

Issued Each Week—only One Dollar a Year

VOL. XXVIII

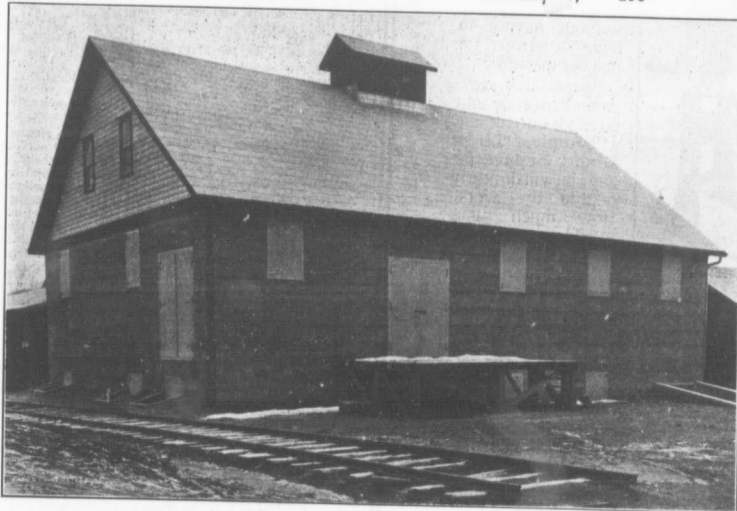
NUMBER 47

FARM AND DAIRY

RURAL HOME

PETERBORO, ONT.

NOVEMBER 5, 1907



STORAGE HOUSE OF THE NORFOLK FRUIT STORAGE CO., LTD., SIMCOE, ONT.

At this season when many apples are being placed in storage, it would be well if more buildings like the one illustrated, were to be found in Canada. Through co-operation it is possible to have them in all fruit districts. The Norfolk building is 42 by 62 feet, and made of cement, with galvanized iron roof and gable ends. The basement is 10 feet clear and the first floor, 12 feet. Note the railway spur line for loading cars direct. The Norfolk Fruit Growers' Association distinguished itself by attractive exhibits at the Ontario Horticultural Exhibition recently. Read the article on Cold Storage by Mr. Ruddle on page 3 of this issue.

DEVOTED TO
BETTER FARMING AND
CANADIAN COUNTRY LIFE

Is Your Time Worth Anything?

In these busy days when help on the farm is scarce, time means money to the farmer. Does it mean anything to you to be able during the busy season to save half an hour or more every day of the time usually spent turning the Cream Separator?



The **Link-Blade** device gives a larger separating area in the same sized bowl than any other make of separator. This gives an increased capacity without having to have a larger or heavier machine.

Spend the same amount of time and strength in turning a "**Simplex**" **Link-Blade Separator** and you will do nearly double the work. How much time would you save each day if you could separate your milk in half the time? That is what the "**Simplex**" machine does. And it does the work better too.

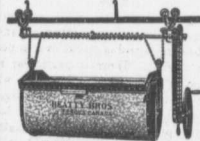
The machine for you to buy is the "**Simplex**" **No. 9**. It has a capacity of 900 lbs. of milk per hour but turns as easy as the ordinary 500 lb. machine. When you are thinking of buying a new separator see our **No. 9** machine. Write us for fuller particulars and the name of our nearest agent.

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Branches: PETERBOROUGH, ONT. MONTREAL AND QUEBEC, P. Q.

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should be in your stable—
Let because they will save you more
hard and disagreeable work than any
other machine you can invest your
money in.
And because they are the best machines
made for handling Litter and Feed.
Let us tell you what they will do and
why they are better. We also build Cow
Stanchions, Steel Stalls, Hay Carriers,
Forks and Slinges.

BEATTY BROS., FERGUS ONT.

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

Meeting of Seed Growers

Growers of registered seed (members of the C.S.G.A.) and others who may be interested will gather in the south wing of the City Hall, Guelph, on Thursday, December 9th at 2 p.m. for a special meeting to transact business of the Seed Growers' Association. Papers upon the following subjects will be presented:

- 1 "Corn Breeding on the Farm."—Mr. L. D. Hankinson, Gravesend, Ont.
- 2 "Some Results Obtained in the Improvement of the Potato," Mr. Alfred Hutchinson, Mount Forest, Ont.
- 3 "The Choice of Foundation Stock and Its Importance," Mr. Chester Nicholson, Mount Forest, Ont.
- 4 "The Scope Open for the Production of Improved Seed in Ontario," Mr. T. G. Raynor, Seed Branch, Ottawa.

Discussion led by Mr. John Clark, Chatsville, Ont.

Winter Fair Lectures

The following programme of practical addresses will be given at the Ontario Provincial Winter Fair which will be held at Guelph, December 6th to 10th, 1909.

TUESDAY, DECEMBER 7TH, 7.15 P.M.
Poultry session.—Address: "Profitable Production of Poultry on the Farm," by Mr. W. R. Graham, O.A.C., Guelph.

Address: "Poultry Feeds and Feeding," by Miss Yates, Guelph.

WEDNESDAY, DECEMBER 8TH, 9.30 A.M.
Dairy Cattle Session.—Address: "Lessening Cost of Milk Production," by Prof. H. H. Dean, O.A.C., Guelph.

Address: "Breed Type of the Different Breeds of Dairy Cattle," (Illustrated). Ayrshires, John McKee, Norwich; Holsteins, R. S. Stevenson, Ancaster; Jerseys, B. Reid, Berlin.

WEDNESDAY, DECEMBER 8TH, 1.30 P.M.
Address: "Under-draining," (Illustrated). By Prof. W. H. Day, O.A.C., Guelph.

WEDNESDAY, DECEMBER 8TH, 3.00 P.M.
Beef Cattle Session.—Address: "Breed Type of the Different Breeds of Beef Cattle," (Illustrated). Short-horns, Herefords, Aberdeen-Angus, Galloways, by Prof. G. E. Day, O.A.C., Guelph.

THURSDAY, DECEMBER 9TH, 9.30 A.M.
Horse Session.—Address: "Breed Type of the Different Breeds of Horses," (Illustrated). Clydesdales, Wm. Smith, Columbus; Shires, John Guardhouse, Highfield; Hackneys and Thoroughbreds, Dr. Hugo Reed, O.A.C., Guelph; Standard Breeds, Dr. Rutledge, Lambeth; Ponies, Robert Miller, Stouffville.

THURSDAY, DECEMBER 9TH, 1.30 P.M.
Sheep Session.—Address: "Breed Type of the Different Breeds of Sheep," (Illustrated). Shropshires, Robert Miller, Stouffville; South-Dorsets, Lt. Col. R. McEwen, Byron; Down-Horns, R. H. Harding, Tiernedale; Leicesters, A. W. Smith, M.P.; Maple Lodge; Cotswolds, D. McCrae, Guelph; Oxfords, Lincolns, Hampshires, Suffolks, Prof. H. S. Arkell, Macdonald College, Que.

THURSDAY, DECEMBER 9TH, 3.30 P.M.
Swine Session.—Address: "Breed Type of the Different Breeds of Swine," (Illustrated). By Prof. G. E. Day, O.A.C., Guelph.

SEED SESSION, DECEMBER 9TH, 7.30 P.M.
Seed Session.—Address: "Best Types of Ensilage Corn for the Various Stock Raising Districts of Ontario," by J. H. Grisdale, Central Experimental Farm, Ottawa.

Discussion.—A. McKenny, Secretary, Ontario Corn Growers' Association, Essex.

Address: "Observations and Conclusions from the Work in Judging Seed Exhibits at the Winter Fair," by J. Buchanan, B.S.A., O.A.C., Guelph.

Address: "Seed Control Act and the Farmers," by T. G. Raynor, B.S.A. Ottawa.

Short Addresses, giving some practical lessons obtained from the work in judging the fields of standing grain in Ontario, by Simpson Rennie, Toronto and by B. J. Waters, B.S.A. Coldstream.

Items of Interest

Those who will represent the Ontario Agricultural College in the students' judging competition at the International Live Stock Exhibition, Chicago, on November 27th, are H. Moorehouse, W. E. J. Edwards, O. C. White, W. R. Reek, and A. M. Shaw.

It is reported that Mr. Bert Kerr, a prominent farmer living at Comanda on the south shore of Lake Nipissing, Ont., made over 100 gallons of pure maple syrup from October 27th until the first week in November. The weather had just the necessary frost at night for ideal sugar making. That sap would run well in November is regarded as very unusual.

The annual meeting of Canadian Hereford Breeders' Association will be held in the Wellington Hotel, Guelph, on Wednesday, December 8th, at 10 o'clock a.m., for the purpose of electing new officers, and the transaction of general business. The members are requested to attend and help boost the Hereford interest, viz. J. Mackie, secretary, Oshawa, Ont.

Any who require work of any kind skilled or unskilled, men or women, will receive help in securing the same by communicating with Free Employment Bureau operated by the Associated Societies of Toronto; communicate direct with these bureaux—Toronto Free Employment Bureau (for men), South-east corner of Queen and Jarvis streets, and the Women's Work Bureau, in the same building.

Note the Breeds.—Our pig offer is still booming. We are sending out a large number of young pigs in return for clubs of seven new subscriptions to Farm and Dairy. We are obliged, however, to limit the breeds of pigs given away in this way, to Berkshires, Yorkshires, Poland Chinas and Tamworths. Several requests have come to hand of late for the Hampshire breed, which is not a standard breed, and which, owing to scarcity of stock, are we unable to procure. Winners of clubs will kindly bear in mind the above breeds, when ordering their pigs as premiums for new clubs.

Profitable Cows.—Mr. C. F. Whitley who supervises the work of the cow testing association in the cow convention in a recent press Bulletin to some October records which intimate that many cows are not expected to earn anything above the bare cost of feed from now until spring. In contrast to such cows, are those in another class altogether whose records as kept by the cow testing association show them to have given as high as 700 pounds of milk and 23 pounds of fat in October, and these cows were not freshly calved cows, but cows that freshened in May. These are cows that produce plenty of milk from a reasonable amount of stuff fed and such as may have through proper feeding and eliminating the unprofitable cows.

Our Efforts Appreciated.—I appreciate very much the earnest effort of Farm and Dairy made for the securing of free rural mail delivery and I believe that the articles it published helped very materially in bringing this blessing to us farmer.—W. K. McLeod, Middlesex Co., Ont.

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Cold St

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Ontario storage quote n stored e lya from G from St one shi for the in the and six ferences four shi and six go, and indicate pies in prove thained.

