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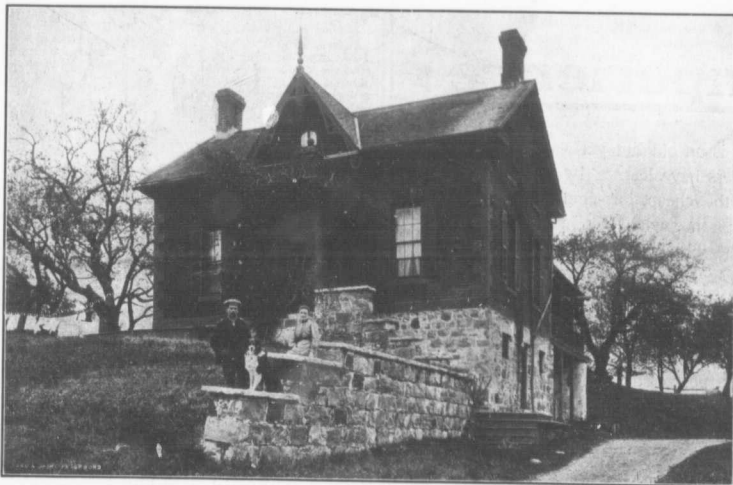
FARM AND DAIRY

RURAL HOME

PETERBORO, ONT.

MAY 5,

Dairy and Cold Storage
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THE HOME OF A WELL KNOWN AYRSHIRE BREEDER AND EXPERT JUDGE

The farm home here shown was erected some 50 years ago. It furnishes evidence of what can be done in the way of remodelling an old home. It is owned by Mr. W. W. Ballantyne, of Stratford. Mr. and Mrs. Ballantyne may be seen in the illustration. One of the rooms has been converted into a modernly equipped bathroom. There is hot and cold and soft and hard water in the kitchen. Two other rooms have been converted into a cosy living room. Other conveniences have been added, making the interior of the house most attractive. The lawn and vegetable garden are on the far side of the house. Further particulars about this house appear on page seven.

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Alfalfa is a Quick Grower

One of the many outstanding favorable characteristics of alfalfa is the rapid growth it makes in early spring. At the first sign of growing weather, the alfalfa plant begins to shoot. By the time red clover has got fairly started, alfalfa has made considerable growth. The possibilities of alfalfa in this particular are well illustrated by the following letter, received last week from a Gleggarry County, Ont., Farm and Dairy reader, enclosing a stalk of alfalfa grown this year measuring over 12 inches in length:

Editor, Farm and Dairy.—The enclosed stalk of alfalfa was taken from my alfalfa field, which this year will give a crop for the fourth season. The alfalfa in this field measures a little over 12 inches high at date of writing, April 25, which I think is surprising. Our cows are living now on ensilage and alfalfa hay. They appear to enjoy it, as they are giving excellent results. I believe it is not possible to get as much feed off the same ground from any other crops as is possible with corn and alfalfa. My alfalfa looks as if the stand might last indefinitely.—W. H. Byers, Gleggarry Co., Ont.

Alfalfa a Splendid Crop

J. Locke Wilson, Toronto, Ont.

Ontario farmers who have gone into alfalfa experimentally have proved beyond the shadow of a doubt that it is the best paying fodder crop that an agriculturist can grow. Alfalfa has been known since 490 B. C. and was successfully grown in Greece and Rome nearly 2,500 years ago. In the State of Kansas there were in 1891 30,000 acres of alfalfa grown, while last year nearly a million acres of alfalfa were under crop, resulting in untold financial benefit to the farmers of that State.

There are five different varieties of alfalfa, viz.: American, Turkestan, Arabian, Peruvian and German; for Ontario the American variety is best suited.

Alfalfa, unlike many other crops, enriches the soil rather than impoverishes it. The roots extend into the earth from five to 12 feet, reaching down and bringing to the surface nitrogen and other valuable mineral plant food. This crop has been grown continuously on a farm in Ontario for nearly 30 years, and it still produces good crops. It can be grown successfully on sandy, heavy clay loam, or on nearly any variety of soil that is properly drained.

EXPERIMENTS SUCCESSFUL.

Experiments with alfalfa have been conducted on a limited scale with success in nearly every part of Ontario, both when sown with and without a nursing crop. Spring sowing has given the best results. If sown with a nursing crop, barley at the rate of one bushel an acre is an excellent one for the purpose. Eighteen or 20 pounds of alfalfa seed is the proper quantity to sow.

From three to four crops of alfalfa can be harvested in one season. The average height of a plant runs from 14 to 20 inches. The yield per acre of green crop is about 20 tons, and of dry hay, five. It should not be allowed to remain too long in the hot sun, as the leaves are liable to become dry and break off and they contain the most valuable nutrients.

Alfalfa seed is produced best from either first or second cuttings. It averages five bushels per acre, although it sometimes runs as high as ten.

COMPARED WITH RED CLOVER.

Alfalfa hay contains about 50 per cent more digestible protein than hay from red clover. It makes a splendid feed for horses and cows. Care needs to be exercised when sheep or cattle are turned in, as there is a tendency for them to bloat if allowed to eat too much, especially when the plants are wet.

An application to the alfalfa field of about 12 loads of barnyard manure an acre every four years has proved very satisfactory. Fertilizers containing phosphate have given the best results. When a field of alfalfa is plowed down the surface soil is completely filled with root rich in fertilizing elements.

Farmers Should Not Bear the Loss

During the discussion of the Act to amend the meat and canned foods Act recently in the House of Commons, Mr. W. O. Sealey said, in part: "Our packers in the vicinity of Hamilton claim that they lose all the meat rejected by the inspectors, and

Rumored Appointments

It is rumored at Ottawa that there is to be a rearrangement of the staff at the Central Experimental Farm, Ottawa. It is stated that as a result of the new branch farms being established this year, the work has so increased that extra assistance is required. Dr. Saunders of Ottawa is to remain head of all the farms, but Mr. J. H. Grisdale, agriculturist at the Central Experimental Farm, is to be made Dominion Agriculturist. He will have charge of the agricultural and live stock work on all the Dominion experimental farms throughout Canada.

It is understood also that Mr. W. T. Macoun, horticulturist at the Central Experimental Farm, Ottawa, is to be made Dominion Horticulturist and given charge of the horticultural work on all the experimental farms. Both Mr. Grisdale and Mr. Macoun will be given more assistance at Ottawa so that they will be able to give more time visiting the various other experimental farms.

While I have sympathy with any person who meets with a loss which might be averted, I cannot endorse the reasoning that the loss should be on the farmer. I think the drover who purchases the animal has the right to make the examination and inspection he wishes before he buys the animal, but when he has bought the animal and taken possession of it, the farmer's responsibility should cease.

"Then, when the drover sells on the market to the packer, unless he unwillingly agrees that he should stand the loss, I am quite satisfied that he gauges his buying and selling prices by an estimate of that loss, and no doubt the producer and consumer pay in the end. I do not want the House to look upon this matter from the point of view that the drover is standing that loss now. He may be in some cases where he agrees to, but if it be a fact that he is bearing the loss, then the law should be amended so that when a man buys and assumes possession of an animal the responsibility of the seller should cease."

Herewith is my renewal to Farm and Dairy for another year. I appreciate the much improved and up-to-date farm paper which Farm and Dairy is furnishing the farmers of this country.—Jas. Lewis, Lennox & Addington Co., Ontario.



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Vol. XXIX.

FOR WEEK ENDING MAY 5, 1910.

No. 18

WHO WILL BE THE NEW PRINCIPAL OF MACDONALD COLLEGE?

The Position one of Great Importance and Far Reaching Influence.—It Requires a Man of Outstanding Ability and Special Qualifications—Such a Man Suggested

THE interests of the farmers of Canada—particularly those of Quebec and Eastern Ontario—are concerned in the selection of the new principal of Macdonald College, Que. This is the position left vacant through the resignation of Dr. Jas. W. Robertson.

With not more than one or two exceptions, and possibly none, no man in Canada will have greater opportunities to benefit and assist the farmers of Canada, and to elevate the agricultural standards of the Dominion, than the principal of this great institution. The position calls for a man of outstanding ability. The principal must possess unusual versatility. He should be a man who has been born and brought up on a farm and whose knowledge thus gained has been extended and made efficient to a high degree by a thorough agricultural college training both as student and director. No matter how well fitted he may be in other respects, if he lacks these qualifications he will fail to command the respect and confidence of the farmers of the country to the extent that is requisite to promote the best interests both of the farmers and of the college.

The principal must be a man of strong moral character, high ideals, broad culture and wide sympathies. Otherwise he will not be able to leave the best impressions on the minds of the hundreds of students who each year will come under his influence and whose standards of what is true and noble and good will be moulded in a considerable degree by his personality.

He must be a man of pronounced and trained executive ability. This is required in order that the numerous departments of the great college over which he will preside may be kept working harmoniously and effectively. Only those who have had some opportunity to observe for themselves can have any adequate conception of the amount of time and tact that is required to smooth out the difficulties and remove the friction that is always engendered where hundreds of students and, yes, even college professors, and their wives, are living in the close relationship of college life.

As research and experimental work of vast importance to agriculture is a part of the college work, the principal must be an experienced experimentalist; otherwise he will not be able to give the trained oversight to the experimental work of the college that its importance, and the expenditures that will be involved, will require.

Another consideration of great importance is the fact that an institution like Macdonald College requires at its head a leader—a man who will do things. The progress of the college as an institution will be regulated by the degree in which the principal is able to set the pace. He must be competent to read the signs of the times and the needs of the people, to devise methods for improvement and to enlist the great forces he will

have under his control, in their practical application. Only such a man will be able to gain the confidence and support of all classes interested in the welfare of the institution and ultimately establish Macdonald College as one of the great agricultural colleges of the world, if not the greatest.

SALARY QUESTION IMPORTANT.

It would be folly to expect to secure a man of



President A. M. Soule, Athens, Ga.

A Canadian who has made a great reputation in agricultural work in the United States, and who is president of the College of Agriculture and Mechanic Arts for the State of Georgia. Farm and Dairy would like to see him appointed Principal of Macdonald College, Quebec.

this type for a small salary. A man having the ability to perform the duties of the principalship of Macdonald College properly could, were he to apply himself to the practice of law or to business, easily earn ten times as much as does the average college professor. That our competitors the Danes appreciate the importance of paying a good man well is shown by the fact—as recorded in the report of the Dominion Swine Commission—that the salesmen for some of their co-operative Lacon factories have been paid salaries as high as \$10,000 a year. Even if we do not pay it, surely we must admit that the services of the principals of our great agricultural colleges should be worth as much to us. When the right man is found for Macdonald College a salary of \$5,000 to \$7,000 a year will not be out of the way.

