you, but—"

Leonard drew her chair forward and as she seated herself he placed his hand gently on her shoulder.

"Let us dismiss the subject," he entered; "I see that Helen's father is also a late sleeper."

"At times," the mother replied, her blue eyes searching the man's face wistfully; "but you'll remember, Len, won't you about Helen sleeping in the morning. I have never yet forgotten to send her cocoa up when I was assured that she was awake."

"I'll remember," Leonard promised, and he turned to his breakfast.

The most beautiful months—the opening months—of married life flew by. No change took place in Helen's relations with her mother. The two were inseparable. Helen also desired to entertain now as lavishly as before her marriage.

"Blessed Helen," the mother objected, "I cannot afford to let you give these affairs constantly. Remember, little girl, that I am not a rich man—"

"That's all right, dear lady," Helen answered brightly at such questions. Father is willing to let me do just as I did before."

Leonard set his lips firmly.

"I cannot allow that, Helen," he affirmed. "You are my wife and you must share my lot, not your father's."

Helen pouted.

"I didn't know you were so selfish," she commented, "and I do want to entertain the girls at luncheon and matinee next week."

"How much will it cost?" The girl's eyes flashed wider.

"I don't know, I'm sure, Leonard. I'll ask mother."

"Very well, find out. I'll pay for that, but remember, you must not entertain on such a lavish scale for a long time."

Helen did not answer, and the incident was closed.

A month later, as Leonard sat at his lonely breakfast with the morning paper lying beside him, his wife glided softly into the room. In a moment he was on his feet, his arms opened to gather her in. With a little furtive glance around that had become habitual to her, she sprang toward him.

"So glad to see me, dear?" she asked.

"So glad to see you, dear one," he repeated joyfully.

"Well, you owe this to mother," she answered as she withdrew from his embrace. "She suggested that we call on the Herberts to-day and I assented. They live out in the country. Mother wanted to go this afternoon and stay until to-morrow, but I wanted to go early this morning."

Leonard's heart sank. It was not for him that she had risen early. No thought seemed to enter his mind that he should be consulted in any way.

"I hope the visit will be a pleasant one, Helen," he said at last.

"It will be," she promised; "I always enjoy going out with mother, anyway."

But at dinner time, Helen had not arrived home. A telegram directed to her father and signed by her mother announced that they had decided after all to remain over night.

Leonard excused himself early and went upstairs. For some indefinite reason, he sought for the old pipe that he had smoked when at college; He seemed to desire its dumb company to-night.

He wondered where the mistake lay, for a mistake there surely was. Suddenly he believed that he knew. And it was such a little thing too. He should have been given the seat at the head of the table! Then he laughed scornfully at himself for the intangible thought that sprang from the chaos of his mind. Was that the trouble? And why should he be given the seat at the table in another man's home?

He was tired, and he could not wrestle with the question, for any solution that came showed him in a selfish light. He should be willing that Helen receive all the comforts to which she had been accustomed.

Then an illuminating idea came. Why not have the vacant room next to his dressing-room made into a little den? Then he and Helen could come upstairs after dinner, and he could take her hand and kiss her openly as she moved, not his wistful calling forth that furtive expression. Yes, that was what he missed, the frank exchange of caresses, the frank expression of love and admiration that no matter how sincere, would sound out of place to listeners.

(Concluded next week.)

The Upward Look

If ye, being evil, know how to give good gifts unto your children, how much more shall your heavenly Father give the truly spirit to them that ask him.—Luke 11. 13.

In our talks about the nature of baptism of the Holy Spirit it has been shown that in order to receive it we must recognize and be sorry for our sins, we must be willing to do whatever God asks us to do, no matter how unpleasant (it won't be unpleasant to us in an admission of soul requires it or makes it so) and we must be prepared to confess our Saviour as such and be anxious to do His good will. Our text points out that our hearts are to be given tasks. We must ask God for His Holy Spirit. Our verse, this week, shows us that God is more willing to give it to us than our earthly parents are to give us good gifts. Why then should we not ask Him with confidence that our petitions will be granted.

We must, however, ask in the right way. The right gift of the Holy Spirit is the greatest blessing that we can receive. It is greater than riches, power or wisdom. When the kings of the Israelites, as Saul, for instance, had God's Holy Spirit with them they prospered and overthrew all their enemies. When, however, God's Spirit left them, disaster followed. We must long for this blessing every day. We must be willing to give up everything else, if necessary, in order that we may obtain it.

We may depend upon it that God will not give us anything but the best unless He sees that its possession is injuring our souls. We must ask for this blessing with all the power and sincerity of purpose we possess. We must be willing to set aside things aside and if necessary wait for this blessing. The gift of God's Spirit is such a great and holy one, God does not give it lightly. Only those who are worthy receive it. Our earnestness must be able to stand God's tests or it will avail us nothing. Sometimes, before all selfishness, pride, revengefulness, doubtfulness and other bad spirits are recognized by us and through God's help removed from our lives it is days or weeks or even years before God considers us worthy to receive it. We may wait for it, but our Spirit. There need be no delay, however, as soon as we comply with God's conditions the blessing follows immediately. The length of the delay depends upon our own hearts. Next week we will have more to say on this subject of asking.—I.H.N.