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Extract from Ontario Fruit

Canadian apples require cold storage. In the cooler districts at least a portion of the late or slow maturing varieties may be preserved for early marketing if properly handled in ordinary frost-proof warehouses. While cold storage would lengthen the season of all apples, the gain in value would not be equal to the expense in all cases.

As one whose duty it is, as a public officer, to give all reasonable encouragement to the use of cold storage, I feel that it would be unfortunate if these things were not well understood and clearly recognized before there is any large expenditure made in this connection.

PACKAGES IN COLD STORAGE

The question of package is of some importance in the cold storage of apples. In the case of the early varieties, for which quick cooling is important, the box package on account of its smaller size and, therefore, greater extent of surface as compared with bulk, and the openings at the edges, undoubtedly facilitates the attainment of the object in view. With later varieties for which quick cooling is not so important; the barrel carries no serious objection.

WRAPPERS AND COLD STORAGE

All apples will keep better if wrapped in paper. The wrapper helps to prevent the bruises which may result from the handling and the pressure of tight packing, and it also prevents the spread of mould spores or other germs of decay from one apple to another. The wrapper offers the further advantage that it prevents, to some extent, the collection of moisture on the surface of the apple when it is changed from a low temperature to a comparatively high one.

The wrapper is obviously more useful on early and tender varieties than on later and firmer ones. Circumstances and labor resources must guide the individual in determining how far it will pay to carry the matter of wrapping.

Diseases of the Horse's Foot - Thrush

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

Thrush is a disease of the frog. It consists of a watery discharge of a very offensive smell which usually takes place from the cleft of the frog. An attack of this disease is usually the result of filth, the hind feet are more likely to become affected than the fore, because the former are more likely to come in contact with the filth of the stall.

TREATMENT

Thrush in the early stages is usually easy of treatment. Great care should be taken as to cleanliness. The cleft of the frog should be spread apart by a strong blunt knife-blade or other instrument and some disinfectant such as a solution of carbolic acid or creolin forced well up into the cleft. Sometimes lime or salt will be sufficient to effect a cure if introduced well up in the cleft and the parts kept scrupulously clean, in cases where those simple remedies do not prove effective, a small amount of calomel should be used in the way described.

The latter drug is always more effectual than the others, but it is expensive and as a matter of economy the others might be tried first. When the disease is of long standing it is often difficult to effect a cure even with the greatest care and in such a case the animal will receive much benefit by having the shoes removed and being turned out to pasture if the season of the year will admit of such a procedure.

Seasonable Horse Notes

The season is at hand when many horses which have become inured to hard work on the farm every day will suddenly be thrown idle. Any sudden change in the habits of a horse is always attended with more or less danger as far as his general health is concerned. In the case of the hard working horse the muscular system (as well

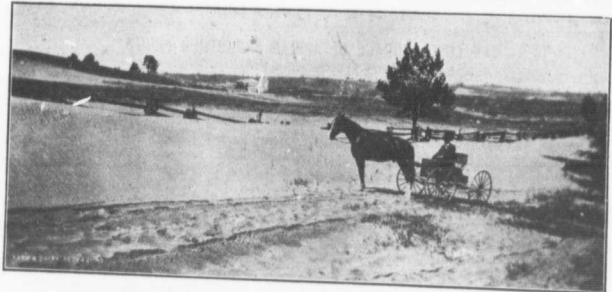
as all of the internal organs) have become hard and strong and fit for almost any degree of exertion but when subjected to suddenly enforced idleness, they become soft and flabby, lose tone and in too many cases derange the system to such an extent that the animal assumes an unthrifty appearance. Many of the minor ills so prevalent in farm horses in the early winter can be attributed to this condition.

When we take into consideration the fact that at the same time the food supply has also suddenly been reduced we find another reason for so many horses being out of condition during

to a greater or less extent. As a rule the draft colt is not sufficiently fed even in the summer. The most successful breeders will let their colts have a grain ration every day of the year and the result is invariably a better grown and more vigorous and valuable animal than where undue economy is practised in feeding. A liberal allowance of good food and plenty of exercise are essential in producing high-class colts of any kind and especially in the draft classes.

WEANING THE FOALS

Many foals are damaged for life because of lack of care at weaning time. They are sud-



Not Snow Banks, Simply Blown Sand—The Result of Deforesting Lands Unsuitable to Agriculture.

The sand bank as shown and which is fully seven feet deep, has all accumulated in the last four or five years. The fence along the roadside is fairly buried. Traffic is being diverted from the roadway in much the same way as is caused by snow drifting on a side road in winter. The photo was taken on the north-western portion of the 9th concession of Clarke, north-west of Leskard, in Durham Co., Ont. Mr. Thomas Smith owns the land adjoining. Photo by the Editor of Farm and Dairy.

the early winter months. While it is very true that an idle horse does not require so much food as when he is at hard work the change should be made gradually. If it be made too suddenly the digestive organs become deranged and as a consequence the tissues of the body are not well nourished and the result is often a staring and unhealthy coat, swelling of the legs and a general unthrifty appearance.

EXERCISE IS ESSENTIAL

The idle horse should have exercise of some kind every day. If there is nothing in the way of work for him to do he should be turned out and allowed to exercise himself. In cases where it is desirable to keep horses in good condition for sale or show purposes they should be covered with a blanket quite early in the season to keep the coat short, and should receive a good rubbing down every day to ensure that fine, silky coat so desirable in a horse and which always adds to his appearance as well as to his value in the market.

When a horse is going to run idle during the winter it is often good practice to remove his shoes, by so doing (if he has good strong feet) they will come out in the spring in better condition than if kept shod. In the case of weak hoofs shoes might better be kept on all winter. Many horses with naturally good feet and which are not expected to work in the winter need never be shod at all. They will perform any kind of ordinary farm work very well without shoes, a hoof which has not been shod will stand more friction than one that has become accustomed to wear shoes.

CARE OF COLTS

Many colts come into winter quarters in good condition but before spring comes they have fallen off in flesh and weigh much less than they did the previous fall. To allow such a condition is a great mistake. A colt should increase in weight every month during his growing period. Any exception to this rule is a distinct loss to the animal. While this is true in the case of a colt of any breed it is especially true in the draft breeds. You cannot get your draft horse too heavy and any break in the growing period will mean a loss of weight to the animal

denly deprived of the mother's milk and are thrown on their own resources for a livelihood. The result is they become much emaciated, with a ragged coat, a pot belly and a ewe neck and have lost more in the first few weeks after weaning than the best of care can make up to them for months. In fact, a colt in this condition will never be as well grown as one that was always well nourished.

Be good to the foal at weaning time. See that he has comfortable quarters. Give him all the good clover hay he will eat. Let him have an oat ration three times every day. Allow him plenty of exercise. He will take it himself if he has a yard to run in and he will come out in the spring a well grown yearling in good shape for growth during the summer and will prove a pleasure as well as a profit to his owner.—Centaur.

Care of Farm Implements

T. R. Jones, Middlesex Co., Ont.

All observant farmers realize that the time of inactivity is more damaging to implements than is their periods of use, unless they are given proper care. Neglect to provide proper housing costs the farmers of Canada untold loss annually. Ontario farmers for the most part provide shelter for their implements, much more than do those living on the prairies in the West, yet even in Ontario more and better care of implements would prove most profitable and would save what is now a great waste.

All implements should be run under cover even when temporarily not in use; an implement shed conveniently located and provision made for easy access to it by wide doors and plenty of them, wide gates and lanes, greatly facilitate the carrying out of this practice. Dry, hot summer weather is often as damaging to implements as periods generally thought to be the most severe.

HOUSE THEM IN WINTER

It goes without saying that all implements should be housed for winter. No implement should ever be put away for the winter season until its owner is sure that it is in good shape for the following season. Repairs that are

needed housed, sibly be fore the The h solved T With the shetter a find reu bidden and is u when on Expense for all profitabl

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Feed Me

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At this jun samples show showed how stitents be cow. He d

needed should be made before the implement is housed. Time, money and expense will most probably be saved by attending to these details before the implements are put away.

The housing of implements is a problem easily solved to those who have plenty of buildings. With the farmer who has scarcely room enough to shelter all his live stock, the problem is quite a different one. It is often quite a task for him to find room for his binder. Of all implements, the binder should be taken care of. It is expensive and is used only for a short time each year and when one wants it, the binder is wanted badly. Expense should not be spared in providing housing for all such implements and it will be found profitable to house all farm machinery.

PROVIDING FOR THE HAY RAKE

One of the worst implements to put away, and for this reason one that is the most often left out in the weather, is the hay rake. By taking off the wheels and shafts, the hay rake can more readily be stored. When a steel rake or other implement that may seem to be indestructible, may be left outside, there is nothing that detracts more from the appearance of a place than to have implements left in the fields or driven up together outside the buildings.

Plows, cultivator shovels, hoe or seed drills, and other such parts of farm machinery should be greased with axle grease to keep them from rusting. One derives a pleasing sense of satisfaction to know that his implements are all under shelter and that they are not rusting and rotting off from exposure to the weather.

Feed Management of the Dairy Cow

"There are many good cows in the County of Peterborough. That there are many cows as well, however, that are far from being up to the mark, goes without saying," said Mr. Henry Glendinning in addressing the district dairy meeting held in Peterborough last week. "It has been advised, and it is good advice, that these should be weeded out. There is no better way in which this can be done than by means of the scales and the Babcock test. It won't do, however, to weed out and condemn cows unless they have been properly fed.

was the largest constituent of milk, it being approximately 87 per cent. The fat, ash, sugar and the protein of milk all were dealt with in turn. "While fat is the most valuable constituent of milk," said Mr. Glendinning, "protein is the most important element in the production of milk viewing it from the standpoint of feed. The food that would be most profitable as a milk producer must contain a large amount of water, such as grasses. These are not available in winter. We can substitute them however, with corn silage and roots. A cow will not do her best work on dry feed no matter how much water you give her. Her food must be in a succulent form."

SUPPLYING CONCENTRATES

While corn silage is succulent, supplying water and carbohydrates, it supplies very little protein. Bran is good for supplying the protein that the silage lacks. All clovers are high in protein also. Timothy is low in protein. We know that it is poor as food for a milk cow. Straw also is poor, it being low in protein. The difficulty with such concentrates as bran and oil-cake, both of which are high in protein and well adapted to the dairy cow, is that they are high in price. Anyone who sells milk at market prices and feeds much of these concentrates will not have much profit left. Protein feeds are most expensive to get upon the farm, but there is one crop in which we can get protein comparatively cheap. It is alfalfa. I don't know any place where alfalfa will do better than in Peterborough County. There are hundreds of acres here that would grow alfalfa well." Mr. Glendinning then led a most interesting and profitable discussion on alfalfa. It will be reproduced later in these columns.