A GREAT INSTITUTION.

Macdonald College, as stated in its announcement for 1909-10, was founded, erected, equipped

and endowed by one man—Sir William C. Macdonald of Montreal. This great gift to the people, and more especially to the farmers, of Canada, cannot well be too highly appreciated. History records few greater acts of generosity and none better planned to be productive of the highest degree of public good. It is understood that Sir William has already expended over \$3,250,000 on the grounds and buildings of the College besides endowing it with \$2,000,000. The College property comprises 561 acres of land, while the buildings provide accommodation for 425 regular students and professors. Over 300 students are now taking the college course. All this only serves to emphasize more clearly the absolute

necessity for securing as head of this great institution a man possessing the greatest possible degree of ability. It is fortunate that we can depend upon it that Sir William Macdonald appreciates these facts and that he will not allow a small matter in the way of salary—as our provincial governments sometimes do—to stand in the way of the appointment of the right man for the position.

A PRINCIPAL SUGGESTED.

Farm and Dairy appreciates fully the great interest of Sir William, in Macdonald College, and as we, to a large extent, represent the farmers for whom the College was established, we have decided to venture to suggest for the principalship of the College the name of a man who we know possesses in a marked degree the necessary qualifications and whose appointment we are satisfied would meet with the general approval of the agricultural community. We refer to Andrew M. Soule, once a Canadian farm boy, who is now the president of the College of Agriculture and Mechanic Arts for the State of Georgia, and whose career in the United States has been one of which every farmer in Canada may well feel proud. In mentioning the name of President Soule, we desire to have it clearly understood that we desire to suggest his appointment without consulting him. We have no assurance that President Soule could be prevailed upon to accept the appointment.

Two years ago Farm and Dairy was endeavoring to secure as editor-in-chief a man of strong personality and broad agricultural training. We were prepared to pay, to the right man, a larger salary than is now being paid to any professor in any agricultural college in Canada. After looking over the field in both Canada and the United States we picked out President Soule. During a visit of President Soule to Canada, in the summer of 1908, the position was offered to him. After giving the matter some consideration, he declined it, his chief reason for doing so being that the State Legislature of Georgia had just unanimously voted over \$100,000 to extend the work of the agricultural college along lines that had been recommended by him. President Soule felt that he was in duty bound to remain with the College at least until his plans had been carried into practical effect. We found then that President Soule was drawing a much larger salary than any

of our Canadian agricultural colleges pay. In venturing to suggest President Soule's name, we do so with the greatest diffidence and only because we are conscious of the importance of the issues at stake and because we are satisfied that the record President Soule has made is the only evidence needed of his fitness for the position. An outline of President Soule's career, as we have been able to gather it, is here given. At the outset, however, we would like to state, in case any person may conclude that owing to his long residence in the United States he may have got out of touch with Canadian agricultural conditions, that President Soule has visited Canada for weeks at a time almost and possibly every year since he first moved to the States, that his people still live here, that he is a subscriber to and constant reader of all our leading agricultural papers and that in all important essentials he is thoroughly informed in regard to agricultural matters in Canada. In the record that follows we would like to call attention to the fact that wherever he has been President Soule has accomplished important, constructive work:

REARED ON A STOCK AND FRUIT FARM.

President A. M. Soule was born near Hamilton, Ontario, and was brought up on a stock and fruit farm in the Niagara Peninsula. In his early childhood he evidenced a love for nature and the pursuit of agricultural industries. He was prepared for the University in what is now known as the Stanford High School, located at Niagara Falls South. In 1890 he entered the Ontario Agricultural College, at Guelph, receiving an associate's diploma in 1892. He graduated from the University of Toronto in 1893, after which he returned to his father's farm at Niagara Falls.

Early in 1894 President Soule was called to the Missouri Experiment Station as assistant to the Director and placed in charge of the live stock and dairy interests of that station. During his connection with this station he published a treatise on Dairy Management, the results of experiments made there, and which resulted in his being appointed on the editorial staff of Hoard's Dairyman. His connection with Hoard's Dairyman has continued ever since.

HIS WORK IN TEXAS.

In the fall of 1894 he was chosen assistant professor of agriculture and assistant agriculturist in the Texas College of Agriculture and Experiment Station. During his association with the work of the station he published an important pamphlet on "The Effect of Food on Economic Dairy Production." In 1896, owing to the increase in the number of agricultural students and his success as a teacher, President Soule was requested by the Board to devote his whole time to instruction. This was a period of rapid development in the College, and especially of those features relating to animal husbandry and dairying.

ANOTHER PROMOTION.

In 1899 President Soule was called to the University of Tennessee as professor of agriculture and director of the Experiment Station. During his tenure of office the work of the station was reorganized, and brought so effectively in touch with the people of the state as to attract national attention. As a result of this he was offered positions of trust in the service of the states of North Carolina, Georgia, Missouri and Texas.

During his association with the University of Tennessee many bulletins and monographs were issued, among the more important of which were Experiments with Winter Wheat; Corn, Forage Crops and Spring Cereals; Feeding Native Steers, Parts I and II; Winter Cereals and Legumes; Winter Wheat; The Value of Corn, Skim Milk and Whey for Fattening Swine; The Relative Value of Protein in Cotton Seed

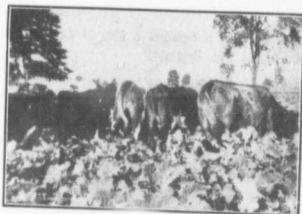
(Continued on page 27)

Grow Rape for Fall Forage*

James Pate, Brant Co., Ont.

It has always been a surprise to me how well cattle of all ages grow on rape. I believe that my feeding cattle gain as much in weight after the 15th of September—the time they go on the rape, as they do during the whole summer previous to that date, during which time they pasture on grass.

Rape is a gross feeder. It grows best on the richest land. When sown on black muck, I have seen it over 'three feet in height. Being pastured off and the roots all left in the ground, rape should not rob the soil to any appreciable extent.



Feeding Cattle on a "Paradise"

Any farmer may have abundant feed like this for his cattle next fall if he will but plan for it in time. Read in the adjoining article what Mr. James Pate of Brant Co., Ont., a prize winning farmer, has to say of rape. The illustration shows some of his cattle feeding on rape, at "Branwood Farm."

We always secure good standing crops following after rape, which would indicate that it is in no way hard on the soil.

CULTURAL DIRECTIONS.

I have grown from six to 10 acres of rape each year for a long time. I sow it during the last half of June. It may be sown later, and it will do even as well provided the land has moisture enough to sprout the seed. Rape may be sown immediately after the spring seeding is finished, and it is then ready for pasture in July. If sown after the 15th of June, it is ready for the cattle any time from the first to the 15th of September. When a dry fall comes along, such as was the case last year, it is a great comfort to a farmer with stock to know that he has such an abundant supply of first-class feed as is furnished by a crop of rape.

The preparation of the land for rape is practically the same as for a turnip crop. The method of sowing is the same. If I have a piece of land extra full of thistle (I have no sow thistle) or blue grass, that is where the rape is to be sown. This land is plowed twice in the fall and twice in the spring, the first plowing in both spring and fall being done with a light gang plow. If any barnyard manure is to be applied, and we usually put on from six to eight loads per acre and it is a decided help to the crop, the application should be made between the two spring plowings. The last plowing may be done about 10 days before sowing. I find it a great advantage to get some of the June grass and the annual weed life destroyed before sowing the rape.

HOW IT IN DRILLS.

The Dwarf Essex is the only variety of rape that should be grown. It may be sown broadcast. It is decidedly better, however, to sow it in drills 27 to 30 inches apart. From one to one and one-quarter pounds of seed to an acre is sufficient, either when sown broadcast or in drills. If sown in drills, the rape should be cultivated at least twice with a one-horse cultivator. It should be cultivated as close to the rows as possible, then there will be but few weeds left, and the rape

*This article is another of the series of essays by those farmers whose farms were prize winners in the Dairy Farm Competition. Your brother farmers should know about these articles. Tell them of these essays now being featured in Farm and Dairy.

being a vigorous grower will keep down most of them. One great advantage of the drills is that the cattle do not destroy so much of the rape by trampling.

It may scarcely seem orthodox for a dairy paper like Farm and Dairy to publish an article on the culture of rape when everything savouring of rape or swedes is detested by the consumer of dairy products. There is always some young stock to be fed on the dairy farm, however, and a few acres of rape will greatly aid in bringing this young stock to its growth besides saving the pasture for the cows.

THE RAPE PLANT IN SCOTLAND.

All that I know about the rape plant is what I have seen of it in the fields. In Scotland, rape is frequently sown along with grass seed about the first of June on land that is too poor to grow oats. A good catch of seed was invariably the result in those days, and the rape was ready to put the lambs on at weaning time. There always resulted a good pasture field the following year. The land had been worked to a fine tilth before sowing and some lone meal or other artificial manure applied. I would recommend this crop handled in this manner to sheep farmers of this country.

Spring Management of Lambs

A. Stevenson, Perth Co., Ont.

When the lambs get about four or five weeks old, a little place should be fixed off so that they can have a trough for themselves. They will soon learn to eat oats. I advise this for early lambs. April lambs do not require oats, they will be on the grass.

Before the sheep are turned to grass, the lambs should all be dipped. The ticks will be on the little ones by this time. Dip the lambs twice about 10 days apart, and you will almost rid the flock of ticks.

The docking should be done when the lambs are about two weeks old. Always cut from the under side and cut at a joint if possible. If you want to make wethers of the buck lambs, castration should be done at this age. There is danger in



Many Canadian Farmers Now Enjoy Rural Free Delivery

Unfortunately the number of our farmers who are privileged to enjoy rural free mail delivery is exceedingly small compared with those, just as desiring, who must go without the service. This boon to farm-homes, Prince Edward Co., Ont., is shown in the illustration. Photo by an editor of Farm and Dairy.

this operation if left till warm weather, when flies abound, but there is no danger in cold weather.