Women's Institutes

SUPT. G. A. PUTNAM

It is encouraging to know that an increasing proportion of the membership of Women's Institutes is made up of young women and girls who are not only assisting by contributing music, readings and recitations, but are also taking an active part in the discussion and consideration of subjects which are brought before the institute from time to time. One of the most effective ways to secure their co-operation and assistance is to ask them to bring for exhibition at the institutes, articles which they have made, whether it be sewing, fancy work, baking, preserving or some other line of household work, and ask those who receive first place for thoroughness in their work to explain briefly to the members the methods followed. In this way you not only increase the interest of the girls, but their mothers also are more likely to be more regular attendants.

It is a good plan for adjoining institutes to arrange for an interchange of program and papers. This has resulted in a higher standard in the quality of addresses and papers given and a wider circle of acquaintance and more uniform work in the dif-

ferent localities. It does not seem just that the excellent papers and addresses prepared should be delivered only once and, then before a small society. The great majority of these are worthy not only of presentation before the societies in the districts concerned but are worthy of publication for the benefit of the institutes at large. When one knows that her paper or address is to be delivered upon several occasions before different audiences she is encouraged to put a little more time and labor upon the preparation of the same.

Best rooms have been established by a few institutes and others are making plans along this line for the future. Why should not the women of the village or town and their friends in the country co-operate in fitting up a room to use as a common meeting place and in which literature purchased for the institute could be kept for reference and distribution.

The first effort on the part of an institute to raise funds resulted in a profit of something over \$800 at a bazaar held at Brampton, and the moving spirit are confident that the assistance to be secured from other branches and the support they have already been promised by leading citi-

zens in Brampton and other places in the county will give plenty of funds to establish an hospital of considerable proportion. There is no reason why the Women's Institutes should not take an active part in undertakings of public character such as this.

The Women's Institutes have done considerably by visiting and offering suggestions to the trustees to improve the conditions surrounding the rural school. The sanitation of the school has been improved and scholars and teachers have co-operated in beautifying the school grounds as a result of suggestions offered by the Women's Institutes.

Exhibitions of articles made in the household and appliances used in the home can be made a very interesting and profitable part of the Institute work, especially when accompanied by small prizes to those who have reached the greatest perfection in the preparation of the articles shown and in a description and explanation of the same.

While we have mentioned a few features of the work which have impressed themselves upon us during the past year, it should be remembered that the lines of work which have characterized the Women's Institutes from the first continue to hold a prominent place in the monthly program, refer to such subjects as the following: Food values, selection, cooking and serving of foods, pure water, sanitary milk supply, sanitation in and about the home, personal hygiene, beautifying of home surroundings, architecture of the home, house furnishings, general management in the home, training of children, the rights and responsibilities of the different members of the family, etc.

What are the chief duties lying before institute officers and workers? In the first place we must not lose sight of the fact that our object is to improve conditions in the home. When we have done this the domestic life will certainly be elevated. We believe it wise for every woman to plan her responsibilities and work so that she will be enabled to attend a few institute meetings or meetings of other organizations where she will have an opportunity of meeting with those who have common interests and responsibilities. We would be sorry to learn, however, that any mother or wife had neglected her first duty, the home, in attending to the duties which come to her as an institute officer or member.

(Continued next week.)

When papering a room, try mixing the flour paste with skimmed milk, but be sure there is no cream left on the milk. Sour milk is even better than sweet milk. Soak the paste thoroughly, and do not have it too thick. Paste made in this way will stick on whitewashed walls.

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DIAMOND CAKES

Cream 1 cup granulated sugar with 1-4 lb. butter, then add 1 beaten egg, and flour enough to roll, sifted with 1 teaspoon baking powder. Cut in diamond shapes, brush the tops of the cakes with beaten egg, and sprinkle with currants, chopped almonds and cinnamon.

SWEET DROP CAKES

The ingredients are 3 eggs and the weight of the 3 eggs each in flour and sugar. Beat the yolks of the eggs with the sugar to a froth, and then stir in alternately the flour and the beaten whites of eggs. Place a piece of well-oiled white paper on a sheet of tin and drop small spoonfuls of the batter on the paper. Dust over with sugar and bake a golden brown in a moderate oven.

PUMPKIN TARTS

Invert some gem pans and lard them the least bit, then cover with pie crust and bake yellow brown. If you want the tarts to have strips across, bake some of them also. Filling: Cook to a cream in double boiler, 1 pt sweet milk, 1 pt sifted pumpkin, 2 beaten eggs, 2 tablesp melted butter, spice of preferred kind to suit taste, and sugar in same quantity. Fill the baked cups with this mixture and cool. This amount fills 12 tarts.