A SUITABLE RATION

"We must get the right cows," continued Mr. Glendinning "and then feed them properly. They must have an abundance of water. No matter what you feed the dairy cow, she must have water, a liberal supply of salt, and be well taken care of. The feed must be bulky. One cannot maintain a cow on concentrated feed alone. No meal, while rich in protein and quite suited to the dairy cow when fed in small quantities, would not do at all if fed alone. She would die if fed upon such a ration. Her stomach is made to

and in doing so, did you get any butter?" answered Mr. Glendinning. "It would be just as reasonable to expect butter from clear water as milk from a cow that was not fed."

Something Worth Thinking About

Wm. B. Leuven, Prince Edward Co., Ont.

At the time when the people of Prince Edward County were somewhat alarmed at the proposed expenditure of a considerable sum of money for county road purposes, an alarm which I am pleased to say has almost completely subsided since the roads constructed have been so satisfactory. I was led to examine the public accounts to see how our expenditure on the public highways would compare with some other public disbursements of which we bear a part.

It is generally conceded that the revenues of the Dominion are in greater part derived from indirect (yet none the less real) taxes upon the people. Taking Prince Edward which is one of the smaller counties having a population well under 20,000, and having regard to the standard of living, which is beyond the average, it is a conservative estimate when I place our contribution to the revenue at three dollars to every one thousand collected and expended. When we find the total amount expended for military purposes (1907-8) to be nearly seven and one half millions it is easy to see that Prince Edward County's share is over \$22,000 per annum.

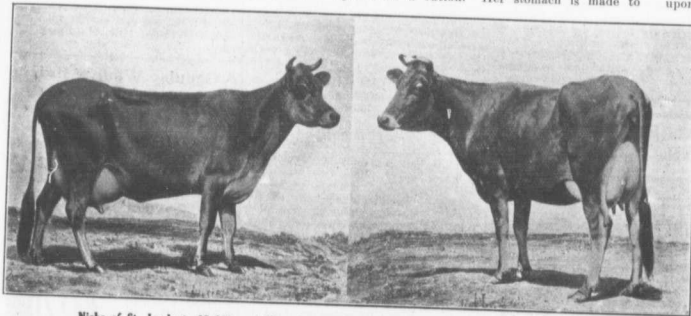
The latest proposition and one that has the support of many of our leading people is to expend \$20,000,000 on a Canadian navy. If the ratepayers understood that this county could not well escape a contribution of \$60,000 to the Navy fund, the proposal would meet with a chilly reception.

Just previous to the last general election it was announced by the Minister of Public Works that the policy of the government was to enlarge the Welland canal at an expense of \$30,000,000. A majority of the electors endorsed this announcement and the minority found no fault with it yet this meant an assessment of no less than \$90,000 upon the County of Prince Edward, probably not ten persons in the County will ever benefit to the extent of \$1.00 by the said improvement. Still many have expressed their disapproval of raising a smaller sum to be expended upon the County Road System, some part of which they use to their advantage every week of their lives.

I am not calling attention to government expenditures for the purpose of criticism but merely to point out the ease with which the average ratepayer will part with large sums of money if collected through the merchant or grocer for purposes in which he is only mildly interested, compared with his reluctance to assist in improvements of a purely local character.

Nowadays we seek to replenish the fertility of our land which has in too many instances been depleted by constant cropping and selling the grain of the farm. We seek to sell farm products in some concentrated form such as beef, lamb, pork and butter. To make the most out of live stock, we must encourage early maturity. In order to bring about early maturity, we must feed grain to young animals. This practice necessitates that all grain be ground.—I. M. Law, Durham Co., Ont.

I am very well pleased with Farm and Dairy. It is improving very much.—E. F. Martin, Oxford Co., Ont.



Niobe of St. Lambert, 12,969, and Mary Anne of St. Lambert, 9,770, Good Examples of Jersey Type.

"A cow requires material from which to produce milk. There is nothing better than grass for this purpose. Blue grass and the clovers are excellent. They contain the right materials from which the cow can produce milk. Not so with timothy. A cow must have sufficient to eat. We must not only feed in large quantities, but we must feed those feeds that contain materials for producing milk."

CONSTITUENTS OF MILK

At this juncture, Mr. Glendinning, by means of samples showing the various constituents of milk, showed how necessary it was that the right constituents be contained in the feed given to the cow. He demonstrated conclusively that water

handle rougher feed. If the cow is right and fed sufficient of a ration that is succulent, palatable and which contains the nutrients for milk production, there need be no worry about her milking. Such a ration can be made up of corn silage and alfalfa hay. The silage will supply the succulence and bulk and the alfalfa will give the protein. An abundance of this kind of feed is sure to give good results."

"Do you know of any breed of cows that will milk without feed," asked Dairy Inspector Ward, before Mr. Glendinning retired. "My cow at home is doing exceptionally well. My neighbors explain her performance by saying, 'Oh, you feed her!'. 'Did you ever try to churn clear water

FARM MANAGEMENT

Bees Not in Shape for Winter

Our bees have not done as well as we expected since we made the last extra flight for winter. Will you kindly tell me in detail what is the best means of putting them in shape for winter?—M. D. Peterboro Co., Ont.

It is rather late to feed now, though you may succeed in feeding them yet on sugar syrup. Take two parts best granulated sugar to one part hot water, stir till completely dissolved. If you have no feeders take jars or crocks, put a bit of cotton over top, and invert on frames, putting an empty saucer and filling the space around jars with old cloths or anything to retain heat. Feed the syrup while warm. If you can procure pails, the following from the Canadian Bee Journal for September, will be found to be good advice: Take the cover of a 10 pound penny lever honey pail, place it upside down on a block, and pierce 10 or 15 small holes in it, about the size of the lead in an ordinary lead pencil. Place three or four thick pieces of newspaper over frames, first tearing out holes about two and a half inches where you wish to set a feeder. Probably one feeder full would carry your bees through, that is 10 lbs., 20 lbs. would be better.—R. Lowery, Prince Edward Co., Ont.

Wintering Bees Outside or in Cellar

We have a single swarm of bees that we caught last summer and have lived them in a Langstroth hive. As we have had no previous experience with bees, would you kindly tell us how to bring these through the winter to the best advantage? Can they be packed in a box on their summer stand or should they be taken to the house cellar? Would they not prove a nuisance if not a menace in the cellar?—L. M., Halton Co.

Yes, they can be packed on their summer stand. Use dry sawdust or forest leaves, at least four inches—six would be better—on sides and bottom. Have one foot or more on top. Cover board at entrance to keep entrance open. In the cellar prefer however putting no harm in the cellar. If the bees in your cellar place the bees in the darkest corner, up from the floor, and out a little from the wall. Do not disturb them in any way. If wintering outdoors pack at once. If you put them in cellar put them in a soon as there is no prospect of them flying again.—R. Lowery, Prince Edward Co., Ont.

Fertilizer for Potatoes

What is the best fertilizer, other than manure, to use so as to get a crop of potatoes? The manure that one buys in town is dry, strawy and costs 50 cents a load. What will be the best of commercial fertilizer, and where is the best place to get it? When should it be applied? My field is six acres and has been down to sod for eight years. It is a good clay loam. It was plowed early, and has since been so far. I intend to cultivate it again. I ought I to get any results from this land if commercial manure is applied?—H. H., Northumberland Co., Ont.

It would not be desirable for you to correspond to altogether neglect the use of farm or stable manure, even if it is of rather poor quality. Manure is not to be valued merely by the amount of plant food it contains, though this is of course an important factor, but also by the quantity of humus forming (organic) matter it can furnish to the soil. In this latter particular that farm manures differ from fertilizers, which contain little or no organic matter.

The function of humus in a soil cannot now be entered upon at length,

but it may be mentioned that besides acting as the natural store house for nitrogen, it is the constituent that exerts the most powerful and beneficial influence upon the physical texture, the tilth of the soil, making both clays and sands into loams suitable for the germination of seeds and the easy extension of the crops' root system. It is in many instances the controlling factor as regards the warmth, the moisture content and the aeration of the soil. Further, it is the organic matter that furnishes the food for the micro-organisms of the soil, and these have much to do with the preparation of available food from the stores of inert material in the soil.

The fact that the soil has been in sod for a number of years must to a certain extent have enriched it in organic matter, but nevertheless I am inclined to advise some manure, applied and used in this autumn if possible. It is generally better to manure the crop previous, as direct contact of the manure with the potatoes is apt to induce scab.

As to the fertilizer, the application might be from 500 to 800 lbs. according to the present richness of the soil of a brand containing, nitrogen 2 to 3 per cent., available phosphoric acid 6 to 8 per cent., and potash 6 to 8 per cent. The fertilizer is broadcasted or drilled in on the prepared land in the spring, the point to be observed being that the fertilizer should not come into immediate contact with the potato set.

If the fertilizing constituents are bought we would suggest the following:

Bone meal, 150 lbs. an acre; Superphosphate, 150 lbs. an acre; Sulphate of potash, 100 lbs. an acre; Nitrate of Soda, 75 lbs. an acre. If it is desired to purchase a ready made commercial fertilizer, our correspondent should write to the Department of Inland Revenue, Ottawa, for a copy of the Bulletin on Fertilizers for 1909, which contains the comparative relative values, addresses of manufacturers and vendors of all fertilizers sold in Canada.—Frank T. Shutt, Chemist, Dominion Experimental Farms.

Milking Period of Heifer

Grade Holstein heifer three years old was milking since December. She is due to freshen in April. Does not give much milk now. Some say she will make a better cow if let dry now. Another says no, as she is only a heifer, keep on milking her even if you do not get much until about six weeks before freshening. Kindly answer through your paper which plan you think advise.—Wm. M. Haldimand Co., Ont.

In advising the milking of a heifer after dropping her first calf, up to within six or eight weeks before freshening the second time, it is assumed in 12 or 14 months after the first. The object is to get the heifer on a long lacteal period. In this case there will be about 16 months between the first and second freshening periods. It is probable that in the future the cow will give birth to a calf about once every 12 months, and in that case there would be no advantage in milking her for 14 or 15 months.

It will be better to let her go dry at the end of 12 months, and dry her and have her in good flesh—in good condition when she drops her second calf. She will be able to make a large part of the extra flesh milk product when she freshens.—Hy. Glendinning.