It is wise to make wethers of the bucks and feed the lambs for the February or March market. I have heard of some who clip their lambs in the last of September and feed in a warm shed for a time. They claim the lambs do much better and only has the wool besides.

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FARM SEWAGE DISPOSAL BY MEANS OF A SEPTIC TANK

Prof. S. F. Edwards, Bacteriologist, O.A.C., Guelph, Ont.

A Modern Method of Handling Sewage from Isolated Dwellings. Disintegration by Means of Bacteria. The History and Description of the Septic Tank.

SYSTEMS of water carriage or sewage are now almost universally employed for the quick and inoffensive removal of fluid wastes and human excrement from thickly settled communities. This sewage disposal is not, however, merely a public or community problem. Isolated private houses may be abundantly supplied with running water, a supply of which has become one of the greatest necessities as well as one of the greatest luxuries of civilization. In such houses the water carriage system for the disposal of household wastes of all kinds has found favor no less than in the densely crowded communities.

There is involved in this system, however, for the private house as well as for cities, a problem in the ultimate disposal of the sewage in such a way as to avoid any infringement of the laws of hygiene and sanitation. The attempt at scientific waste disposal is comparatively recent. The Cloaca Maxima and the other so-called sewers of antiquity were rather drains than sewers, and their function was to lower the ground-water level and not primarily to remove excretal wastes. Until 1810 the discharge of any waste but kitchen slops into the drains of London was prohibited by law, and the same regulation persisted in Paris up to 1880.

No law of sanitation is now more clearly recognized than the principle that the wastes of human life must be diluted with an adequate supply of water and quickly disposed of in such a manner as to render it harmless. Nor is this disposal less important on the farm than in crowded communities. The germs of almost any disease of man or the lower animals may gain access to sewage, and in the case of typhoid fever in particular the infection may be transmitted through its agency. Hence, germ-laden excreta when placed on the surface of the ground or in the ordinary privy vault may find its way through the soil into the farm well or into a stream, and thus prove a real menace to the farmer's household or to communities.

PROBLEMS OF SEWAGE DISPOSAL.

Besides the obnoxious bacteria that may be present, the other constituent of domestic sewage is dead organic matter. The excretions from the body and the waste materials from the preparation of food are largely made up of organic chemical compounds. These must be decomposed and the resulting products disposed of in such a way as to render them harmless and at the same time avoid creating a nuisance.

For individual houses the most practicable system of disposal is upon the principle known as anaerobic putrefaction, which means simply that the solid organic matter is at least partly dissolved by the action of certain types of bacteria.

CAMERON'S SEPTIC TANK.

This anaerobic process of sewage purification owes its practical development chiefly to Donald Cameron of Exeter, England. In 1895 he installed a water-tight, covered basin for the treatment of sewage by anaerobic putrefaction and gave it the picturesque name of the septic tank. The sewage flowed slowly through the tank, taking about 24 hours in passage, the inlet and outlet being about midway between the top and bottom. He found that the liquid turned dark colored, while in the solids collected at the bottom an active fermentation was set up. Bubbles con-

tinually rose to the surface carrying, with them solid particles, which gathered at the surface to form a scum, sometimes so firm and compact that a man could stand upon it. This scum appeared and disappeared without any recognized reason. Meanwhile the effluent flowing off was freed from gross floating matter, and its total solid constituents were decreased to one-half their previous amount.

The most satisfactory method of disposal of the sewage from individual houses now within our knowledge is a modification of Cameron's septic tank combined with a system of subsurface irrigation by means of which the partially decomposed matter as it flows from the tank is distributed through the upper layer of an area of soil, in which, as is well known, any organic matter is rapidly disposed of, becoming a part of the soil itself.

THE COLLECTING CHAMBER.

In order that the ground shall not become clogged, the partly decomposed and liquid sewage must be distributed to it intermittently,

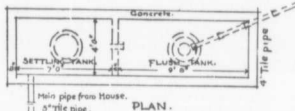
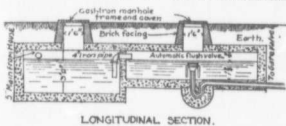


Fig. 1.—Double Chambered Septic Tank of Concrete

hence a collecting chamber must be provided. This chamber is variously called the "flush tank," the "settling chamber" or the "septic tank." One type of such a tank is shown in Figure 1. The amount of sewage to be disposed of daily by this tank was estimated from the amount of water used by the family of five, the water supply being distributed through the house from a 580-gallon tank in the attic, which is filled about every other day by means of a hot-air pump. The tank was designed to take care of 350 gallons, or 70 gallons per capita a day.

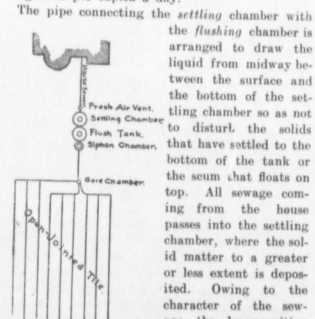


Fig. 2.—Subsurface Irrigation on Level Ground

they may be removed, but this should be necessary only at rare intervals, if at all. This tank was built of concrete, the manholes were of brick and the siphon placed directly under one of them for convenient access to it. The cost of the material for this tank, including the siphon and cast-iron manhole covers, was \$61.61. The cost would, of course, vary in different localities, depending upon the price of both materials and labor.

PURIFICATION OF THE SEWAGE.

It has already been stated that the bacterial action necessary for sewage purification goes on only in the upper layers of soil, and further, Nature has her limits and must not be overworked; hence, there must be intermittent application of the sewage or the process of purification will cease altogether.

To secure this necessary subsurface disposal, three or four-inch field tile are laid with open or loose joints, the bottom of the tile coming within eight to 12 inches of the surface of the ground. These drains should be laid level, or with a very slight fall, say two inches in 100 feet. If too much fall is given, the lower part of the field will be flooded.

The ground should be naturally or artificially so well drained that water will descend through it readily and porous enough to admit the air. If the subsoil is not porous enough to remove all the water settling through the upper layers, it should be underdrained by lines of four-inch tile spaced 25 to 40 feet apart. If a suitable outlet can be had, these underdrains will do better work if placed five feet below the surface, although four feet will do.

The most suitable soil is a sandy loam, although heavier soils may be used successfully by providing good under-draining and by filling the distributing trenches after laying the tile with sand, gravel or fine cinders. The drainage will improve with time and the soil be able to purify an increased amount of sewage. The length of tile necessary for distributing the sewage will depend on the porosity of the soil. For a porous soil, one foot of tile for each gallon of sewage should dispose of the liquid. If the soil is heavier, the length of tile must be increased. In clay there should be at least three feet of tile per gallon of liquid discharged into it.

THE DISTRIBUTING TILE.

Figure 11 illustrates the method of laying the distributing tile on level ground. In this system there was a third chamber for the siphon, and in addition a gate chamber providing for a gate valve by which the sewage may be intermittently run into the two divisions of the tile system. In

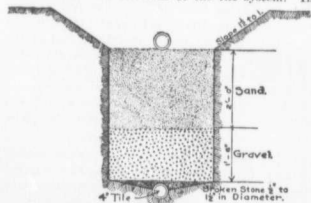


Fig. 3.—Cross-Section of a Filter Bed

open soil this should not be necessary. It is obvious that the distributing tiles may be laid off from the main from the septic tank, diagonally, laterally or in any convenient manner. In the system installed in connection with the home of the writer, the main from the septic tank runs along the side of the house toward the front of the lawn, the laterals being all laid off from one side of the main, and at intervals of about four feet.

On sloping ground or even on steep hillsides, methods could easily be devised for laying the dis-

(Continued on page 14)

Count the Cost in Horse Breeding

T. R. James, Middlesex Co., Ont.

Before deciding on what stallion we shall use this breeding season, we ought, in all fairness, to stop and consider his cost. My neighbor says he does that already. He uses the best horse he can get, provided its fee is not above \$10. Farm and Dairy readers will agree with me that that man counts only a fraction of the cost. He has a few dollars so close to his eye that he cannot see the amount that a first-class horse will bring in one, two, three or five years' time when it is to be placed upon the open market.

It costs very much the same to raise a good colt as it does to rear the indifferent one. The cost will range from \$75 to \$125 or perhaps more, depending upon the feeder. It takes the same barn room, same feed, same attention to raise well a general purpose, farm chunk, or mongrel horse, as it does a horse of more superior breeding.

The well bred horse of a type for which there is a demand will command a premium of from \$50 to \$100 or more, over his indifferently bred mate. The difference in his initial cost was \$5 on the service fee.

Does my neighbor count the cost? Is it not costing him something to lose that extra \$45 or \$95 or more, as the case may be? I think so. Yet he will go on year after year content to use the cheap stallion and risk as little in his investment as possible.

We who can see through this matter of cost only breed to the best stallion of the type we wish that is available. It is all right to deal with the "good fellow" or the "lodge brother" in some cases, but when it comes to horse breeding we cannot afford to use anything but the best, no matter who owns or travels the stallion.

Some Features of the Fence Problem

S. Roberts, Ontario Co., Ont.

Wire fences in Ontario are rapidly displacing old, crooked and snake-like rail fences. These latter in some places have become dilapidated and very unsightly. Such fences are often the cause for bad feelings between neighbors. And there are many disadvantages connected with these old fences, yet lots of owners do not seem to be in any hurry to make them any better either with rails or by substituting a good fence of woven wire.

One of the worst features of these old fences is that the ground on which they stand affords a breeding place for lots of noxious weeds. They afford excellent shelter for quack grass and wild tares. The writer was chatting with a farmer in this district the other day who had just finished cleaning up one of these old fences. He said that it contained pretty nearly everything bad in the weed line as well as herry bushes and small, scrubby trees. This farmer intends to summer fallow that old fence row this season; and his idea is a good one. He has moved and erected a good post and rail fence some rods farther down the field.

RAIL FENCES INEFFICIENT.

It is a question whether or not it is worth while going to much trouble in rebuilding these old rail fences. The rails, especially if they be hard wood, have passed their stage of usefulness for fence purposes. Through age and partial decay they are easily broken, so that when put into a newly erected fence, some of them are soon broken, and the fence becomes an inefficient one, such as cannot be trusted to turn the stock from the crops that may be on the other side of it. Owing to this fact, woven wire has become the only fence worth considering.