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Designs illustrated in this column will be furnished for 10 cents each. Readers desiring any special pattern will confer a favor by writing Household Editor, asking for same. They will be published as soon as possible after request is received.



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OUR HOME CLUB

BETTER TIMES NOW.

What is wrong with "Dot." Is she one of those "back numbers" that still think the hours must be long on the farm, that money must needs come in slowly, and that the general spirit, which her letter display is, perforce, inseparable from the farm? So much for her contribution to the Home Club in Dec. 25. Much of that with which "Dot." deals was once all too common. It is still existent in some districts, but thank goodness our farmers on the whole enjoy better things and a larger life since adopting modern ways of doing things and carrying their business as any other "business" man would do. If conditions are with you, gentle reader, such as "Dot." pictures, rest assured that it is pretty much of your own making. If not your own fault, then the blame belongs to someone closely connected with your home or farm.

Better things are now available to all who will but reach out and grasp them. The experience of the most successful farmers is put before you in the other columns of this paper and what we need to do is to get over that spirit of hard times and join the ranks of the successful, who before they could succeed had to develop an

optimistic spirit. The information is available; then see to it that it is applied, and let us make the farm what it is now to many, the very best place on earth to live, be happy and contented in.—"The Son."

How to Launder Doilies

Wash them in warm water with ivory or any other pure soap. After rinsing thoroughly, place between towels and squeeze as dry as possible.

Instead of ironing the doilies, try pinning them out on the ironing-board, right side down, stretching them smooth and being careful to keep the threads of the linen straight. They can be left in this position until perfectly dry; or, should this not be convenient, they may be dried with a hot iron on the wrong side.

A Substitute for Bread Crumbs

When you are making an omelet that requires bread-crumbs for thickening, and you have none handy, try using a slightly larger amount of any of the flaked breakfast foods. The flavor will be much better when the crumbs are used.

If you are making pancakes use them again. If you will be pleased with the one of the fine-grained cereals mixing your pancakes, and add a little more baking-powder than usual. This recipe will give satisfaction to the home circle, and especially to the "men folk."

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Our 10-piece Toilet Set is made of absolutely the best grade English semi-porcelain ware. All pieces are large, full size. The decoration consists of wild flowers, prettily entwined with foliage.

We can furnish it in dark blue, pink or peacock blue. Given for 5 new yearly subscriptions to Farm and Dairy. Slop Jars, with cane handle, to match above set for 2 additional subscriptions. Address:

CIRCULATION DEPT. FARM AND DAIRY PETERBORO, ONT.

The Sewing Room

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

BLOUSE WITH CHEMISSETTE 550



The blouse with a chemisette always means the effect of daintiness. The blouse is closed at the front. There are just enough tucks at the shoulders to mean becoming fullness and the closing is made with two big buttons.

Material required for medium size is 3/4 yds 21, 24 or 32, 2 yds 44 in wide, 1/2 yd 18 or 21 for chemisette, 1/2 yd of contrasting material for turned-over collar and cuffs. The pattern is cut for a 34, 36, 38, 40, 42 and 44 in bust and 20 in waist.

CIRCUAR CAPE 6512



Capes are much worn just now. They are easily slipped on and off. This one can be made in many different styles, with straight revers for its entire length or buttoned over double breasted. In the illustration openings for the arms are made at the seams, but they can be cut in the fronts if preferred.