Food Requirements of Swine

The constituents most desirable in feed for swine depend greatly upon the use to which the animal is to put them. A newly born pig's body is largely water, and to grow he must

have food that will produce tissue. That is why the milk, primarily designed to furnish proper nourishment for growing animals, needs to be, as it is, so rich in nitrogenous substance. Later, when the time comes that he is intended for quick-fatening, he should, naturally, be supplied with feed containing much fat-making material, and it is that quality which has given our swine their high place in finishing hogs for slaughter.

It is readily seen, therefore, that different kinds of feed will be needed to furnish the most beneficial results according to the stage of growth of the animal, the energy required for its maintenance, and the end to which the animal is destined; yet it does not necessarily follow that a ration should be one-sided or be dominated by one element to the exclusion of a variety. Losing sight of this is a mistake that has been made more frequently in the use of corn than any other feed; not so much, perhaps, because it is rich in carbonaceous matter, as by reason of its convenience and cheapness in the regions where it flourishes.—From Coburn's "Swine in America."

Our Veterinary Adviser

PARALYSIS IN SOW—Sow was kept in pen for some time before farrowing. After she farrowed she seemed to suffer for a few days. In about a week she lost the use of her hind legs and could not rise. I took her litter away from her. She now refuses to eat, coughs and breathes heavily.—J. Mot., Bruce Co., Ont.

She is suffering from parturient paralysis which has become complicated with pneumonia. It is probable she will not recover. If you had allowed her freedom and plenty of exercise and green food before farrowing it is probable she would not have suffered as she has. Give her 10 grains of nux vomica three times daily and give her anything she will eat, but if her appetite returns tend in small quantities and often.

Our Legal Adviser

BREACH OF CONTRACT.—A neighbor and I wished to secure a trio of pigs—two sows and a boar of the same breed, they to be no kin to each other, and to be March or April pigs. We ordered them under explicit conditions. In due time they arrived and the pedigrees showed them to be all of the same litter. One of the pigs was a boar, and was sold and died the following day. Instead of shipping the pigs as instructed, one to my neighbor and two to me, they all came in the one crate. I wrote the breeder stating that he had not followed my instructions in shipping the pigs, that I should not be expected to pay for the loss. He replied that the pigs were shipped in perfect order and that he would send me one of a July litter at half price to make good my loss. I wrote him a sharp letter re: the matter and demanding that the whole matter and explaining the terms be righted. I have received no further communication from him although that was a month ago. Can you help me to make the matter right, and who should be liable for the loss of the sow?—G. G., H. Clarence, Ont.

The Breeder was guilty of breach of contract in sending you a boar of the same litter as the sow, but we would not advise proceedings being taken to recover damages, as any awarded would be merely nominal, and the matter could probably be adjusted by exchange between your friend and yourself.

Unless you can prove the sow which died was not in good condition when shipped, or that proper precautions were not taken in shipping the same, you will have to bear the loss.

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CIRCULATION MANAGER

FARM & DAIRY

Peterboro, Ont.

HORTICULTURE

Marketing Apples

In an address on the marketing of apples, given at the convention of the Ontario Fruit Growers' Association in Toronto, in November, Mr. R. J. Graham, Belleville, said that success depends upon finding profitable customers, upon making them permanent and upon establishing confidence and that there were too many varieties in the country. There are numerous things to learn and to know about marketing apples. The ideal condition is to make it a matter between producer and consumer. Buyers and dealers are necessary in moving the crop. There is a splendid opportunity to popularize our apples in Great Britain. Though many thousands of barrels are exported, only a small percentage of the population of the British Isles eats Canadian apples. Mr. Graham advocated the establishment of a system of selling by hand carts and hawkers. These could sell our apples in three grades, three pence, two pence and one penny a pound. If apples are treated properly and the supply is maintained constantly this could be done. According to Mr. Graham, the grower would get by this system \$3.70 net a barrel.

In discussing the relative merits of boxes and barrels, Mr. Graham said that we must give the market what it wants, both in package and in variety. Nothing should be packed below No. 2. There is a market for lower grades but they never should be packed and palmed off upon the public for anything better. Apples should be sold when they are wanted and not at any other time. No one should sell varieties that are out of season.

Orchards on the Lake Huron Shore

A report on orchard survey work done during the past season in the apple orchards of the Lake Huron shore, was made by Mr. S. E. Todd, O.A.C., at the convention of the Ontario Fruit Growers' Association, Mr. Todd showed by charts that a large part of the district is admirably located for the production of fruit. He showed that most of Lambton county is farther south than the Niagara and Burlington fruit districts. Except a very small area, the whole section along the Lake Huron shore could be made into one large orchard.

By charts and tables, Mr. Todd showed that it pays to spray, fertilize and cultivate the orchards. He said that much educational work is needed in that district in respect to spraying and the control of insect pests. Much of the nursery stock used there is very good, but the substitution of varieties is complained of by many of the planters.

Co-operation

In an address on "Getting Together," at the recent convention of fruit growers in Toronto, Mr. Bassett, of

Fennville, Mich., elaborated upon the value of co-operation and of central packing houses. He said that it is a difficult thing to get good men at the head of these concerns and incidentally paid a high compliment to the worth and work of Mr. Robt. Thompson of the St. Catharines Cold Storage and Forwarding Co. Mr. Bassett said that the same could be paid a good salary. Co-operative associations should not expect to secure a \$40,000 man for \$1,000. A capitalist who returns to the growers many thousands of dollars, and therefore he should get a share of it. The organized grape growers of Lawton, Mich., received on the average this season 2 1/2 cents a basket for their grapes more than the price received by growers outside the association.

Co-operation saves also in the buying of supplies, including spraying materials and apparatus, baskets, fertilizers and so on. Mr. Bassett strongly advocated the establishment of co-operative fruit growers' associations in all parts of Canada where they do not now exist.

Hardy Perennials for the Farm

Mac C. Cutting

There is a woeful lack of effort on the part of the average farmer to improve the appearance of his home. He is usually so engrossed in the business of producing crops that he pays little or no attention to those details which make his house and surroundings attractive and pleasing to the eye. The problem of keeping the children on the farm is a constant worry to him, but he does nothing towards strengthening that bond of affection which should bind them. And yet only a little thought and labor is required from the year's work to create a change that will make the old home "a thing of beauty and a joy forever," and help to lift the spirit of discontent in the minds of the young people which conjures up such alluring visions of life in the city.

Perhaps the greatest effect can be produced by planting flowers, and if the desire can be stimulated among the children to look after the flower garden themselves, the results will be so much the better. One reason why more flowers are not sold on our farm homes is because of the erroneous idea that they will require a great deal of care and attention, and that the majority of attractive flowers are suitable to our climate; but if the farmer will confine himself to hardy perennials, he will find little difficulty in maintaining a beautiful display of blooms.

With proper conditions to start, hardy herbaceous perennials require less care than probably any other flowers, and the greatly improved varieties of these plants make them peculiarly well adapted to the farm. Most perennials thrive best where there is plenty of sunlight, and should be protected from cold winds if possible. A good loam soil is best, and thorough drainage is very essential. Prepare the soil thoroughly in the beginning by working in a supply of well rotted manure, as, after planting, perennials should not be disturbed for some time. The growth is well started, keep the surface soil loose and free from weeds. In the summer some of the taller plants will need staking to prevent breaking by the wind. After the plants have ceased blooming, cut off the stems close to the ground; and before frost sets in, cover with a mulch of about six inches of straw manure or leaves to hold the snow and prevent severe freezing. In the spring be careful not to remove the mulch too soon, as the greatest damage is often done during a period of alternate freezing and thawing. When light material is removed, the heavier manure can be dug in to enrich the soil.

A large number of hardy perennials

can be sown from the seed, and in this way great many plants produced. Best results can be obtained if sown in a preliminary seed bed of well prepared loam in rows about six inches apart, and transferred to their permanent position at the end of the first season's growth. Small seed should be buried only sufficiently to keep from blowing away, while larger seeds may be sown half an inch deep. Autumn is the best time to sow the seed, so it will be in condition to germinate in the spring. Transplants can be planted either in autumn or spring.

Canadian Apple Trade

(Continued from Nov. 11th issue)

The Canadian ports chiefly interested in apple exporting are Montreal, Halifax, St. John and Annapolis, and the importing places in Great Britain are Liverpool, Glasgow, London, Hull and Bristol.

As in the case of grain, the Dominion government exercises a careful supervision over the apple exports in order to ensure the grading of the apples being in accordance with the marks set on the barrels by the grower and packer. Apples are graded into three classes—the best, seconds, and votins and Bristol.

To enforce the regulations many inspectors are employed throughout the Dominion. They have power to open barrels when and wherever they please, and if they detect a case of "facing"—or placing large apples at the top, bottom and sides, and inferior ones in the centre of the barrel—a brand to that effect may be placed upon the barrels of that lot and the offender prosecuted. This rule has had the required effect, and one may now rely upon Canadian apples being as they are graded on the outside of the barrel.

Every year is taken in the transshipment of the fruit to prevent it suffer from the effects of climate in the district in which they are grown to the seaport in refrigerator cars, are housed in "cold storage" warehouses on the wharves, and carried in vessels fitted with chambers in which the temperature is kept so low as 40 degrees, and in some cases so low as 33 degrees. On arrival at a British port they are, as a rule, sold almost at once, and appear on the market in a day or so after arrival, so that the necessity for cold storage is not so great.

WANTON'S MARKETS IN UNITED KINGDOM
During the last ten years there has

been an enormous increase in the number of orchards in the Annapolis valley, and the quantity of apples exported so Great Britain and other countries is close upon a million barrels a year, and in a few seasons this will increase greatly. Of the varieties which are grown, many of them are known to the English fruit growers, and they consist of the following sorts:—Gravenstein, Blenheim Orange, Rils-tones, Kings, Baldwins, Fallawaters, Starks, Northern Spys, Nonpareils, etc.

The great market for Nova Scotian apples is London. A few go to Liverpool and Glasgow, but the greater proportion come to London, as Liverpool and Glasgow prefer apples grown in Ontario to those grown in Nova Scotia.