When buying woven wire fences, there are many points worth considering. Years ago when wire fence was wanted, anything in the shape of wire would do, especially if cheap. But the day of cheap wire fences is past. The more money paid per rod the better is the quality and the more

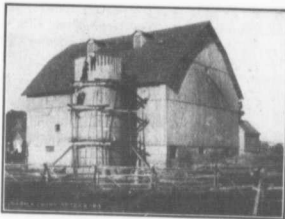
pounds of wire per rod one gets. Cheap wire fence is dear at any price.

A woven wire fence should answer the purpose for which it is made. It should be strong, exceedingly well galvanized, be of best quality and present the best possible appearance when erected. Prospective fence buyers who have not got in touch with such a fence should investigate the question; get samples, or better still, see some that is erected, test it, jump on it, swing on it, sit on it, and, if possible, see a piece of this fence that has been erected for some time, and which has withstood all tests.

Will a Silo Pay for Itself?

H. D. Leavens, Prince Edward Co., Ont.

A goodly number of us farmers, especially dairymen, ask ourselves the question, will a silo pay?



A Satisfactory Ready-Made Stave Silo

All who are in doubt of the utility of a silo should read in the adjoining article what Mr. H. Leavens, of Prince Edward Co., Ont., has to say of their experience with the one shown in the illustration.

The question must be answered in the affirmative before we are disposed to build a silo.

Last summer we had about seven acres of Leaning (ensilage) corn, also about five or six acres of sweet corn. We were at a loss to know what to do with it all, as some of it had grown to an enormous height and some of the stalks were as large as a fork handle—some, in fact, were as large as a man's wrist.

BUILT LATE IN SEASON.

During the first part of August, one of our neighbors, who also had a large amount of corn, began talking about a silo. It was out of the question at that late date to draw gravel and cement, so we built an Ideal Stave Silo, the dimensions of which were 14x30 feet. The silo and chute cost \$248. It has no top on it as yet, but we shall put one on this summer.

When we started to feed the silage, although the silo had been full, it had settled eight feet. This was in November. We fed about 15 pounds twice a day throughout the latter half of November, and all of December. The milk flow increased right along until on the last day of December our cows were giving nearly double what they were on the first day of the month. Besides the silage, we fed millet and oat straw—no grain.

After the cheese factory closed and we were gradually drying up the cows, we shut down on their ration of silage, but even when dry their usual amount was fed once a day along with clover hay and straw.

COWS' MILK MUCH BETTER.

Since the cows have begun to freshen we are feeding silage, about 20 pounds at a feed, twice a day, and from the same cows we are getting nearly as much milk again as we did one year ago. Furthermore, not one cow has had any trouble of any kind at freshening time. At the time of writing, April 18, we are sending milk from 12 cows to the Bloomfield factory. These cows, with the exception of two heifers, are giving over 30 pounds a day.

From the silo herein mentioned we have fed 32 head of cattle from the middle of November. We still have enough to feed until the first of May.

Norway Spruce for Windbreaks*

E. Terrill, Northumberland Co., Ont.

Norway spruce as a windbreak to protect houses, farm buildings and orchards has no equal. To fully appreciate the value of a Norway spruce windbreak, one must live in its shelter for a time. Such a windbreak is of special value to a farm house.

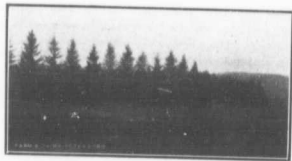
The Norway spruce harbors no obnoxious insects and there is no litter from it falling on the lawn, thus saving greatly in the amount of labor necessary to keep things neat where deciduous trees, which shed their leaves each fall, are planted. It so thoroughly breaks the cold blasts of winter and it is so easy in the lee of a windbreak that on a zero day one is often turned into getting out for a drive with an insufficiency of clothing, only to be obliged to return for more wraps after leaving the shelter of the evergreens.

The Norway spruce makes a very welcome protection from the sun in summer time. One is fortunate indeed if he be privileged to retire in their shade from the heat of the midsummer sun and to inhale the invigorating odor diffused by this member of the family conifer.

As a windbreak it is invaluable for protection to an orchard. It saves apples from being shaken off by the strong fall winds, and it has been my observation that apples grown in orchards protected in this way are less liable to insect pests than apples grown in unprotected orchards.

Even from the purely commercial standpoint of lumber, a windbreak is a good investment. From the 150 trees, which I obtained from a nursery at two and a half cents each, these trees being about a year old, I could now cut—figuring at the lowest estimate—about 15,000 feet of lumber. These trees range from 15 inches to two feet and over in diameter and average from 50 to 60 feet in height. These trees were set out a little over 30 years ago.

For a single row windbreak, Norway spruce



Ye, Who Live on Farms, Plant Windbreaks

A properly planted windbreak of Norway spruce adds much to the comfort and appearance of a farm home. Mr. E. Terrill, of Northumberland Co., Ont., a first prize breeder, writes in the adjoining article of the windbreak illustrated.

It should be set 12 feet apart. Then when the branches begin to meet, every other one may be cut out, thus leaving the trees, when mature, 24 feet apart.

A Cheap Home-Made Paint

Wm. Holman, Painter, O. A. C., Guelph.

Those who wish to mix a cheap paint at home for buildings or fences will find the following of value: In one gallon of skim milk stir three pounds of Portland cement. Add sufficient Venetian red paint powder to impart a good color. (Any other color of paint powder desired may be used.) The skim milk will hold the paint powder in suspension; the cement will settle. It is therefore necessary to keep the mixture well stirred with a paddle. Mix only sufficient to meet the needs of the day. The mixture should not be kept standing.

Six hours after applying, this paint will be immovable and unaffected by water as good paint a month old. Cases are on record of this paint being in good condition after 20 years.

*This article is one of the essays based on the actual experience of a prize winning farmer, a series of which titles, is now running in Farm and Dairy. Mr. Terrill's farm won first prize for his district.

It Pays to Paint Farm Buildings

F. E. Ellis, Wellington Co., Ont.

The prosperity of the farmer is generally reflected in his farm buildings. These can and should be attractive to the eye. It must be confessed, however, that in most cases barns and out-buildings are a blot on the landscape. This is not as it should be. Paint would right matters. Farm buildings neatly painted are a source of pride to their owner. And this extra touch adds substantially to the value of the farm.

All agree that buildings look much better when painted. The question we want answered is, "Does it pay?"

It may not pay, directly, to paint our barns. In fact, its preservative effect on ordinary rough siding would scarcely pay for the paint. On new smooth siding it would pay. Indirectly it does pay, however, no matter what the siding. Well painted buildings add to the value of the farm, a sum far in excess of the cost of a coat of paint.

Let us look at it in this way: Consider two communities in close proximity to each other. They are equal in every respect, save that in one community the buildings are all painted, while in the other they are not. Farms in the former instance will invariably command more money. Prospective buyers cannot but be attracted to such a section. The business man knows the value of attractive surroundings.

There are several brands of ready mixed paints on the market which are satisfactory. These should be used by those who have had no experience in mixing paints. Those who plan to mix their own paints should heed the following suggestions: Avoid cheap oil. Use good pale-boiled oil even if it costs a few cents a gallon more. If raw oil is used, dryer must be added.

THE SPRAY PUMP FOR PAINTING.

When we have decided to paint, the question arises, "How shall we apply it?" The ordinary method of hand application is familiar to all. In recent years, the spray pump has been recommended as a cheap and efficient means of painting outbuildings. It proves quite satisfactory. The spray covers the surface well, though somewhat unevenly, and it is necessary to brush it if a good job is desired. This brushing is easily accomplished by means of an ordinary whitewash brush to the side of which a long handle has been attached.

The advantages of the pump as a means of painting are that the paint is applied quickly and cheaply. This practice has its disadvantages in that fully one-half more paint is necessary and one does not get the fine gloss possible when the paint is applied by hand and well rubbed in.

Where a pump is to be used for applying the

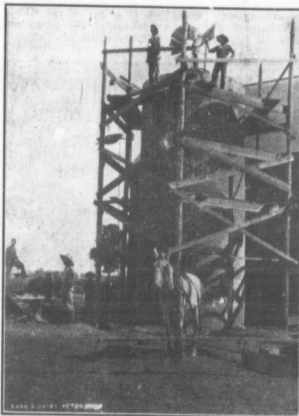
paint, the cheap, cold water paints are probably preferable on account of waste. For purposes of whitewashing, the pump is always ahead of the brush.

When selecting a color, it is well to remember that red will look well longer than any other shade. A coat of paint every eight or 10 years will keep the buildings looking well.

A Small Cement Silo

John Jackson, Lincoln Co., Ont.

The accompanying illustration shows a round cement silo on the farm of Geo. W. Nicholls of Lincoln Co., Ont. Following are the details of cost of construction. The size is 10 ft. 6 in. inside by



Cement Silos Continue to Grow in Popularity

The silo illustrated, although a comparatively small one, has given the best of satisfaction. Mr John Jackson, Lincoln Co., Ont., who took the photo reproduced above, gives the cost of construction in the adjoining article.

27 ft. 6 in. high. The wall is 8 in. thick at bottom, 5 in. at top. The cost of construction, not counting teaming, the material or board of men, is as follows:

4 loads of sand at 25c.....	\$1 00
500 ft. gravel (crushed stone) at \$3.00 a	
cord	11 70
25 1/2 bbls. cement at \$1.30 (cheap).....	32 82
1 extra man three days at \$1.50.....	4 50
Contractor 5 1/2 days at \$5.00	27 50
Iron for reinforcing (a load of small	

field stone)

Total

Of course if everything were paid for, the cost of this silo would run up quite a few dollars more; but even then in the long run it would be cheaper than wood, and a farmer can do the teaming at slack times without feeling it, nor does he mind labor for the men.

This silo was built and fitted last year and has proved entirely satisfactory; in fact, I think it a first-class job. The cement silo has long since passed the experimental stage, and a silo of some kind is almost indispensable to successful dairying.