Material required for the medium size is 7/8 yds 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100, 102, 104, 106, 108, 110, 112, 114, 116, 118, 120, 122, 124, 126, 128, 130, 132, 134, 136, 138, 140, 142, 144, 146, 148, 150, 152, 154, 156, 158, 160, 162, 164, 166, 168, 170, 172, 174, 176, 178, 180, 182, 184, 186, 188, 190, 192, 194, 196, 198, 200, 202, 204, 206, 208, 210, 212, 214, 216, 218, 220, 222, 224, 226, 228, 230, 232, 234, 236, 238, 240, 242, 244, 246, 248, 250, 252, 254, 256, 258, 260, 262, 264, 266, 268, 270, 272, 274, 276, 278, 280, 282, 284, 286, 288, 290, 292, 294, 296, 298, 300, 302, 304, 306, 308, 310, 312, 314, 316, 318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338, 340, 342, 344, 346, 348, 350, 352, 354, 356, 358, 360, 362, 364, 366, 368, 370, 372, 374, 376, 378, 380, 382, 384, 386, 388, 390, 392, 394, 396, 398, 400, 402, 404, 406, 408, 410, 412, 414, 416, 418, 420, 422, 424, 426, 428, 430, 432, 434, 436, 438, 440, 442, 444, 446, 448, 450, 452, 454, 456, 458, 460, 462, 464, 466, 468, 470, 472, 474, 476, 478, 480, 482, 484, 486, 488, 490, 492, 494, 496, 498, 500, 502, 504, 506, 508, 510, 512, 514, 516, 518, 520, 522, 524, 526, 528, 530, 532, 534, 536, 538, 540, 542, 544, 546, 548, 550, 552, 554, 556, 558, 560, 562, 564, 566, 568, 570, 572, 574, 576, 578, 580, 582, 584, 586, 588, 590, 592, 594, 596, 598, 600, 602, 604, 606, 608, 610, 612, 614, 616, 618, 620, 622, 624, 626, 628, 630, 632, 634, 636, 638, 640, 642, 644, 646, 648, 650, 652, 654, 656, 658, 660, 662, 664, 666, 668, 670, 672, 674, 676, 678, 680, 682, 684, 686, 688, 690, 692, 694, 696, 698, 700, 702, 704, 706, 708, 710, 712, 714, 716, 718, 720, 722, 724, 726, 728, 730, 732, 734, 736, 738, 740, 742, 744, 746, 748, 750, 752, 754, 756, 758, 760, 762, 764, 766, 768, 770, 772, 774, 776, 778, 780, 782, 784, 786, 788, 790, 792, 794, 796, 798, 800, 802, 804, 806, 808, 810, 812, 814, 816, 818, 820, 822, 824, 826, 828, 830, 832, 834, 836, 838, 840, 842, 844, 846, 848, 850, 852, 854, 856, 858, 860, 862, 864, 866, 868, 870, 872, 874, 876, 878, 880, 882, 884, 886, 888, 890, 892, 894, 896, 898, 900, 902, 904, 906, 908, 910, 912, 914, 916, 918, 920, 922, 924, 926, 928, 930, 932, 934, 936, 938, 940, 942, 944, 946, 948, 950, 952, 954, 956, 958, 960, 962, 964, 966, 968, 970, 972, 974, 976, 978, 980, 982, 984, 986, 988, 990, 992, 994, 996, 998, 1000.

GIRL'S COSTUME 6507



This dress can be made in three ways, each the trimming portions and sash illustrated, with the trimming portions without the sash, or plain as shown in the small view. It is equally correct in all styles but the plain dress is adapted to school and more dressy occasions.

Material required for medium size is 5 1/2 yds 24 or 27, 3 1/2 yds 32 or 3 1/2 yds 44 in wide. The pattern is cut for girls of 6, 8, 10, and 12 yrs and will be mailed on receipt of 10 cts.

CHILD'S COAT 6510



This coat is long enough to cover the frock and is made with plaits below the waist line that mean comfortable fullness. Bordeaux red cloth with collar and cuffs of velvet is the material illustrated, but there are numberless cloakings that are appropriate.

Material required for medium size is 4 1/2 yds 27, 2 3/4 yds 44 or 2 yds 52 in wide with 1/2 yd of velvet. The pattern is cut for children of 2, 4, 6 and 8 yrs and will be mailed on receipt of 10 cts.

OUR FARMERS' CLUB
Contributions Invited.

QUEBEC

SHERBROOKE CO. QUE.
LENNOXVILLE.—The winter season thus far has been very pleasant and favorable for all industries. Weather has been wintry, but not too cold, and there is sufficient snow cover for the season. These conditions have helped business in all directions and farmers have shares in the general average. Prices for large produce have been very good and of course the Christmas season brought an extra demand. Fresh eggs are very scarce, retailing at from 50c to 60c. Pork still holds at 11 and 11½ cents a lb. Butter 23 and 30c. Potatoes are abundant and cheap, bringing 40c. Feed is still high with no prospect of being cheaper. This has put many farmers out of the winter dairy business and has increased the acreage under grain as well.—H. M.

ONTARIO

HASTINGS CO. ONT.

TURRIFF.—Markets are steady. Oats are 40c, peas 90c, potatoes 50c, hay 513 to 515. Considerable business is doing around us, which helps to keep up prices of produce. A revival of building has commenced, quite a few barn frames are being made this fall and winter. Nearly everyone is trying to make a start at poultry raising, this being having paid so lately. Lard and tallow, as some say cattle will be scarce next spring, so many having been shipped this fall.—W. E. W.

NORTHERN-BREMERS CO. ONT.

WICKLOW.—Farmers are fairly well satisfied with the result of their season's work; grain turned out to be a fairly good average price, and the Christmas returns closed the first of December. The return from the "Old Country" for apples have been quite satisfactory. Stock generally has been through winter in good condition.—E. B. H.

HALIBURTON CO. ONT.

KINMOUNT.—The good sleighing and mild weather of the last two weeks has made things lively here for Christmas. A large number took in the winter fair at Lindsay on Dec. 31st, where they enjoyed a good show. Cattle have gone into winter quarters in fairly good shape. Feed, with exception of hay, is plentiful. Large quantities of tan bark wood, rice, posts, etc., are changing hands.—S. T.