Marketing Apples by Weight

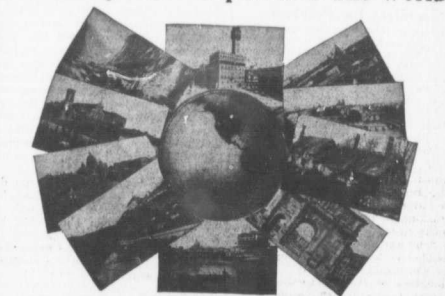
During the past two years, much interest has been taken by wholesale fruit firms of this district in an idea by which it is proposed that apples should be sold by weight in preference to the barrel, reports Mr. J. M. Mison, Canadian Trade Commissioner, Leeds, England. Although this has not been carried into actual practice to any degree, there still remains a good deal of interest in the question more especially in view of the fact that it is claimed by fruit men that an average barrel of Canadian-grown apples will be found to weigh more than a similar barrel of fruit from the United States.

In this connection it is suggested that Canadian packers should mark the gross weight on the top of their barrels before shipment. It would greatly aid the sale of Canadian-grown apples on this side in competition with fruit from other sources, and resulting in an advantage both to the buyer here and the seller in Canada in the way of increased business.

We like Farm and Dairy very much. It is a live farm paper. Every farmer should have it in his home.—H. Mills, Addington Co., Ont.

I received a premium from Farm and Dairy of two pure bred Poland China pigs, bred by Mr. W. R. Ash, of Nice Bridge, Ont., and I consider them fine specimens of the breed. Accept my thanks for the valuable premium, which has amply repaid my efforts for securing 14 new subscribers to Farm and Dairy.—W. E. Scott, Prince Edward Co., Ont.

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POULTRY YARD

Crate Fatten Your Poultry

Robert Smith, Lambton Co., Ont.

Few farmers realize the necessity of having poultry properly fattened for market, particularly in case it is to be sold privately on the market or shipped a distance. Fat, plump fowl sell much more readily than half-starved looking specimens, and they bring higher prices, besides they more than pay for their feed when fattening.

The crate system of fattening is recommended in all cases. It will produce results more quickly than the usual method of feeding, and it is more satisfactory, besides having many other advantages. The crates for fattening may be constructed by any one in a short time. If only a few fowls are to be fattened a box of suitable size may be used. But the usual method of fattening by crates is to place the birds in crates six feet long, 16 inches wide and 20 inches high, inside measurement. The crate is divided into three compartments by two partitions of solid wood. Each compartment holds four or five birds according to the size of the fowl.

The crates must be placed in a sheltered position out of the rain and wind. They require abundant ventilation. In cold weather they must be placed in a shed or barn. Always keep the birds as quiet as possible, keep the building darkened. When the crate is placed on a box the droppings must be kept from under them by the daily cleaning, as much or two of sand should be placed under the crate to absorb the droppings.

Care must be taken to rid the fowl of lice during the fattening period. The birds should be thoroughly dusted with sulphur before placing in the crate. After each lot of birds has been removed wash the crates thoroughly with six ounces of crude carbolic acid to a gallon of boiling water.

FEEDING

The time that the fowl may be left in the crates depends to a large extent on the constitution of the bird their condition when placed in the coop and the treatment given. Chickens that appear delicate will not do well and seldom pay for the food and bother, as they will not stand forcing. Select the vigorous looking birds with broad, square shape and short, straight legs set well apart; avoid odd-shaped specimens with drooping tails and pale combs and waxes.

Feed them carefully for the first week, avoid overfeeding, never feed quite as much as they will eat at one time. Feed three times daily and give plenty of grit and warm water. Vigorous birds will stand heavier feeding than weaker ones; birds that have had free farm range will generally be harder than confined stock.

Oats come nearest to the best of any other single grain, they supply nearly all requirements if the hull be removed. But it is always advisable to feed a variety of grains. One of the best rations is composed as follows: two parts ground oats, two parts low grade flour and one part wheat bran.

If possible use skim milk or buttermilk to mix the mash, mix till it is about the thickness of thin porridge. This mash may be varied in composition depending on the grain available, barley may be used instead of oats even instead of flour. Another mash may be made as follows: two parts ground oats, it is preferable to have the hulls removed; ground corn one part, two parts shorts, buckwheat or

bran, buckwheat is preferred but is rather scarce with us. When poultry is sold privately or shipped it is well to remember that corn produces a yellow flesh of inferior quality if fed in excess, also that peas will harden the flesh.

When milk is not used to mix the mash feed some green food. Sour milk is more fattening than sweet milk, and is greedily eaten. Beef or pork scrap is valuable as a fat producer and some should be fed.

During the second and third week feed twice daily giving them all that they will eat up clean at one time removing all that they leave, in half an hour. Never at any time leave the food constantly before the birds. Feed any food left to other fowl. If a fowl should become sick remove it, put it in a sunny house, or better still, on plenty of green grass, and give a teaspoonful of Epsom salts and it will generally recover.

Marketing Eggs

There is as much science in the marketing of eggs as in any other branch of the poultry industry. In the first place eggs should be gathered twice a day during extreme weather and stored in a clean wooden box in the cellar which is cool, sweet, and clean. The eggs that are soiled should be washed and dried with a cloth.

When the day arrives for shipment or delivery, such shipments being made as regular as possible, the eggs should be brought from the cellar and before packing them in the cases time should be allowed for the sweat or moisture which is sure to collect on them, to become dried off. Small, undersized or mishapen eggs should be discarded as well as double-yolked and thin shelled eggs. Uniformity as to size and color should be kept after and white and dark shelled eggs should be packed by themselves. Such eggs command the highest price.

Cases or cartons in which eggs are sent to market should be as attractive as possible to attract the customer's eye. A private mark upon each egg is a good way of establishing one's reputation for fresh eggs. Neatness and cleanliness are to be greatly desired both in the eggs and the packing.

The same pains should be taken when marketing eggs to private trade. One's personal appearance as well as the appearance of his horse and vehicle must be looked after; for such things go a long way toward forming impressions.

Doubtful eggs should never be marketed, for one bad egg may lose one his best customer. "Do unto others as you would like to be done by" is a rule that is as applicable in this as in any other business. Write Arthur G. Symonds, in Successful Farming.

Poultry Pointers

Half-starved hens show a poor idea of economy. Better overfeed than under-feed.

If the chickens are confined to a run be sure that grit and lime are provided for them.

Clover hay cut in half-inch lengths cooked and mixed with bran and a little meal makes a good morning feed.

Birds that are in the moult and desired for show, can be hurried along with a little oil meal in the mash.

Galvanized iron feed troughs are better than wood, as they are much easier to clean and are more sanitary than wood ones.

Litter at least eight to 12 inches in depth should cover the hen house floor, into which all grain should be

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BLANCHE MARSHES, (PRIMA DONNA.)

fed. Straw and leaves makes about the best litter.

You can always learn something from your neighbor's plans in poultry matters.

Cracked oyster shell and grit is more necessary at this time of the year. See that the fowls have a good supply on hand.

Poultry that is sold upon the market should be fat when sold. It is better flavored, sells more readily, and at a higher price.

The breeder who has a flock of pullets that are now in prime and just beginning to lay has a bright prospect before him, and if given proper

care will continue to lay throughout the winter months and be very profitable.

Hens will lay as well or better without the attention of a male bird. It is better to separate them until mating up the breeding pens; then the male will be more vigorous and better results are assured.

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FARM AND DAIRY

PETERBORO, ONT.

FARMERS AND THE NAVY

Shall we or shall we not have a navy? Some would have us think that we must have a navy, whether we want it or not. With the Leader of the Opposition in the House in favor of the Government's policy, it looked at one time as if the bill providing for the necessary expenditure would pass with little opposition. Fortunately our farmers are awake on the question, and they have been making themselves heard; besides there is more or less of a split in the ranks of the Government, as well as the Opposition, on this question.

When the resolution favoring the establishment of a navy was passed at the last session of Parliament, it was thought that the people of Canada were unanimous in their views upon the question. This unanimity of opinion existed only among after-dinner speakers, boards of trade and the "jingo" element of our people. The farmers had not expressed themselves.

Even yet, many farmers do not

know where they stand. A large proportion are flatly against the proposed navy. Such is the situation as learned by Farm and Dairy from farmer correspondents situated in all parts of the Dominion. Our correspondents are agreed that the question should be submitted to the people in the form of a plebiscite.

In view of the stand that our farmers are taking, the Government without hurting its dignity, might well come forward and take a plebiscite. Such action would strengthen the Government wonderfully throughout the Dominion. The taking of a plebiscite would afford an opportunity for this question to be discussed from all sides. Our people would then have a better opportunity to decide whether or not we need a navy, and if it is advisable to sanction the colossal expenditure needed for its equipment.

FEED COWS TO THEIR CAPACITY

That anyone should expect returns from a cow that is not fed, would seem to be absurd. Farm and Dairy very little while, hears so-called dairymen explain high average records of milk production by saying, "Oh, they feed their cows!" Who ever heard of a breed of cows that would give milk without feed? The cow must be fed or her life ceases. Most cows are fed at least sufficient to maintain life. They should be fed enough to guarantee profitable production.

No one would think of running an engine without fuel or filling the stove with incombustible material that would not produce heat. Why then should we expect a cow to produce milk when she has no feed? The profit of milk production can come only from that feed over and above the amount required for the cow's maintenance.

Many recognize this plain truth and practise it in feeding their cows, but there are still a vast majority who cherish the vain hope that somehow a cow will pay even if she be handled and fed indifferently. We who keep cows may as well recognize that "we cannot fowl a cow," and then set about to feed her according to the most enlightened practice.

RAISE MORE HEIFER CALVES

While discussing dairy and other matters with a farmer recently, he pointedly asked of Farm and Dairy: "How are we to get these good dairy cows that people talk about? They are scarce. When found, they are extremely high in price." We answered that if we all would have good cows we must raise them.

More heifer calves must be raised if we are to materially increase the average milk production. In order to build up a herd of high producers, there must be a continuous string of youngsters coming on from which to select individuals to fill the place of those cows that fail to qualify. The cow testing association renders great assistance in discovering cows that do not pay, but unless other cows are available to take their place, the "boarders" are apt to be continued on. Good dairymen raise all their heifer calves. Such is the only logi-

cal thing to do, and we may follow their practice to advantage.

GOOD ROADS RIGHT NOW

The advantages of the split-log drag as advocated by D. Ward King, of Missouri, and previously described in Farm and Dairy, are not as well known through actual experience as they should be. This implement, crude as it is, has proved a marked success in maintaining and improving ordinary earth roads. An outstanding point in favor of the split-log drag is that it can be used to advantage right now.