Home of a Well Known Ayrshire Breeder

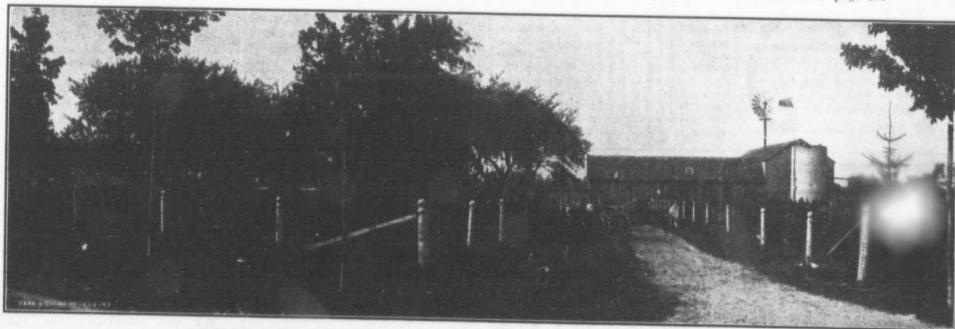
Had Mr. W. W. Ballantyne of Stratford, Ont., entered his farm in the prize farms competition last year, it would have been a hard farm to beat. This is the opinion of Mr. D. Drummond of the Dominion Department of Agriculture, who has judged farms both in Quebec and Ontario and is also the opinion of an editorial representative of Farm and Dairy, who visited Mr. Ballantyne's farm recently. Mr. Ballantyne is a director and past president of the Dominion Ayrshire Cattle Breeders' association. He was chairman last year of the Dominion Swine Commission, which visited Europe; he is a director of the Canadian National Exhibition, and holds other offices, not the least among which is the fact that he is also the president of The Rural Publishing Co., Ltd., which owns Farm and Dairy.

The farm is unusually well balanced, being strong in practically every department. It contains some 200 acres, of which 165 are under cultivation. The fields are laid out for the most part in 20-acre blocks. The house and buildings are so located that they are convenient to the rest of the farm. A stream runs through the center of the farm, the land on both sides of which slopes towards the stream, giving excellent drainage. The soil is rich. Such a thing as a crop failure has not been known on the farm. There is a large and valuable wood lot.

SOME FINE AYRSHIRES.

A four-year rotation is followed, namely, corn and roots, oats sowed down, clover hay, wheat and pasture. This rotation is adhered to as closely as possible, although varied occasionally to meet special circumstances. A feature of the farm is the unusually fine herd of Ayrshire cattle. It is possibly unexcelled in Canada, as a working dairy herd of Ayrshires. The animals are large and have good backs, strong constitutions, large, well shaped udders and their full share of the

(Continued on page 25)



It is Well Worth While to Make the Inexpensive Improvements such as Have Been Made Around This Farm Home

The far-reaching influence of an improved, well-kept farm home is little short of marvellous. Let one farm in a neighborhood be improved, and soon the neighbors will take note and commence to improve their homes. Does your home exercise this influence for good? The home illustrated is that owned by Mr. George Laithwaite, Huron Co., Ont., a prize winner in the Dairy Farms Competition conducted by Farm and Dairy last year.

The Feeders' Corner

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

Silage for a Stock Bull

Should a bull that is used for service be fed any silage? I have heard it stated that he should not, hence this question.—D. B. New Dundee, Ont. A bull in service may usually be fed ensilage, but if he shows any tendency to slowness or is not very sure, then it would be well to give him other feeds than ensilage. Ensilage is a bulky feed and causes a possibly abnormal development of middle which renders the bull awkward in service. A small amount of ensilage with clover hay and bran will make a good ration for a bull in service.—J. H. G.

Keeps Pigs to Use Waste

H. Armour, Simcoe Co., Ont. We have never engaged in the business of feeding hogs very extensively. We keep only pure breeds. The young pigs are taught to feed at five weeks old on skim milk in which a little shorts are well mixed. We always find a ready sale for these pigs at \$5 a pair, or much more if sold for breeding purposes. We carry the sow along on swill from the kitchen, boiled potatoes and oat chop until the pigs are disposed of. She then lives on grass and waste from the kitchen, or if in winter, roots, cut apples and a little meal. We usually manage to raise from nine to 15 pigs each litter.

A Ration for Young Pigs

Will you kindly give in Farm and Dairy a ration without milk for pigs four or five weeks old.—Young Farmer, Brooksbury, Que. Young pigs do best if given frequent light feeds of moderately warm, sweet skim milk. They will also do well on middlings to which a small amount of middlings and sifted ground oats has been added. Where it is desired or necessary to change or vary the above rations, the following mixture is one that has given satisfaction: Sifted ground oats 10 lbs.

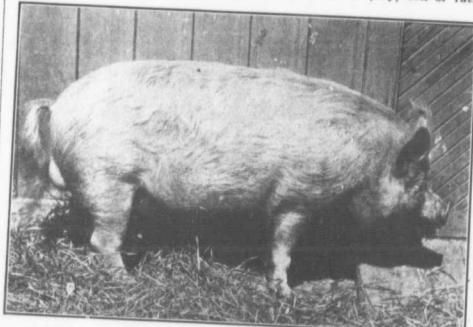
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Shorts 10 lbs. Feed flour 10 lbs. Oil cake meal 10 lbs. Corn meal 10 lbs. The mixture is very much superior to any one, or to any two of the feeds mentioned taken together.

This meal mixture might be added in small quantities to either skim milk or whey. Care should be taken, however, to feed always a dilute or thin mixture. This point of feeding a thin mixture to young pigs is an exceedingly important one and worthy of a great deal of general observation than is likely to knock young pigs off feed than feeding too freely of heavy or thick rations. Adding a little salt, charcoal and ashes to the mixture once in a while does good; say one pound salt, one pound charcoal and one pound wood ashes to the meal mixture.



A Yorkshire Bar of Good Bacon Type "Oak Lodge Cierco," shown in the illustration above, was the herd bar at the Central Experimental Farm, Ottawa, a couple of years ago. Note his smoothness of light jaw.

given above. Regularity and uniformity as to quality, temperature and quantity of feed are the main things along with the preceding considerations.—J. H. Grisdale, Agriculturist C. E. F., Ottawa.

How to Raise Dairy Calves

What would you feed young calves after they are raised on new milk for four or five weeks in order to keep them growing nicely?—F. H. C. Halton Co., Ont. The calf should be removed from the cow the second or third day. It should then be taught to drink. This may be done about as follows: Take a quart of warm new milk in a 10 quart pail. Give the calf two fingers to suck air instead of air entering between the fingers. The flaxseed meal jelly, etc., should be started to take milk. Do not sink the nose so far into the milk as to cover the nostrils. If it will not drink at first, leave it for a few hours to work up an appetite. After a few days it

may gradually be weaned from the fingers. Whole milk should be fed for at least one week. During the next week the change from whole milk to skim milk should gradually be brought about. Substitute each day a regularly increasing proportion of skim milk with the same amount of whole milk withdrawn. **FLAX SEED JELLY** The skim milk should be fed warm, from 90 to 100 degrees no more, or no less. To replace the fat removed from the skim milk as well as to furnish additional protein, it is well to add some flaxseed jelly to the ration. This jelly should be added in small quantities at first and be slowly increased. Begin with a dessertspoonful in each portion and gradually increase until about a cupful is being fed night and morning to the three months old calf. To prepare the jelly, boil or rather

- 2. Be scrupulously clean as to food, pails or troughs and pens or quarters.
- 3. Make all changes in character of food very gradually. This applies whether changes be as to temperature, or ground, or changes in the percentage of butter-fat, acidity or sweetness, quantity, times of feeding, or any other feature in connection with the food.
- 4. Feed only wholesome food, feed regularly and feed in sufficient quantities, but not too generously.—J. H. Grisdale, Agriculturist, C. E. F., Ottawa, in Government Report.

The Culture of Corn

Albert E. Tole, Kent Co., Ont. We select a soil, find for our corn ground. This we manure as during the winter or in early spring at the rate of 12 loads of farmyard manure per acre, applying the manure with a spreader. The field is plowed as early as possible in the spring so as to get the manure rotting for the benefit of the corn. After plowing, the field is harrowed down to level it and retain moisture. If at all lumpy, it is then rolled. We use the disk harrow for preparing the corn ground, tilling half way each end and working the field both lengthwise and crosswise, then we level the field again with the harrow. Before we are ready to plant, we go over the whole with a spring tooth cultivator, giving it a stroke also both lengthwise and crosswise.

If the land is dry and lumpy, it should be harrowed and rolled before planting. I plant in check rows three feet nine inches apart and plant from three to four grains in each hill. Just before the grain is put in, I go over it with a harrow or a weeder to check any weeds that may start and to loosen the soil. After the corn is up a week or 10 days, I harrow it again, then in two or three days I cultivate it with a two-horse cultivator, going through the field each week if possible until the corn gets up too tall. Then I take a single cultivator and one horse, using a short singletree to prevent breaking the corn.

The rotation we practise is of five years' duration; a sod field is plowed for corn, the next year it is sown to oats or barley, then it is seeded with clover and timothy and allowed to stand for two years, or in case of a poor catch of new seed, three years, after which it is again plowed and planted to corn.

Pointers on Potato Planting

W. J. Westington, Northumberland Co., Ont. Plant your potatoes between the 22nd of May and the 7th of June. Choose the varieties that are least susceptible to fungus diseases and that are smooth, well matured, shallow eyed and of medium size, with fine, white skin and flesh, and that have lost none of their vitality by sprouting should be taken from a cool, dark cellar and planted immediately after being cut. Have no more than two eyes in each set and place the sets in the ground 18 inches apart. Discard ill-formed, scabby potatoes, or portions of ones that may have been injured in the digging process. Choose potatoes true to the type or form desired.

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KEEP THE CALVES CLEAN Calves should be kept in scrupulously clean pens. These should be dry and warm in winter and cool and dry in summer. A strict observance of the following general directions will almost certainly ensure success: 1. Treat calves kindly and carefully

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Cement Cistern on Barn Floor

I want to build a wooden cistern on the barn floor so as to force a water to a piper; also, for use of 20 head of cattle under barn. I was going to use soft water that comes off a steel roof.

I want a cistern that will hold one hundred barrels—G. Mc., Cannington.

A cement cistern can be built for very little more than wood. This cistern can be built and placed upon the barn floor with perfect safety.

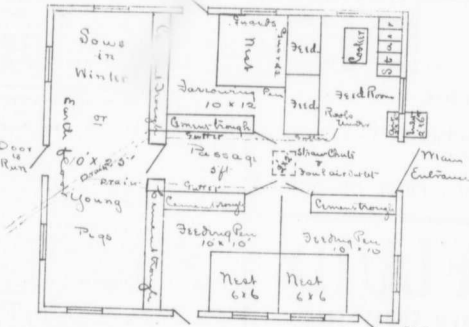
It should be made of cement in proportion one to three. The walls only require to be three inches thick, but should be reinforced with wire. A very good plan is to simply put up wood cribbing of lumber such as would be used for a well crib. Make both inside and outside crib, the walls being three inches apart. Then purchase light iron metal lath and stand in all around the opening, then pour the opening full of cement made of a proportion one part cement to three parts sand. After the cribbing is removed, go over the inside of tank with a brush, using neat cement and water. By this method a very cheap tank can be built, and it will give good satisfaction.