IRONDALE.—We have had sleighing for a month. Farmers are taking advantage of it in getting up wood and hay. Cattle are looking well. There is plenty of water for the stock.—T. P. H.

WELLINGTON CO. ONT.

ELORA.—The finest of winter weather prevails. Christmas has been a success from a business point of view. Markets are quiet, as it is to be expected at this season, and it would not be surprising if the highest level of prices had been reached and passed at least for some months. There are large numbers of heavy exporters in the stalls. These will begin to move in a couple of months time if markets permit, but having been put in at exceptionally high prices prospects for profits are not large. Quite a number are feeding for \$1.00 a cwt. increase in price, which at present prices of feed is not likely to leave any profit for the handling and on the whole this plan is not to be commended.—G. W.

WATERLOO CO. ONT.

NEW HAMBURG.—Municipal matters now occupy people's attention. The county roads system has been adopted in this county, each township paying its own money for its own improvements. This system works very satisfactorily and our council is erecting permanent bridges and well graded and drained roads. This system is an encouragement to put up first-class bridges and to build roads that are in every respect first class. Christmas fowl brought good prices. Several of our turkey men drove to Berlin and for the Christmas market received 25 cents a lb. for their produce. Chickens sold at 12c live weight; hogs are selling at various prices. There has been competition on New Hamburg market. Last Monday \$8.30 a cwt. was paid.—R. G. S.

BRUCE CO. ONT.

WARTON.—Now that winter has fairly set in and all markets are in winter, the farmer is asking himself the ques-

tion, Have I enough feed to pull me through? Most of us have shortened our stock down to so few that there will be little doubt that there will be enough, while others are depending on getting enough feeding to say or when they have to buy. One thing is certain, there never was such a failure of crops before in Althorn North Anabel, although the grasshoppers were the most cases of short grain crops. There will be more peas soon next year, because the crop are not so much, then as a rule. Corn will be seen more than ever before. Turkeys and ducks proved profitable the last year, but for them was profitable, the latter being the most persistent hopper scavengers. Farmers realized 12 and 15 cents a pound for Christmas 14 to 20 pounds each dressed, and hens 10 to 12 pounds. Butter is firm at 25c, eggs 28c, hay \$15 prossed.—O. S.

MIDDLESEX CO. ONT.

TEMPO.—In the early times, before the shipping of apples to outside markets became a general custom, they were disposed of in the following way: Apples were sold in the markets of the local towns, and to the settlers who had not as yet an orchard was being fruit. About one quarter were used this way. Another quarter was made into cider. The rest was kept for vinegar, or boiled down thick and mixed with sweet apples and made into cider apple sauce. This was a staple article, for the table, 40 years ago. Apples and winter. Nearly everyone is trying to make a start at poultry raising, this being having paid so lately. Lard and tallow, as some say cattle will be scarce next spring, so many having been shipped this fall.—W. E. W.

No Kick Coming

I have just received the pure bred Berkshire pig, sent me by Farm and Dairy, from Mr. Howard Wilson of Russell, Ont., for securing a club of seven new subscribers, and it is O.K. Now I am going to get up another club and get a sow pig and if it is as good as the boar you sent me there will not be any kick coming.—E. L. Grant, Quebec.

a more plentiful supply of smaller fruit has out "old" in the background. Another quarter was kept for home use, and these were mostly pitted away in some warm place and after doing with out apples for a few years, they put be universal rejoicing in the home when a fresh pit would be opened. And bulging pockets full would be taken to school the next day, much to the teacher's sorrow. And the remaining quarter would be dried and some sold for there always was a market for apples that had been dried at home. In the good "old summer times" these dried apples would be mixed with raisins and after being well sweetened, would produce a smile on any boy's or girl's face when a great dishful was placed on the table. The paring-bowl will come next.—J. E. O.

ELGIN CO. ONT.

TALBOTVILLE.—For several years "Local Option" has been in operation in this village and township. The splendid results of a clean town are before our eyes. Greater industry, better crops, more up-to-date buildings and a sober, quiet community are the result of old residents say: "It often makes me feel sad when I look back at the farms that have been squandered through their owners in years past indulging too far in the flowing bowl." In those years the hotels received thousands of dollars every year from the gamblers, the heartless get what was left. Now the opposite is exactly the case. No hotels whatever, and a splendid store, doing a business of many thousands a year. Another man told the writer the following: "When I was a young man, night after night it was a dollar a dozen of the old boys and young men going to the bar and treating one after another. Now I don't think there is one young man or boy in the village or its surroundings who could be induced to touch a drop of liquor. And if a petition was put in circulation to have a hotel, it would be granted I don't think the bearer could get a signer. We think too much of our present prosperity and quiet village to ever again allow liquor to be sold in it."—J. E. O.

An Advertisement in Farm and Dairy will sell you more than 1000 lbs.