Earth roads that freeze up while muddy are a terror to those who perform most use them. Often they are quite impassable until snow comes, and the damage they do to wagons and other vehicles, not to mention the loss of time, is enormous. Those who drag their mud roads on the eve of a freeze-up are public benefactors, adjoining and the favorable impression that it engenders in the minds of those who pass that way, are, or should be, ample compensation for any inconvenience suffered, or time spent. Nevertheless, township councils should encourage more of this work.

Nor is this all. Mud placed in cold storage as it is in frozen roads, is bound to be mud next spring. Levelling up the surface through dragging, even though it be in the mud, will give water that stands in ruts and pools a chance to escape. If left as it is, each passing wheel goes deeper and deeper, and in this way the roads reach that condition for which ours are famed.

READ MORE

The long winter evenings have come again. Men who appreciate and take advantage of the opportunities these evenings offer to improve their fund of information are easily recognized. Their success measures head and shoulders above their less thoughtful brethren. Literature of the most valuable nature is turned out annually by the various departments of agriculture and by experiment stations. Everyone should avail themselves of this material which can be had for the asking or will be delivered at the post office as it is published to those who have their names on the various mailing lists through being members of farmers' institutes and other agricultural organizations.

The bulletin, in its plain cover, often goes unappreciated. Those who are wise, however, know the value of these publications and eagerly seek the information they divulge. Backed by the information available through these mediums and through the agricultural press, without which no one should farm, the up-to-date farmer is equipped to maintain and to improve his status. As farmers, we need a greater appreciation of the value of this information at our disposal and when we put it more generally into practice, then and then only, will we attain a full measure of what our calling offers.

EXPERIMENTAL UNION AND FAT STOCK SHOW

Guelph will be the Mecca for thousands of farmers and stockmen during the second week in December on the occasion of the Ontario Provincial Winter Fair. This winter exhibition has been increasing in popularity for years. This year, with the much enlarged accommodation provided, and with a horse department, the Fair will prove more popular than ever. One cannot fail to acquire much information of value at this event, especially if he attends the lectures.

While planning to attend the Winter Fair, there is another event at Guelph that should not be overlooked. It is the annual meeting of the Ontario Agricultural and Experimental Union, on Monday and Tuesday of the Winter Fair week. This organization has been instrumental in working great improvement in the crop yields of the Province and of the Dominion. Since the production of grains and fodder is the very basis of our live stock industry and without them, we would have no stock, the proceedings of the Experimental Union are of vital interest to all agriculturists. Those who attend its sessions are assured of being amply repaid for their time and expense.

That Unfair Tax

(Watchman-Recorder, Lindsay)

One of the most alarming features of the present times in Ontario is the tendency and seeming willingness of the average man to be content with small, run-down and unsanitary homes. The Manufacturers' Association, at its last convention in Hamilton, pointed out this tendency in the following:

"If a man puts up a dwelling house he is treated by the assessor as if he had injured rather than benefited his neighborhood. The better his dwelling the more he is made to pay. If he materially improves his dwelling he is made to contribute, and sometimes even a smart coat of paint is sufficient to incur a penalty. A man in Montreal who had suffered from such a levy and was determined opposed to the system, built a front in intentionally ugly that he might demonstrate the folly of taxing such forms of property."

Farmers and the Navy

(Port Elgin Times)

The next session of the Dominion Parliament opens about November 11. This is to be an important session, perhaps the most important gathering of the country's representatives since the federation of the Provinces in 1867. During this session it is expected that the federation will make practically her initial leap into the naval and military affairs of the world.

It is just a little alarming, for we people in rural Ontario to think of aiding in the building of battleships. Looked at from the local viewpoint, these immense machines bring in no revenue; they do not directly increase commercial prosperity; nor do they elevate in any way the standard of

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living or of life. When one sizes it up that way all the talk of a navy seems foolish, but not long ago there came the voice of Lord Beresford, saying, "Keep the trade routes clear at any cost," and Beresford has been around more than most of us. There are others of the same opinion, too. So it looks as if the country would have to go down in its dip and hand over the necessary just as cheerfully as the average man gives to foreign missions.

Creamery Department

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

Co-operative Dairying

J. A. Ruddick, Dairy Commissioner, Ottawa

In the organization of a co-operative dairy association for the manufacture of cheese or butter, one of the first principles to be laid down is this: The members of the association must agree to "give and take" a little, and they will do this with readiness if they are imbued with the true spirit of co-operation. Another desirable attitude on the part of the members is a reasonable belief in the honesty of their associates. Unwarranted suspicion and distrust is a falling among farmers, and it is on these rocks that many worthy enterprises have been wrecked. After the organization is completed you may send to the Dairy Commissioner, Ottawa, for complete plans and specifications for a cheese factory or creamery buildings, which are supplied free of cost.

The next important step is to settle upon the location of the factory. Here is where a large measure of "give and take" will be called upon. The factory cannot be located at every member's door. The point must be decided on the ground of the greatest good to the greatest number, and due regard for a suitable site and convenience for shipping, etc. In regard to the site, there are two considerations of the highest importance. First, there must be an abundant supply of good, pure water available, and second, the site must provide facilities for a proper system of drainage.

In the matter of supplying milk to a cheese factory or creamery to be run, there need be no hesitations about going into it heartily. I have known dairymen in some places to send the milk of part of their herd only, to the factory, "to try it," as they would say. The days when such a thing might have been justified are long since past. There is no uncertainty about the business in these days. If you go into dairying at all, make a specialty of it, and follow it on a scale sufficiently large to warrant careful study and attention. Secure a well bred bull of the dairy type and be sure he comes from good breeding stock. Avoid the "scrub" bull which would be the plague. He is the biggest curse in the dairy world. Keep a record of individual cows and keep the best calves from the best producers only.

Much will depend on the care and feeding of the cows. They should always be protected from inclement weather. It takes feed to keep up the heat in the animal's body. An excellent feed is necessary to secure a large flow of milk. It never pays to allow cows to run down in condition when they are dry. If you expect to give a good flow of milk when she freshens, have her in good condition; otherwise the feed which might make milk will go to put flesh on her bones. No dairyman ever made money by putting

his cows on short rations during the time she is dry.

Weakness in the Creamery Business

J. F. Singleton, Kingston Dairy School

The greatest weakness in the creamery business to-day is the lack of cooling the cream. We shall have to use more ice. I would rather have a cream moderately dirty if it had been cooled than clean cream uncooled, as I can control it much better. There is no reason why people should not put up ice. It does not require an expensive building and there is very little trouble in connection with it.

Cream containing 90 to 95 per cent. should be taken. It should then be cooled down immediately and the separator washed, then the cream will go through it all right. A separator that will not skim a 35 per cent. cream should have no place in the business. Many think that their machines will not do it. I would counsel them to try it and have tests made.

How to Secure Good Material

A. J. Vind, George, S. D.

In nearly all lines of manufacture, quality, as a rule, means success, and butter making is certainly no exception. Therefore it is a vital point in a creamery management to secure a good raw material from the patrons because without good cream we can not make good butter. But at the time each individual creamery is obliged to handle a large quantity, it must have a certain volume of business in proportion to the expenses. The problem is to attain both of these, both quality and quantity, and give due importance to each.

QUANTITY AS WELL AS QUALITY DESIRED

ON ACCOUNT OF THE HAND SEPARATORS and the centralized cream system this has become a very hard problem to solve, although both local and centralized creameries are equally anxious for quality. The hand-separator patron is independent; he can sell his cream to half a dozen different creameries and no one of them depends therefore in position to compel him to take proper care of his cream which would eventually be to his own advantage. The butterman in a hand-separator creamery must sugar his speech a great deal more than the whole-milk buttermaker, and, although cream might not be of just as good quality as whole-milk, the fact is that it never is, and it is all on account of the independence of the hand-separator patron. He becomes especially careless where there are a number of cream buyers in the same town, all fired at so much a pound butter fat and willing to accept anything that has butter fat in it.

Under these conditions, it is sometimes hard to get our patrons to take proper care of their cream. I hope the creameries some time will learn to work together more harmoniously and avoid some of that destructive competition which is detrimental both to patrons and creameries. If each part of its business at a loss, and even a single patron's cream, whether he is situated in competitive territory or not, a great success towards healthy competition would be made and we would be in a better position to insist on quality from our patrons.

IT WOULD SEEM THAT THE BEST way to secure good cream would be to pay more for it, to grade the cream for us and to grade what it is worth. But that is hard to do where a creamery has to depend on different men

An address before the recent Butter Makers' Convention held in Milwaukee.



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to do the grading, and it is hard to do without sometimes losing valuable patrons. We are all glad to lose the patrons who always bring poor cream, but we cannot afford to drive away the patron who occasionally brings a can of poor cream. At Carleton Place, S. D., we make a practice of grading, and have the word "Grade" printed on both cream receipts and marked first grade. We advertise a premium of 2 cents above our first grade price for sweet cream and most of our second grade cream is marked first. However, it helps some and it gives us the right to lower the price on very bad cream.

I have tried to send out circular letters about quality, tried to hold meetings, etc., but almost without result. In the special dairy district in Wisconsin or eastern Iowa and Minnesota, it may be possible to work up an enthusiasm for quality, but our South Dakota farmers are too busy making money in other lines of farming to get even interested in dairying. Dairying is not receiving as much attention in our state as formerly, and although we have twice as many farmers, only about half as much butter is produced as seven or eight years ago.

SETTING THE CREAM REGULARLY

But if our patrons devote so little time to the cream, we have to devote that much more. About the only way we can secure both quality and quantity is by gathering the cream with our own men and teams. In that way we get the cream regular, whether the farmer is busy or not, and if our hauler understands his work he will soon manage to get his patrons to clean their separators and take proper care of their cream. It is personal attention and treating each case individually that brings results, rather than lectures and circular letters, although both are beneficial. I believe

cream-gathering is the greatest lever for quality in our part of the country and perhaps it would be in other places. But we must have good men fired by the month and not on commission. We have made a specialty of gathering cream at Carthage and we keep four men and 12 horses busy during the summer hauling to the home plant, besides a few routes at other stations. The average expense is less than two cents a pound butterfat and it costs nearly as much as that to operate a cream station. Of course it requires more management to lay out cream routes and watch them than it does to establish cream stations, but it pays to do it. If one man can go to the farm and get the cream at the same expense as another sitting in town waiting for the farmer to bring it, then the man who goes after the cream is going to get it and he will get the quality too. And again, if we gather the cream ourselves we can keep up with the requirements of the market in regard to quality.

We can gather cream more or less frequently as we find it pays the best. For instance if the difference in price received for a better quality of butter will justify the increased hauling expenses, we can gather the cream every day and get the cream absolutely sweet.