A tank of this size can be built from cement for about \$50.—London Concrete Machinery Co., Limited, H. Poocke, Manager.

Plans for a Two-Sow Piggery

Kindly publish in Farm and Dairy plans for a pig pen suitable for a farm where two brood sows are kept.—A. Bruce Co. Subscriber.

The plan submitted herewith for a piggery 25x30 may possibly be too



For comments on this plan, see adjoining article.

large for such pig feeding operations as intended, but is my idea of what would be necessary to get the best results under such conditions.

The floors should be of cement and slope to gutters along the passage. Sleeping nests should be floored with wood on top of cement. Fresh air should enter at feed room and foul air go out as indicated. The large apartment might be quite separated by a partition or left in connection just as suited the fancy of the owner. I would prefer it separate.

Straw should be stored overhead. Windows should reach to within two and a half feet from floor of pen and should be five feet high. They should be three feet wide and hinged in the middle crosswise to permit of opening the upper half.

The ceiling should be about eight feet high. Walls may be built as follows, starting at outside: matched lumber and battens, two papers, 2x4 studding, one paper, matched lumber, preferably V joint.

There might advantageously be a cooker in the building, as indicated,

and a small root cellar underneath the feed room. The fresh air intake should be about two feet by six inches. The foul air outlet about 2x2 feet.—J. H. Grisdale.

Why You Need a Silo

The silo will enable you to increase the amount of stock you are carrying on the farm. This should be the aim of every farmer, for it means the maintaining of soil fertility. It enables you to increase the production of milk and butter fat and very materially decrease the cost of producing it.

With silage you can prevent shrinkage in the flow of milk, which takes place in the late summer and early fall. It is the most economical feed for stock at that time of year, when pastures are short and dry. You can also keep up the flow of milk during the winter, when butter fat prices are most favorable. Winter dairying can be carried on in a satisfactory and profitable way with the silo.

About 40 per cent. of the feeding value of the corn plant is in the leaves and stalks. With the silo you save practically all of this 40 per cent., which is often wasted. It makes a palatable feed of stuff which would not be eaten. It enables the farmer to get more fall plowing done than he otherwise would. There are no agricultural graving cranes in the manure when silage is fed. It saves the drudgery of feeding and makes the hired man more satisfied with his position.

The young stock is kept in a healthy, sappy, growing condition.

subsoil and supplying nitrogen and mineral plant food to the surface. From two to four crops can be cut in a season, and the plant attains a height of from 10 to 20 inches. This crop runs from three to six tons to the acre, and it makes a splendid feed for all kinds of live stock.

In order to encourage societies to enter this crop, liberal arrangements have been made by the Department,

full particulars of which will be furnished on application.—J. Lockie Wilson, Toronto, Supt. Fairs and Exhibitions.

I am sending you \$1 to renew my subscription to your valuable paper for 1910. We find Farm and Dairy a very useful paper in our home and wish it all possible success.—J. A. Cameron, Peel Co., Ontario.

Potash Means Profit

Test the truth of this statement by using Potash this year in conjunction with a Phosphatic and Nitrogenous Fertilizer.

Potash is an Absolutely Essential Plant Food and may be obtained from all leading Fertilizer Dealers and Seedmen in the highly concentrated forms of

Muriate of Potash and Sulphate of Potash

Potash promotes maturity and insures high class quality of all Farm, Orchard and Garden Crops.

Write us for particulars and Free Copies of our Bulletins including:—"Fertilizers: their Nature and Use," "Fertilizing Orchard and Garden," "The Potato Crop in Canada," "The Farmer's Companion," etc., etc.

DOMINION AGRICULTURAL OFFICES OF THE POTASH SYNDICATE
1102-1105 TEMPLE BUILDING, TORONTO, ONT.

Agents wanted in some localities

Old stock wintered on silage comes through into the spring in a much better condition than stock wintered on dry feed.—B. V. B.

Alfalfa Included in Competition

Editor, Farm and Dairy.—For the past three years directors of agricultural societies which have taken part in the Standing Field Crop Competitions have confined their entries to oats, wheat and barley. To those agricultural societies that have not yet selected a crop for the competition this year I strongly recommend that, where alfalfa has, even in a small way, been grown, it be the crop selected in view of the magnificent returns obtained from it wherever given a fair trial.

The farmers of Kansas have taken the advice of their Department of Agriculture and have increased the acreage of alfalfa from 38,000 to 100,000 in a few years. Instead of impoverishing the land, alfalfa enriches it, its roots going down from five to 20 feet, drawing moisture from beneath the

which are accurately pressed from the best and most durable British Steel it is possible to procure.

All corrugations are straight and true, assuring an accurate fit at both side and end laps without waste. Special hip and ridge covers make tight, neat joints at these points.

Where warmth is not important "Galt" Corrugated Sheets save three-fourths of the wood sheathing as well as considerable labor, and will give good service for a life time of at least fifty years.

It costs no more for a "Galt" Corrugated Sheet Steel Building than for a wood one. Which do you think is the better investment? Galvanized or painted material always in stock. Complete information in catalog "3-B."

The Galt Art Metal Co., Ltd., Galt, Ont.

Sales and Distributing Agents: Dunn Bros., Winnipeg and Regina.

HORTICULTURE

Better Care for the Orchard

G. H. Lees, Norfolk Co., Ont.

If one were to judge by the neglected state of most apple orchards, such as are to be found in almost all sections of older Ontario, where general farming is practised, he would think that apple growing was about the last proposition that one should enter into. And where orchards are looked after as is the usual practice, it is, to say the least, doubtful whether or not returns are secured from these sufficient to justify their existence. We know, however, from actual experience—and countless men in this county and in many others of the province have proved it to their satisfaction—that the apple is a money maker if given the care that its proper cultivation calls for.

There are few farmers but recognize the advantage of pruning. A lot of them, on the other hand, have yet to find out that it pays to spray. Even many of those who do spray go about the work in a shiftless sort of way, their main purpose seeming to be to empty the larred rather than to spray

the trees properly. The apple crop is proving to be a profit maker with many of our leading farmers. All can who by virtue of up-to-date methods have succeeded in making it a leader.

Any farmer located in a district suitable to the growth of the apple tree might do worse than to consider the advisability of planting out more land to orchard. Our constantly expanding markets for the right kind of those of sufficient foresight to see the apples bid fair to remunerate all ultimate harvest that may be reaped from a good orchard. It is useless to plant an orchard, or even to maintain the old one, unless we give it proper care, and above all, spray.

Planting the Orchard

J. A. Moore, Queen's Co., P. E. I.

In preparing to set out an orchard we would select a field affording natural drainage and, if possible, natural shelter; that is, if one has a grove or of, as a shelter for the orchard, for there is not much use of growing fruit and having it blown off by the heavy autumn winds. A row of cherry trees planted thickly around the outside of the orchard would make quite a good windbreak and prove a source of profit as well. We would also plant an

evergreen hedge outside of all and, if fruit trees and evergreens were set out at the same time, the shelter would be sufficient by the time the trees had fruited.

A good preparation of the ground would be to plow and harrow, then sow with peas or buckwheat, and when it had grown up sufficiently, to plow it down. This would make the ground plump and provide an abundant supply of the best kind of food for the roots.

After pulverizing the soil and smoothing it, lay off the orchard in rows each way, at whatever distance rows are to be planted. Set up stakes in line and plant where the lines intersect. This will leave the trees in line every way and will facilitate working among them. When trees are to be planted, the roots in a pail of water, as the clay will adhere quickly to the wet rootlets and facilitate speedy growth. For years hood trees may be grown between the rows of trees, if plenty of manure is used; the trees can thus be cultivated with profit. Late in the fall the young trunk with building paper to the height of about eighteen inches to protect them from being injured by mice. This is about the way we set out our trees, and we have never yet had an apple tree fail to grow. If every

farmer in Prince Edward Island could be induced to plant five acres of orchard the exodus would stop and we would double our population in fifteen years.—The Canadian Horticulturist.

Effective Spraying Material

Editor, Farm and Dairy.—In regard to the oyster shell scale on my young orchard last season, I sent to Cooper & Nephews, Toronto, on your recommendation, and got a gallon of their VI Fluid, with which we sprayed 60 trees. It cleaned off the scale most completely. The trees looked much more healthy and had fully twice as many apples, these being of much better quality than those not sprayed. The trees sprayed with this material were for the most part Greenings and Seek trees. The Seek trees were badly infested with the oyster shell scale. So bad were they affected that it looked as if we might lose the tree. Some branches, however, were covered with the scale as thickly as it could stick on. The effective manner in which this VI I cleaned the scale off and restored the healthy conditions to the trees, was little short of a surprise. It might interest you to know that I have ordered enough of V I and V 2 Fluids this spring to spray the whole orchard thoroughly.—H. R. Nixon, Brant Co., Ont.

Prospects for Fruit, 1910

The growing season of 1910 opens with very bright prospects for fruit. Unless caught by frosts and later unfavorable weather, there is every assurance of a favorable crop. The season is fully three weeks earlier than usual, and on this account there is perhaps more danger of untoward results. Following are reports on fruit prospects as received from Farm and Dairy correspondents:

LINCOLN CO., ONT.

St. Catharines.—Peaches are coming into bloom with fine prospects for a heavy crop. Plums are in full bloom and promise full crop. Pears promise a good crop. Sweet cherries are in bloom, but the wet weather may shorten the crop a little. Sour cherries are looking well. Grapes and apples prove to have wintered well. Strawberries are fair.—R. T.

HALTON CO., ONT.

Grimsby.—The prospect for peaches, and indeed every fruit, was never better. The wet and cold had thus far done no injury whatever.—W. Burlington.—Fruit trees and bushes have wintered exceptionally well. Prospects for crops of all kinds, fruits, grains, meadows, etc., are the best I have known for years.—A. W. P.

ESSEX CO., ONT.