LIVE HOGS

We are buyers each week of Live Hogs at market prices. For delivery at our Packing House in Peterborough, we will pay equal to Toronto market prices. If you cannot deliver to our Packing House, kindly write us and we will instruct our buyer at your nearest railroad station, to call on you.

THIS WEEK'S PRICES FOR HOGS DELIVERED AT FACTORY
\$8.00 a Cwt.
FOR HOGS WEIGHING 160 TO 220 LBS.

THE GEO. MATTHEWS CO., LIMITED
PETERBOROUGH, - HULL, - BRANTFORD

GOSSIP
ANOTHER GREAT WINTER FAIR.

Prospects are very bright for a magnificent exhibit of live stock and poultry in connection with the Eastern Ontario Live Stock and Poultry Show which will be held in Ottawa on January 17th to 21st, 1910. Although several thousand copies of the prize list were distributed in September nearly every mail since has brought a number of applications for lists. The recipients of these lists will find in the large prizes offered a strong inducement to prepare and make exhibits.

A total of \$8,000.00 is offered in cash prizes for horses, dairy cattle, beef cattle, sheep, swine, seeds and poultry. The classification provides for animals of all the principal breeds and the different ages. Breeders who have stock that they could show should make arrangements at an early date, as live stock entries close on January 8th and poultry entries on January 3rd. Prize lists may be secured on application to D. T. Elderkin, Secretary, 21 Sparks St., Ottawa.

HOLSTEIN NEWS.

Since a merely average lot of tested animals give such fine results, it is not strange that there is general agreement in dairy circles that Holstein-Friesians produce milk in large quantity; yet when a milk producer, who has grown

tired of a losing business with light yield speaks of his intention to give Holstein-Friesian blood a trial, he is often told by those who know nothing about it that, while the breed does give a large flow of milk, the milk is below standard in quality. It lately became necessary for the Advanced Registry office to make some computations in this line; so let us take the figures from strictly conducted official tests and carefully examine this charge:

Above 44 quarts of milk a day, in weight 93 lbs., might well be considered as an amount so great that no cow could produce it; yet under the strictest of official tests 32 Holstein-Friesian cows have produced in excess of 651 lbs. of milk in seven consecutive days. This herd of 32 cows, of which some were not of full age, produced within a period of seven days 21,757 lbs. of milk containing 719.72 lbs. of butter-fat; thus showing an average of 3.31 per cent fat. The average for each cow was 680 lbs. of milk, containing 22.9 lbs. of butter-fat; equivalent to 97.1 lbs. or 47% quarts of milk a day, and 26% lbs. of the best commercial butter a week. These animals are the heaviest milkers of the breed, one of them producing 119 lbs. of milk in one day; yet the average per cent fat for the mixed milk of the lot is fully 10 per cent in excess of the usual legal requirement for milk as sold—Malcolm H. Gardner, Supt. of Advanced Registry.



IT WILL PAY YOU

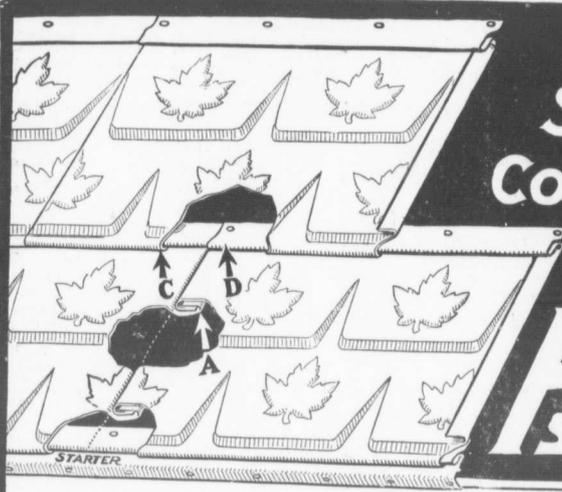
To Cut Your Straw and Corn
With One of Our Cutters

They are strong, easy running and handy to operate. Large and small styles. Latest improvements.

The Peter Hamilton Co., Limited
Peterborough - Ontario

Note the Safe-Lock Construction of

PRESTON SAFE-LOCK SHINGLES



Safe-Locked on All Four Sides

Don't make the mistake of thinking that all makes of metal shingles are very much alike. There is a vast difference between PRESTON Safe-Lock Shingles and others.

Unlike other Shingles, PRESTON Shingles do not merely slip or slide together. Instead, they are SAFELY LOCKED on all four sides. The picture above shows how.

Look at ARROW A. See how the sides of the shingles hook over each other. This is on the principle of the "sailor's grip." It is utterly impossible for shingles locked in this way to pull apart. The heavier the strain, the firmer the grip.

Twice as Strong

The top lock of PRESTON Shingles is TWICE as strong as our wonderfully secure side lock. It consists of three thicknesses of sheet steel—see ARROW B.

The top of the shingle is where the greatest strain falls. Yet the top lock of most other metal shingles isn't as strong as the side lock of ours.