Success in dairying depends on the man and on the cow. The man that is afraid to work had better keep away from the dairy business.—J. W. Newman, Victoria Co., Ont.

There are three ration for the dairy cow, the starvation ration, the maintenance ration, and the profitable ration, which latter consists in giving the cow all that she can eat of the right kind of food at all seasons of the year.—J. W. Newman, Victoria Co., Ont.

Cheese Department

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

Registration of Cheese Factories and Creameries

Proprietors, presidents and secretaries of cheese factories and creameries throughout Ontario are being notified that only those factories, creameries and other establishments for the manufacture of milk products which are duly registered can legally manufacture milk products after the beginning of January next.

Those factories which are undertaking the manufacture of milk products for the first time in 1910 will be required to have their plants approved of by the Minister of Agriculture as far as equipment and sanitary conditions are concerned. Those who contemplate the erection of factories or creameries should notify the Director of the Dairy Branch, when a representative of the Department will be sent to confer with the persons interested. A valuable service can be rendered the manufacturers of cheese and butter by having a representative of the Dairy Branch consulting with them and making recommendations before sites are selected and plans are completed for the building of new factories or the equipment of old ones.

It has been the policy of the Department to give the advice as to location, equipment, etc., and often serious mistakes have been avoided by following the advice of instructors who have had the opportunity of inspecting sections. These men are placed at the disposal of the Dairy men of the Province, and it is hoped that the Department will have the hearty co-operation of all interested in the cheese and butter business in its endeavor to place the industry upon a permanent basis.

Creamery Meeting at O. A. C., Guelph

Wednesday, December 8th at 1.30 p.m., is the time slated for creamery men and others interested in dairying to meet together at the dairy school of the Ontario Agricultural College, Guelph. Every one interested in dairying will be welcome at this meeting and all are invited to come prepared to discuss any or all of the subjects up for discussion. The subjects will be:

- 1—Is the grading of cream practical at cream-collecting creameries?
- 2—Instructing and equipping the cream haulers. Sampling cream by the haulers. Individual cans for collecting cream.
- 3—The chief sources of difficulty and possible error in making Babcock tests under average creamery conditions. The scales and pipette for taking the sample.
- 4—Improving the cream supply. Visiting patrons. (a) By the butter-maker. (b) By the instructor.
- 5—Increasing the individual and total production of cows in Creamery Districts. Cow-testing Associations.
- 6—Improving the quality of our butter. Pasteurizing. Preventing mottles. Controlling moisture content. Caring for the churn. The best kind of paint for churn, cream vats and so on.
- 7—Creamery Refrigerators. Creamery ventilation.

8—Creamery Competition. Weak points in our creamery work. The Live Stock Show will be in progress at Guelph and reduced rates can be secured on all railroads.

A Frontenac County Cheese and Butter Factory

The accompanying illustration is a view of Woodburn Cheese and Butter Factory in Frontenac Co., Ont., of which Mr. Chas. Shook is the proprietor. The main building is 50 feet by 28 feet. It is equipped with two 12-gang presses and three 8,500 lbs. steam hot and steam Babcock tester. The cool curing room is built after the Ruddick plan. The make this season was small on account of the shortage of feed last season inducing the farmers to dispose of their stock. The largest amount of milk received in a day this season was 12,220 lbs., which makes 14 pounds averaging between 82 and 84 pounds. In previous years as high as 14,000 lbs. has been received, making 16 cheese of about the same weight.

In 1889 and 1890 Mr. Shook made cheese in this factory for Mr. McColl in South Lake. In 1891 he bought a half interest. In 1903, he bought out his partner, Mr. Crawley of Brockville.

The butter department of this fac-



A Frontenac County, Ont., Cheese and Butter Factory.

This factory, owned and operated by Mr. Charles Shook, is described in the adjoining article. A windmill, the tower of which appears in the illustration, is used for elevating the whey; it has been in use for seven years.

ing door is 24 by 36 feet. It is under the one roof with the boiler house, coal house, butter room, ice room and refrigerator. Butter is made from the whey.

The whey is run from the vats with a large leader to the vat in the butter room which is about three feet lower than the cheese room. It is then elevated by means of a rotary pump, driven by a six horse power engine, to a tank over the separator.

Writing of whey butter manufacturing, Mr. Shook says, "I find that one of the main things is to have a good pure culture starter. I place this in my cream before the cream has started to run. After the cream is separated, it is placed in a tank of cold water. My well is in the centre of the butter room which makes it very handy for cooling the cream. After the cream is cooled to 45 or 50 degrees, it is placed in the refrigerator where it is still cooling until it is churned. I churn every second day. The churn and butter worker is driven by the same engine. It takes about one hour to churn, after the milk is drawn off I wash my butter with two waters which takes all the milk out; then I salt and work. The butter is placed in the refrigerator, after which it is printed.

"The patrons take about half the make. We run about five pounds of butter to the ton of whey. I sell the rest of my butter in Gannanogue at 25 cents a lb. The windmill shown in

the photograph has been used for seven years for elevating whey. I consider it one of the cheapest means of elevating whey."

Composition of Milk as Applied in Cheese Making

"While protein is the most valuable constituent in milk from the standpoint of production—the feed for the cow—it must take second place, viewed from the commercial value," said Mr. J. F. Singleton, creamery instructor for Eastern Ontario, and assistant to Mr. Publow, in addressing the dairy meeting held in Peterboro recently. "Fat is the most valuable constituent. It is present in the milk in small drops. Just as fat or oil cannot be mixed with water, neither does it dissolve in milk. It is held in suspension. Eighty-seven per cent. of milk is made up of water, this being the vehicle to convey the other constituents from the cow. The albumen of milk is held in solution. Casein, on the other hand, is partly dissolved and partly held in suspension, and it is due to this latter fact that the fat is held in suspension. Without the interference of the suspended casein, the fat would rise at once, not unlike oil on water. Sugar is present in milk to the extent of four or five pounds in every 100 pounds. The souring of milk is due to the break-

Out They Go

Some farmers and dairymen first by disk filled or other common cream separators—use them a while—discover they are not modern—then out they go for Sharples Dairy Tubulars.

That is paying dear for experience—but better than continuing to use common separators. This is the fact that Sharples Dairy Tubulars probably replace more common separators every year than any maker of such machines sells.

Other farmers and dairymen look keenly into the matter. They talk with tubular users. They compare. They conclude.

Sharples Dairy Tubulars saves that Tubulars are the only modern separators—the World's Best—and buy Tubulars in the first place.

Canada's leading dairymen is one of our best customers. Tubulars is a concern in America. Sales easily exceed most, first all others combined.

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Toronto, Ont., Winnipeg, Man.

tended to hold the case in position, were found to have lost their grip entirely. Owing to the pulp having by some means or other become damp, it was an admirable form of packing for home trade and also from an economical point of view, yet they are looked upon with but little favor here. It is stated that they do not afford the maximum of protection in accordance with the weight of the cheese.—J. M. Masson, Trade Commissioner for Leeds and Hull.

Dairy Meetings.—At the district dairy meeting for Lanark County held at Carleton Place, November 17th, Mr. T. A. Thompson was re-elected as director on the board of the Eastern Ontario Dairymen's Association; he was an admirable speaker and presided on November 16th, at the dairy meeting for Renfrew County held at Renfrew, Mr. J. H. Singleton was re-elected on the same board. The meetings were very interesting to those who were in attendance. The attendance was not as large as it should have been, the chief reason apparently being that the meetings are held a little too early or that the ground is late in freezing up and the farmers have not finished their fall plowing.—R. G. Murphy, Brockville, Sec. E.O.D.A.

Our "Pig Offer" is a dandy. Have you taken advantage of it yet? Read it elsewhere in this issue.

FOR SALE.—Cheese factory, with whey butter plant, all in good condition. Good dairy outlet, Western Ontario. Will be sold cheap, as owner has other business and is leaving the province. Box 53, Farm and Dairy.

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Steel Cheese Vats, Steel Curd Sinks, Steel Whey Tanks, Steel Vent Leaders, Wheelbarrows, Wash Tubs, Steel Smoke Stacks, Galvanized Vent Pipes, Cheese Hoops. Everything guaranteed.

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partake of His spirit which is the spirit of love. If we do we will unconsciously so live that others will be quick to see our good works and thereby be led to glorify our Father who is in heaven. Through contact with us in daily life, others will realize that our strength comes from above and they will be led to seek the same source of power and love and wisdom.

The best way in which to show our good works is by our method of life. When things go wrong with us we must not complain. We must trust in God and show others that we are so doing. We must control our tempers, forgive insults and wrong, do good to those who hate us and keep from pride. Such acts are the fruits of God's spirit within us. They are prompted by a power greater than our own.

When our good deeds to others are the result of our love for them we will not need to think of God's warning not to do our alms before men. We will strive to live them instead of make them public.

If we are not gaining the victory over sins in our lives then we should remember Christ's awful warning that every tree that does not bring forth good fruit will be hewn down and cast into the fire. (Matt. 3, 8). We are to be known by our fruits. (Matt. 7, 16).

It is one thing to believe in Christ and to be regenerated. It is an utterly different matter to be led by God's holy spirit. Many of us fail to draw this distinction and thus our lives are not as fruitful of good deeds as they might be. The disciples believed in Christ but after He had risen they were not permitted to serve Him until they had received the baptism of the Holy Ghost. When they had received this baptism they worked with great power. Every person who so desire may receive the baptism of the Holy Spirit. If we have not got it we should examine our lives to find why. If we do possess it then our lives will abound in good works pleasing to God.—I.H.N.

Renew your subscription and send for one of our Musical Folios. They are sure to please you.

Benefits of Women's Institutes

Mrs. M. L. Watts, Clinton, Ont.
 "The objects of Women's Institutes," as taken from their hand book, are the dissemination of knowledge relating to domestic economy, including household architecture, with special attention to home sanitation, a better understanding of the economic and hygienic value of foods, clothing and fuel; and a more scientific care and training of children, with a view of raising the general standard of the health and morals of our people; or the carrying on of any line of work, which has for its object the uplifting of the home or the betterment of conditions surrounding rural life."

What do you think of them? Are they worthy of your consideration? Can anything be added to make them more complete, or is there a society on earth that should be more helpful to the home life of every one?

Surely there is much to be gained by women attending the meetings of such an organization. There is no phase of the work which does not enlist their sympathies. Benefits? Why it can be nothing but benefits accruing from attendance at meetings, when everything pertaining to the betterment of home life is discussed. Where is the woman who cannot or will not find new ideas that will be helpful to her? Here we get a clearer conception of the necessity of perfect sanitation in and around the home, and what is more important than that which aids in procuring and retaining good health.