Ruthven.—Indications are very favorable for a heavy crop of all kinds of fruit. Never saw a greater show of bloom. Season is early and peach trees are about in full bloom, also pears, cherries and Japanese plums. A frost just now would reduce the prospect of full crop very materially.—J. O. D.

GREY CO., ONT.

Clarksburg.—All kinds of fruit trees and bushes wintered exceedingly well, and there is every appearance of a large crop in cherries, berries, pears and apples, providing, of course, that we will not have frosts to contend with. Cherries are now in blossom.—J. G. M.

L'ISLET CO., QUE.

Village des Aulnaies.—Trees are in splendid condition, no damage being caused to fruit trees. Bushes and strawberries are fine. The winter has been normal east and northeast of Quebec City, with plenty of snow, which has just melted. There is no frost in the ground. The sugar crop is below average.—A. D.

JACQUES CARTIER CO., QUE.

Notre Dame de Grace.—Fruit trees of all kinds have come through the winter O. K. There is every appearance of a bumper crop of all kinds of

BY APPOINTMENT TO H.M. THE KING

COOPER'S DIP

HAS NEVER BEEN EQUALLED

It Cures SCAB, Kills TICKS and LICE, Keeps off the MAGGOT FLY, and BENEFITS THE WOOL and HIDE

THE ORIGINAL DIP

THE BEST OF DIPS

V2 K FLUID
FOR ROSE and OTHER MILDEWS

Invaluable in the Garden and Greenhouse. Easy to mix and to apply.

V2 FLUID
THE SUMMER SPRAY FLUID

Kills Greenfly, Apple Sucker and Scale Insects, without injury to Leaf or Blossom.

WEEDICIDE

A Pure and Concentrated Preparation for Killing Weeds, Grass and Moss on Garden Paths and Gravelled Spaces

1 Gallon makes 100 Gallons of Weed-killer

APTERITE The Soil Fumigant and Fertilizer
Destroys Insects and other Soil Pests

Prices and full Particulars from the Sole Manufacturers

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fruit grown here. Plum trees will be in bloom in a day or two.—R. B.

CHATEAUGUYS BASIN CO., QUE.
Chateauguys Basin.—All fruit wintered splendidly and there is a heavy showing of fruit buds. Plums and cherries are very full of buds. Raspberries wintered without any killing back. Apple trees are looking fine. Strawberries and currants wintered well.—P. R.

HANTS CO., N. S.
Cambridge.—Orchards are looking well. Trees wintered well without any apparent injury. The prospect is good as could be expected at this time of the season.—J. H. C.

KINGS CO., N. S.
Berwick.—The prospects for a good fruit crop are excellent. Trees and lush fruits came through the winter in splendid condition. We have no trouble with winter injury to apple trees and very little to other fruits. Fruit buds are very much advanced owing to the warm spell. Spraying is general, and there is a great boom in planting young orchards. Nursery stock is very scarce.—B. H. L.

KINGS CO., P. E. I.
Aitken's Ferry.—Buds are only beginning to swell, so cannot say much about prospects of fruit crop. Winter was exceptionally mild, even peach buds were not killed.—D. J. S.

QUEENS CO., P. E. I.
Charlottetown.—Fruit trees came through the winter in good condition, and the buds promise a good crop. Season is two weeks earlier than usual. Considerable spraying is being done with the lime sulphur wash.—A. E. D.

NEW WESTMINSTER CO., N. C.
Agassiz.—The past winter was mild all over the province, and trees are looking well. Many trees are just coming into bloom, and if we have fine weather for a few weeks, there is every promise of a full crop of fruit.—T. A. S.

FOR SALE AND WANT ADVERTISING

TWO CENTS A WORD CASH WITH ORDER

BEES—Wanted, several colonies of bees.—J. R. Black, Harwood, Ont.

FOR SALE—Six Buff Orpington and twelve Brown Leghorn pullets, \$1 each, from prize winners; Leghorn eggs, \$1 per 15.—H. Weston Barry, Princeton, Ont.

EGGS GIVEN AWAY in return for new subscriptions. Settings of eggs of any standard variety of fowl, given away in return for two new subscriptions to Farm and Dairy. Send to Circulation Manager, Farm and Dairy, Peterboro, Ont.

BARGAINS—Famous Pride of Ontario strain of Rose Comb, Rhode Island Reds, White and Partridge Wyandottes, are prize-winning, record breaking layers, broad-breasted, healthy, vigorous. Circular free. Eggs \$2.00 per dozen. Prize price \$1.00 per setting guarantee. Pride of Ontario Poultry Yards, Collville, Ont.

S. C. BLACK MINORCAS—Stock and eggs for sale. Thirty sets, one hundred, \$5.00.—Wm. McEhee, Sr., Beaverville, Ont.

MY BIRDS won over five hundred first prizes at eleven fairs and shows. White Rocks, White and Brown Leghorns, Black and Spangled Hamburgs, Buff Orpingtons, Black Javas, White Crested Black Polands, White and Silver Laced Wyandottes, Rose and Single Combed R. I. Reds, Blue Andalusians, two pens of each breed; No. 1 \$2. No. 2 \$1.50. Write for Circulars, Partridge and Buff Cochins, Silver Pencilled and Columbia Wyandottes, Buff Rocks, Anconas, Golden Seabrights, Bantams, one pen, only \$2 for 15 eggs.—F. W. Krouse, Guelph, Ont.

WANTED—Chase makes the coming season to sell subscriptions to Farm and Dairy, Peterboro, Ont. Good cash commission for each subscription taken. Write Circulation Manager, Farm and Dairy, Peterboro, Ont. for sample copies for your patrons. Samples sent free on application.

EGGS FOR HATCHING—R. C. W. Leaghorns, Excellent layers. Eggs, \$1 per 15.—H. McKellar, Tavistock, Ont.

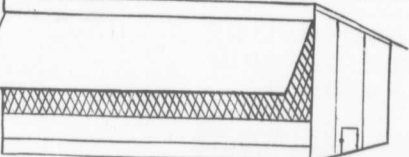
SINGLE COMB WHITE LEGHORN eggs, \$1 per setting. One hundred \$5.00.—John McCormick, Paris, Ont.

POULTRY YARD

A Convenient Chicken Coop
Gen. Robertson, Carleton Co., Ont.

Almost all the coops that I have seen in use and most of those that I have seen described in poultry papers have had very little attention paid to the convenience of the attendant in getting at the chicks. The coop I will try to describe, and which is herewith illustrated, is one I have had in use for some years and one that I have found to answer my purposes very well.

The entire roof of the coop is hinged so that by lifting it and placing a short stick under one end the whole interior is at the command of the attendant.



A Chicken Coop that Embodies Many Conveniences

This useful adjunct to the poultry department of any farm, is described in the adjoining article by its originator, Mr. Geo. Robertson, of Carleton Co., Ont., who is an expert poultryman.

I make the coops in different sizes, according to the number of hens I command, so that the dimensions I give can be varied according to conditions. The length of the coop is 6 1/2 ft. (13 ft. board cut in two), 28 in. high at the back and 36 in. high at front, giving a slope of 8 in. in width. It is three boards wide, so if I am using 10 in. lumber it will be 30 in. wide.

The back and ends are made solid except that in each end is a small door for an exit. The end boards run up and down and are held together by a 1x2 strip top and bottom. Just above the doors strips are nailed to support the roasts, two of which are placed in the width. They are made of 2x3 stiff dressed and rounded on the edges.

WHERE SETTING IN FRONT.

The boards for the back run lengthwise. The front of the coop is formed by tacking one-inch wire netting on the front, then at the top and bottom a board is nailed (about a six-inch board) and the netting tacked to this board from the inside. This leaves the top and bottom board projecting an inch past the edges of the coop. Into this space is fitted a frame made of one-inch material covered with cotton, and it is hinged to the top board so that it can be raised or closed at will.

The roof boards run up and down. In making the roof I first take a couple of strips of one-inch material as long as the width of the coop, allowing for the slope. These are set the distance apart that the coop is normally and a couple of 1x2 in. strips are firmly nailed to them. Then the roof boards are in turn nailed to these strips, allowing the boards to project over the coop an inch or so to throw the drip off.

ROOF PLACED ON HINGES.

When the roof is placed on the coop the cross strips should fit snugly against the ends of the coop. A nail is then driven through the strip into the front board of the coop at both ends, the wire hinges, the strips end, the wire hinges, the strips end, to which the roof boards are fastened will need to be let into the ends of the coop.

There is no permanent floor in the coop. It is simply placed on a floor which is made about an inch larger all round than the coop. When it is necessary to clean, all that has to be done is the coop is laid on its back off

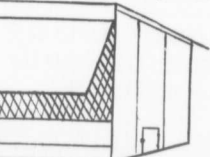
replace the sterile, and if a system of fresh sand scattered and the coop upset back on.

I should have said that in the centre of the front and back I nail a strip 1x2 in. to act as a brace. In is tacked a partition made of one-half-inch material and a hen and brood is placed in either end. When the chicks are ready to roost, this partition is taken out, the roost put in and the two broods go together.

The cost of material will depend altogether on one's location. I used dressed tongue and groove pine that cost me \$18 per 1,000.

Testing the Fertility of Eggs

In modern hatching, much more attention is given to the fertility of eggs than was formerly observed.



The old way was to fill up the incubators or put a sitting under the hen, let the fertile hatch and the sterile remain, to be disclosed when hatching was done. There was great waste in this. Many hens and incubators were employed in running eggs with no chicks in them; but now more people test their eggs for fertility. There is economy in this, as fertile eggs can

everything to avoid dirty eggs. A soiled this kind is adhered to, the fullest results are securable.

Many have experienced the farce of a hen sitting for three weeks on a dozen or more eggs, and when due to one or two chicks arriving, and to keep the rearing hen with such a brood is indeed profitless, whereas, if the eggs had been tested and their condition ascertained, one hen might have been given the fertile eggs of two, had a good hatch, and reared the lot. Whether they are fertile or not can be clearly seen in seven days from the time incubation was started. Hold the egg between the thumb and forefinger, and hold it up to the light of a lamp or candle at night, when it is dark. If the egg is fertile, a dark, spider-like germ is seen in the centre of the thick end of the egg, while sterile eggs are clear, and void of such indications.

To add further to the economy of the arrangement, the eggs that have to be extracted are sufficiently fresh to be chopped up and given to young chickens.—A. Sinclair.