ARROW C shows how the shingles above hook over and lock securely to row below.

Nailing Is Protected.

ARROW D shows the method of nailing together the top locks of two adjoining shingles. The top lock of the right hand shingle overlaps the one on the left. The nail goes through both shingles.

All nails on the flange of the top-lock are covered by the shingles on the row above. Thus all nails are protected from exposure to the weather. They cannot rust or work loose. They are there, for keeps.

So strong are our locks that there has not yet been a gale

powerful enough to rip off a roof covered with PRESTON Safe-Lock Shingles. The terrific wind storm that swept over Ontario on April 8, 1909 ripped off scores of wooden, metal and prepared roofings. Yet not one of these metal roofs was a PRESTON Safe-Lock roof.

Gale-proof Shingles

So close do PRESTON Shingles lay to the sheathing and so secure are the Safe-Locks that even if some of the shingles were not nailed the roof would be solid and wind-tight.

It is utterly impossible to get PRESTON Shingles off the roof in any other way than by removing the nails one by one and unlocking each shingle separately. When you put PRESTON Shingles on your roof they are on to stay.

Snow-proof, too

No snow can be driven up PRESTON side locks and on to the sheathing below. The fold of our top lock closes right down over the end of the side lock. No rain or snow can be forced past this fold of sheet steel, unless you drill a hole through it first.

Just how easy it is for snow or rain to be driven up the side joints of other shingles you can readily see for yourself.

Simply fasten the sides of two ordinary shingles together. Then hold the shingles up and look through the joint. You can see daylight through it. That means there is an unobstructed passage through which rain or snow can be driven by the force of the wind.

Make the same test with PRESTON Shingles. You cannot see daylight through our side locks. That means the ends of our side locks are closed securely against wind and weather.

Generous Folds

The folds of PRESTON Safe-Locks are of such generous size that there is room and to spare for expansion and contraction due to excessive heat and cold.

Even the shrinking of the wood sheathing or the heavy strain due to the settling of the building is not sufficient to make any difference to our safe-locks, whereas other shingles will pull apart and leave spaces for leaks.

Patented Construction

You understand now why PRESTON Safe-Lock Shingles are so different in construction from other metal shingles. They will always be different and better, too. We were the originators of the interlocking Shingles. The patents we hold prevent others from making as good a shingle.

British Government Specifications

It is a well known fact that the British Government is the most particular buyer in the world. Ordinary metal shingles could not pass their Acid Test for galvanizing. This test is more severe on the galvanizing than twenty years of Canadian weather. Yet PRESTON shingles will easily pass this test.

PRESTON Shingles are made and galvanized according to British Government Specifications.

Twice the Service

Shingles galvanized according to these specifications are good for twice the service of shingles galvanized in the ordinary way.

Metal Shingle and Siding Co. Limited

Head Office, Dover Street Factory, Preston, Ont.
Branch Office and Factory, Montreal.

Lightning Guarantee, Free

We have been making PRESTON Safe-Lock Shingles for eleven years. In all that time we have never heard of lightning damaging a building roofed with PRESTON Shingles.

So positive are we that a roof of PRESTON Shingles is lightning-proof that we give you a lightning guarantee free. This proves to you our unlimited confidence in the lightning-proof quality of PRESTON Shingles.

Most Quickly Laid.

As PRESTON Shingles are cut accurately to size, and the locks carefully made, they lock together quickly.

A man and a helper can lay 10 squares of PRESTON Safe-Lock Shingles in a day, whereas 5 or 6 squares would be a good average with ordinary metal shingles. If you have a large surface to roof that saving of time and labor means a good deal to you.

Booklet Reward

We have just issued a new booklet, "Truth About Roofing." We should charge something for this, as it contains information of real value to anyone who has a building to roof. But we will send it FREE as a reward to all who cut out, fill in and mail the coupon to us. Just you mail it today, or you'll forget it.

Please send me your new booklet, "Truth About Roofing." I am interested in roofing and would like complete information about PRESTON Shingles, British Government Specifications and Free Lightning Guarantee.

Name _____
P.O. Address _____
County _____ Prov. _____

40 Million Square Feet of Oshawa Shingles

Cover Canadian Roofs Today

A ROOFER'S square is 10 x 10 ft.—100 square feet. There are 400,000 such squares of Oshawa Steel Shingles in use to-day in Canada. Enough

THEY KEEP ON SELLING BECAUSE THEY MAKE GOOD

steel, that, to make a pathway a foot wide and 7,576 miles long. Almost thrice the length of the C.P.R. tracks. Nearly enough to roof in a thousand acres of land! And the greater part of those Oshawa Shingles will be right on the job, good, weather-tight, rain-proof roofs, when your grandsons are old, old men. They are good for 100 years.