Sanitary science is a science that does not relate to the earth we live on or the heavens we live under, but to the condition of the homes we live in. Sanitary science can change from unhealthy to healthy, the homes we live in. It touches the highest interest of mankind, purifies the present generation, and will strengthen and glorify posterity. The effects of obedience to its laws are not remote but immediate, they touch the everyday life of all, and enter into all the relations of life. They are strength and vigor to whatever capacity in which human endeavor is put forth.

At our meetings we discuss "Domestic Economy," a subject, the discussion of which every thrifty housewife should enter into most heartily. If we can get ideas that are an improvement on our own, let us accept them

gladly and put them into practice. Economy can be practised in so many ways, not only in buying, but in a score of other ways in the home. Every housewife should study economy in the kitchen, in her cooking and at the table. Some are very wasteful of good edibles, of which there is no need in these days when we have so many recipes for making tasty dishes out of left-overs. If you have not been schooled along this line I would say attend the Women's Institute meetings and receive an education that will put an end to all waste of good food.

The want of economy springing from the ways of knowledge, the greasy food, the lack of delicacy and regard for the finer elements of health and life, is amazing; it is pitious. We do not want any French morality; but we should like some French cuisine; the art of rendering the poorest, cheapest meats, such as are within the reach of all, into such toothsome, savory dishes as shall perfectly satisfy the most fastidious and teach young girls how wisely, economically and delicately to cook, as to lay a foundation for their future married life that will avail much.

I pity the man who marries a girl who knows nothing about cooking. He'll find his path not all roses. I read of one such young wife who complained to her good grocer that the flour he sent her was not good. On his inquiring that was wrong with it she replied, "Why it was tough. My husband simply couldn't eat the biscuits I made of it." That husband has my sympathy; he should see that his wife joins the Women's Institute. She might learn how to make tough flour tender.

While I would not hold back any moral or religious element, I am of the opinion that the kitchen has a great deal to do with grace in civilized society. If a woman wants her husband to be healthy and amiable she must see to it that her proper food and that food well cooked. Another benefit of attendance at our Institute meetings is that they not only develop a new interest in all matters pertaining to household duties, but they also promote a spirit of sympathy among the members. Coming in contact with other people gives us a new train of thought and draws us out of ourselves. There was that interchange of thought and ideas that

brings out the best that is in us, and makes us more generous and less narrow minded. Our members vie with each other as to who shall produce the best recipes or give the most general information on any subject pertaining to the welfare of the home. Helpful women—better women. Then again we learn to look upon housework in a new light, not as a drudgery, but as an accomplishment. If we look upon life rightly, all its duties may become delightful. The true secret is to cultivate a cheerful spirit, despise nothing that must be done to promote the health, comfort and happiness of ourselves and those around us, learn to be interested in all our hand finds to do and to gain pleasure, not annoyance from our everyday duties.

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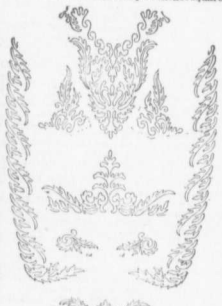
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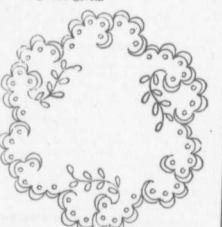
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OUR HOME CLUB

COUNTY SCHOOLS

I am sure we all want to shake hands with the Doctor's Wife. From her last letter to the Club we know that more than one heart aches when Monday morning comes and 'Good-bye, could we have a van as she suggests, to bring our hairnets to the home nest every evening. Such a scheme as this was advocated some time ago in Ontario but it failed to materialize. It makes the homelily indeed yet the ladies must learn to fly and it is for their discipline as well as our own.

The pity of it is that the promotion examination seems to be the goal of every teacher and pupil. The sooner they make it the better and so it happens that just at the adolescent period in the child's life when the influence of home and mother is most needed they are forced to leave it. At a most impressionable age we are filled with doubts and anxieties as we remember the many temptations and trials they are bound to meet. Could we keep them until when a little older they are fortified and their character is really formed and on a pretty sure basis we would be more content. It was a good thought to have our colleges in the country. It may be, both to town and country pupil. Yet, the city has many advantages for the real student, and the country students so full of fresh life and spirits help to leaven the city and vice versa.

I think one solution of the problem would be higher classes in our country schools. If a child passes the entrance examination at 10 or 12 years as many do, there is nothing for it but to stay at home or else away to board and go to high school if in it very mildly. The first year's work at high school is very easy and is put rest after the dreadful cramming before entrance.

I wonder what "Cousin Eva," is doing and how she is? We have not heard from her for many weeks. Her thoughts on "The Boys on the Farm," "How to keep Young," were so splendid we would like to see her name once more in the Home Club.—"Aunt Faithie."

TEMPERANCE REFORM

The continued progress of the Temperance Reform in one of the pleasing morals of the life of this country. Moral and legal stuation have gone on hand in hand, until by far the larger number of our people do not use alcoholic stimulants for beverage purposes and the larger half of the habitable area of the country is under prohibitory law. The end is not yet.

The same causes which have been in operation for the past half century producing the present gratifying results are in operation still and will continue, hence the same result may be looked for.

Not only will the causes working for temperance continue, but they will go on in an increased measure. For a moral force, once started, moves like a ball started on top of a hill under the law of gravitation, that is, the longer it moves the greater its velocity and more powerful the momentum. People who once have tasted of the fruits of total abstinence for the individual and prohibition for the community are not likely to go back to personal indulgence or to a social condition in which the open bar stands as a menace to the welfare of many in its vicinity. This fact is seen in the large percentage of municipalities in this province which on the motion of local option, refuse to return to the license system.—"The Parson."

THE COOK'S CORNER

Recipes for publication are requested. Inquiries regarding cooking, recipes, etc., gladly answered upon request, to the Household Editor, Farm and Dairy, Peterboro, Ont.

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A GOOD ENGLISH PLUM PUDDING

A recipe that it said to have taken the prize in London as the best of five hundred submitted contains the following ingredients: One lb. each of raisins seeded and chopped fine, currants thoroughly cleaned and suet, also chopped fine, 1/2 of a lb. flour, 1/2 lb. brown sugar, the rind of one lemon chopped fine, a half nutmeg grated, 6 eggs and 1/2 lb. candied peel.

Mix the dry ingredients thoroughly, beat the eggs and mix with grape or orange juice, then combine and knead thoroughly. Just before it is boiled the first time, according to old English tradition each member of the family should stir it once to insure good luck during the ensuing year. Then pack solidly in a mold, bag or bowl which has been well buttered and dredged thickly with granulated sugar.

Do not leave much room for the pudding to swell. Many puddings have been ruined by the water boiling into the space between them to swell in, or even by the steam from the boiling water becoming condensed there. Cover lightly. If a bowl is used, butter and sugar a large square of cloth in the center, and its over the mouth of the bowl. Carry the ends of the cloth under the bowl, across, bring back to the top and tie. Suspend in boiling water to cook, taking care that the water is not allowed to stop boiling from the time the pudding goes on until it is done.

If the water should stop boiling, the pudding will be soft and sticky, even if the boiling is speedily renewed. A large pudding requires 9 or 10 hours for the first boiling. After the pudding is done, hang away in a cool place until the day it is to be served. Then, still in its original bag or mold, plunge again into boiling water for an hour or two; take out twenty minutes before serving, turn out on a dessert platter and let it stand ten minutes in the oven to take on a rich brown color.—The New Idea Women's Magazine for December.

PARSNIPS

Scrape, split lengthwise and boil till tender in clear water enough to fill a pan for a meal. Then take them from the water, lay in a pan, and dot with pieces of butter, sprinkle with pepper and salt and sugar. Brown in oven.

POTATO PIE

Boil potatoes until soft, mash through sieve, and to 1 pt potato add 3 pts sweet milk, 1 c sugar, 1 tabsp melted butter, 3 beaten eggs, 1/2 teasp salt, nutmeg or lemon flavor, and bake till done, in pans lined with bottom crust only, same as custard pie.

FRIED CABBAGE

Chop fine 1 qt firm white cabbage. Have ready in a skillet 1 tabsp each of butter or lard or nice bacon fryings. Put in the chopped cabbage and season with 1 teasp salt and scant 1/2 teasp pepper. Do not add any water, but stir with a wooden paddle till done, but not quite tender. Do not let it brown, or it will not be so nice.

PUMPKIN PIE

Take 1 qt stewed pumpkin, 4 beaten eggs, 3 tabsp molasses, 4 rounded tabsp white sugar, 2 rounded tabsp butter, 2 teasp ginger, 2 teasp cinnamon and 1/2 teasp each of salt and nutmeg. This makes a very nice full-flavored, rich pie.

The Sewing Room

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

LOOSE FITTING COAT 642

The coat that is made with plaited portions at the sides is a novelty. This model is smart yet by no means difficult to make in spite of its exceedingly handsome effect. In the illustration it is made of broadcloth, with trimming of soutache.



BLOUSE WAIST 645H

The blouse waist which includes a chemise, is a pretty one and will be much worn this season. Here is a model that can be made both for the gown and for the separate blouse.



The pattern is cut for a 34, 36, 38, 40 and 42 in bust and will be mailed on receipt of 10 cts.

GIRL'S YOKÉ DRESS 646S

This dress for the younger girl is one of the latest. This one is smart yet simple and comfortable in effect and can be made from a variety of materials. Light weight serge and cashmere are favorites, plaid also are much used, and shepherd's checks are always pretty and serviceable.



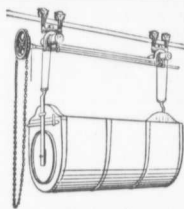
The pattern is cut for girls of 8, 10, 12 and 14 yrs and will be mailed on receipt of 10 cts.

PLAITED SKIRT WITH FIVE GORED UPPER PORTION 647I

The skirt that is smooth and plain over the hips and plaited below is a favorite just now, and is peculiarly well adapted to wear with fashionable coats. This one will be found desirable for almost every seasonable material, while also it makes an admirable model for re-making.



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



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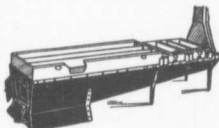
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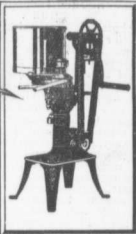
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