This is the One Roofing It Pays Best to Buy

Figured by price-cost, "Oshawa" Guaranteed Steel Shingles are as cheap as the poorest wood shingles. Figured by service-cost—the length of time they will make even a passably good roof—wood shingles cost Ten Times as much; slate costs six times as much; and the stuff they call "ready roofing" costs Thirty-Three Times as much! These are facts. They can be proved to you. Proved by figures; by the experience of hundreds of other people who doubted at first, just as you perhaps doubt. Proved, absolutely! You want that proof before you roof. Get it! Send for it to-day.

No Other Roofing Does This

Stays rain- and snow- and wet-proof for fully a hundred years. Absolutely fireproofs the top of the building for a hundred years. Protects the building from lightning for a hundred years. Resists the hardest winds that blow for a hundred years. Keeps the building it covers cooler in summer, warmer in winter, for a hundred years. Gathers no moisture, and never sweats on the under side for a hundred years. Needs no painting, no patching, no care nor attention for a hundred years. **WHAT MORE CAN YOU ASK OF A ROOF?**



The picture above, on the right, shows the new Spanish pattern Oshawa Galvanized Steel Shingle (Guaranteed). That on left is the standard pattern.

Probably 1835 seems a long way off to you. By that time, I suppose, aeroplanes will be as numerous in the skies as steamers are on the seas now. I don't believe the fall of an aeroplane upon it would harm a Pedlarize-roof.

Yet, when 1835 begins the guarantee that goes with every square foot of my shingles will still have twelve months to run.

You may not be around then. I may not be here. But this powerful Company I head will be doing business; and the price of putting a new roof on your building will still stand as a mortgage upon our assets.

Understand me clearly:

If the Oshawa-shingled roof you put on this year falls—even on the last day of 1835—to make good to the letter the plain promises of our Guarantee, there's a new roof for nothing going on that building just as soon as we can get a man there.

Think that over for a minute. Think if it isn't a pretty clear evidence of merit in roofing.

That is what I call making good with Oshawa shingles. That is what you pay five cents per year per square for.

Seems to be worth the money, doesn't it?

G. A. Pedlar

ADVERTISING alone never sold that vast area of Pedlar Shingles. Smooth salesmanship never kept them selling; nor glib talk; nor lying abuse of competing goods; nor cut price. Those things do sell shingles, right here in Canada's roofing trade. But Oshawa Shingles sell, and keep on selling, for a different reason. They make good. They keep out the wet, year after year, as we say they will. They protect buildings from fire and lightning, as we say they will. They make good.

THEY DO ALL WE SAY THEY WILL AND MORE TOO

This is the One Roofing That is Guaranteed

Some makers of 'metal shingles' (ever notice how careful they are to avoid saying steel?) point with pride to roofs of their 25 years in service. BUT THEY DON'T GUARANTEE their shingles for 25 years to come. You buy Oshawa Steel Shingles—the only kind that IS guaranteed—upon the plain English warranty that if the roof goes back on you in the next quarter-century you get a new roof for nothing. You can read the Guarantee before you decide. Send for it. See if it isn't as fair as your own lawyer would make it on your behalf. Isn't that square?

Book and Sample Shingle Free

Send for free book and free sample of the Oshawa Shingle itself. It will interest you to study it. You will see the actual construction. You will see that the Pedlar Improved Lock, on all four edges of the shingle, makes it certain that moisture never can get through any Oshawa-shingled roof. You will see how the Pedlar process of galvanizing drives the zinc right into the steel so it never can flake off. You will be in no doubt about which roofing after you have studied this shingle.

Send for it and the book and Guarantee. Send for them now.

It Will Pay You To Pedlarize All Your Buildings

"To Pedlarize" means to sheathe your whole home with handsome, lasting and beautiful steel—ceilings, side-walls, outside, roof. It means to protect yourself against cold; against fire; against much disease; against repairs-bills. Ask us and we will tell you the whole story. Just use a postcard and say: "How about Pedlarizing my house?" State whether brick or frame. Write to-day.

The PEDLAR PEOPLE of Oshawa

ESTABLISHED 1861

HALIFAX
16 Prince St.

ST. JOHN, N.B.
42-46 Prince William St.

QUEBEC
127 Rue de Pent.

MONTREAL
321-3 Canal St.

OTTAWA
423 Sussex St.

TORONTO
111-113 Bay St.

LONDON
66 King St.

CHATHAM
200 King St. W.

PORT ARTHUR
45 Cumberland St.

WINNIPEG
76 Lombard St.

REGINA
1901 Railway St. South

CALGARY
215 12th Ave. W.

VANCOUVER
821 Powell St.

VICTORIA
434 King St. E.

ADDRESS OUR NEAREST WAREHOUSE.

WE WANT AGENTS IN SOME LOCALITIES.

WRITE FOR DETAILS.

MENTION THIS PAPER.

SEND TO-DAY FOR SAMPLE SHINGLE AND "ROOFING RIGHT" BOOKLET No. 9. ADDRESS NEAREST PLACE.