Poultry Pointers

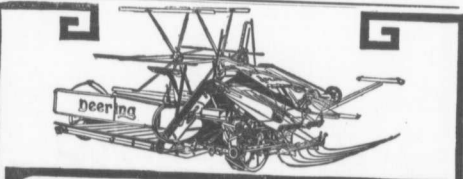
Feed for sitting hens should be whole corn.

To keep the yards clean and healthful there is nothing better than frequent stirring of the soil.

Charcoal is an excellent aid in arresting bowel complaints and should be fed to breeding stock and young chicks.

Feed little chicks the first thing in the morning. If you cannot get ground at sunrise, better scatter some seeds in the litter of the brooder runs after the chicks have gone to sleep.

Keep clean nesting material and litter in the brooding pens and do everything to avoid dirty eggs. A soiled egg sent out for hatching, or even to market, is a thorn in your business success.



GET ALL THE CROP THIS YEAR

THINK back to the last harvest time. Did you get all the profit from your acres that should have been yours? Or through drought, caused by tinkering with broken-down or inefficient machines, did you lose valuable time? Did you get all the grain—tangled or down—or did your machine leave a part of your profit in every field? Ask yourself today. Did I get the best results possible from my harvesting machines last year, and, if so, are they in condition to give me the same service again? If not—

Now is the time to choose the machines that will get all the crop this year in the shortest time—with the least effort on your part. That means they are built to meet the conditions encountered on Canadian farms.

The Deering binder is a model of convenience for operating. It is a draft and has such a wide range of adjustment that it is adapted for all conditions of grain and fields.

You will be sure of satisfaction with a Deering. It is a proved machine. In addition to binders, the Deering line comprises various other implements. The Deering local dealer handles I H C gasoline engines, cream separators, manure spreaders, wagons, hay presses and motor vehicles.

Investigate the Deering line. Learn what Deering machines will do for you. Call on local dealer for catalogue and particulars or write to nearest branch house.

CANADIAN BRANCHES—International Harvester Company of America at Brandon, Calgary, Edmonton, Hamilton, London, Montreal, Ottawa, Regina, Saskatoon, St. John, Winnipeg, Toronto.

INTERNATIONAL HARVESTER COMPANY OF AMERICA CHICAGO U S A
(Incorporated)



FARM MANAGEMENT

Queries re Pumpkins, Amber Sugar Cane, Old Meadows

1—What is the proper time to sow and the best way to have the rows for pumpkins and for amber sugar cane?
2—If these crops were in one field would you venture to harrow or use the broad weeder over the whole field?
3—Do you recommend the harrowing and rolling of a timothy and clover meadow in spring?—A. S. Lanark Co. Ont.

1. Pumpkins had better be sown about the end of May. Mark off field into squares eight feet to the side. Make hole six or eight inches deep and two feet square at intersecting lines or eight feet apart each way. Put two or three bushels fine manure

in each hole. Pull soil over top of manure. Pack soil and manure very solidly. Manure whole field first at rate of 10 to 12 tons an acre. Sow four or five seeds on each manured spot or hill. Amber sugar cane, sow in rows 30 to 36 inches apart. Sow after June 20th.

2. No.
3. Yes. Harrow if meadow is old or if very rough and uneven. Roll new meadows; old meadows not likely to be improved by rolling.—J. H. G.

Vetches May Be Cured for Hay

Will you kindly let me know through Farm and Dairy if vetches can be cured for hay for winter feeding?—H. T. Victor is Co. Ont.

Vetches can be cured for hay. A mixture of equal parts by weight of peas, vetches and oats sown at rate of four bushels an acre will give best results as a hay crop mixture.

Corn That Will Ripen in Quebec

Will you tell me the name of a golden corn that will ripen in August or first part of September, so it can be fed to hogs in winter?—Young Farmer, Brooksbury, Que.

In Compton County, under average weather conditions, Longellow and North Dakota White Flint are both likely to ripen. The small flint corn known as Quebec Yellow always ripens. An excellent strain of this kind of corn is grown at Macdonald College, where your correspondent could possibly get a small amount of seed.—J. H. G.

Queries re Pigs on Rape

Can pigs be raised successfully if one has to buy all the feed? Would you advise fattening them on rape, and if so, at what age?—D. S. Compton Co. Que.

Pigs can be successfully raised buying all the feed; that is to say, pigs if properly fed will pay for all the feed they consume and leave a profit. Pigs may be advantageously pastured on rape. The rape should not be as high as the pigs when they are put into the field. The rape should be sown in rows two feet apart. Put pigs on rape when two and a half to three and a half months old.—J. H. G.

A Combination Cement and Stave Silo

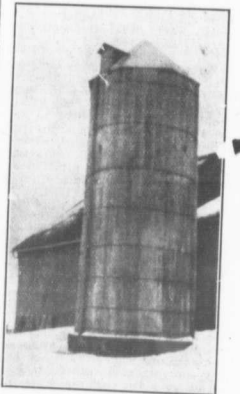
There are many advantageous features of a silo such as is here illustrated. This particular silo was erected last fall by Mr. G. A. Brethen, who owns the farm in Peterboro County that won the first prize in the Special Good Farms Competition for the county. It is 41 feet high in all and is 12 feet in diameter.

The foundation part of cement is 12 feet high. Mr. Brethen, with the assistance of a couple of ordinary laboring men took care of the whole of this part of the work. When excavating, the hole was dug just to the size required for the wall, thus no curbing was required for the outside of the circle. For the inside, the staves were set up at the proper distance to give the proper thickness of the wall. These were held in position by the iron afterwards to be used as hoops, it being placed, in the form of hoops, on the inside of the temporary structure. The whole was then rigidly braced.

After this curbing was in position, it was a simple matter to mix the cement and put it in place. A goodly quantity of field stone was worked into the foundation, thus effecting a considerable saving on cement. On

digging the ground surface, the outside curbing, which then became necessary, was made from old smoke-stack metal obtained in the nearby village. When the foundation was completed, a carpenter, who understood erecting the staves, was called in to superintend and to assist in erecting the superstructure of staves.

As may be seen in the illustration, Mr. Brethen has a very neat silo, and it was erected at a very moderate cost.



A Cheap and Satisfactory Silo

This silo built of cement and staves is of a most satisfactory type. It is owned and was built by Mr. G. A. Brethen, whose farm won first prize in the Special Good Farms Competition for Peterboro County. The foundation part (cement) is 12 feet deep.

Aside from the digging of the excavation, the structure cost \$80. Not including the roof, it cost \$100. Roof and all, the total cost was \$126.75. Mr. Brethen is very enthusiastic over the silo as a means of storing an abundance of cheap succulent fodder, such as is required by dairy cows.

One can of bad milk, when mixed with the good milk delivered by the other patrons of a factory, is liable to cause a loss of many dollars to the best patrons of the factory.—G. G. Pablow, Chief Dairy Instructor, Kingston, Ont.

Renew your subscription now.



Put a lasting roof on your new barn

We are making Brantford Roofing higher in quality than any other ready roofing.

The felt is made to our specifications. It costs us 33-1/3 per cent. more than ordinary felt used in other roofings. But our felt is pure wool, long-fibred, evenly compressed. It wears like iron when saturated with Asphaltum—the highest grade of Asphalt. Our Asphaltum is 99 per cent. pure. So called "Trinidad" Asphalt is only about 45 per cent. pure. Do you see why other Asphalt roofings don't wear so long as Brantford Asphalt Roofing?

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Selection of Nursery Stock

"Every fruit grower should be able to tell at a glance what age a tree is when it comes to him from the nursery," said Prof. J. W. Crow, when discussing the above subject at Guelph. "Every tree has on it marks which show plainly how old the tree is. The terminal bud of a branch is always protected during winter by a number of scales. In the spring the buds continue the growth of the tree and the scales drop off, but the scars remain, and form a distinct ring around the limb or trunk, making each year's growth quite plain unless removed by cutting. Thus a tree one year old will show no ring of scars; a two-year-old tree will show one ring of scars at the junction of the one and two-year-old wood; a three-year-old tree will show two rings, and so on."

At the beginning of the second year the nurseryman cuts back his apple trees and trims them to the desired height to form the head. If he sells the tree at two years old, well and good; if not, he may let it grow, but more likely he will cut it back again to keep the head from getting too big. This means that he will remove practically all the last year's growth. Thus a year can be added to the age of the tree for every time the knife has been applied. The marks of the knife are always evident. A tree that has stood continuously in the nursery row for three to five years, as not unfrequently happens with certain varieties, or when trade is slow, does not transplant with such certainty of success as does a one or two-year-old tree. One-year-old well grown apple trees are preferable for planting. In the first place, they must be sturdy stock in order to attain the right size in a year. Then it is much easier to head a one-year-old tree low down than it is a two or three-year-old tree. These old trees are usually headed about three feet from the ground, which is too high. A low-headed tree is preferable because the limbs tend to a more upright habit of growth. Sun-scald is almost entirely confined to high, open-headed trees; it is much more economical to prune, spray and pick the fruit from such trees.

Before planting a considerable number of trees, it will pay well, if convenient, to visit the nursery and choose your own stock. Choose one-year-old trees not less than 30 inches high. If you insist on having one-year-old trees you will get them. They will probably cost a little more because they have to be dug by hand, as there will not be more than 50 per cent. of the trees in the nursery row fit for your purpose. Do not buy poor one-year-olds, as it is necessary with these to cut them off nearly at the ground in order to stimulate a strong growth after they are planted.

Peach trees are nearly all sold at one year old. It does not pay to buy big 1 1/2 or 2 year old. Medium sized No. 2 is better, as it transplants with a greater safety and makes a better

tree with low heading. If possible, buy peach trees with all their branches on them. Then you will be able to head your tree just where you like. This will probably mean giving the nurseryman instructions a year ahead, but it will pay.

It is good practice to grow your own nursery stock. Grow your seedlings or procure them from a nursery. Plant them in the spring in rows and cultivate as you would potatoes. In July bud these with buds taken from the very best bearing trees of your locality. A very little practice will make any intelligent man a competent hand at budding, as the process is simple. If you do not care to grow your own stock, buy trees that will make good McMahons; after these have been set out for three years, graft with scions from the very best bearing trees of the desired variety to be found in your locality. There is as much individuality in a tree as there is in a dairy cow. Select your trees as you would select your dairy cows, by breeding from the very best individuals you can find. The nurseryman cannot do this, as he must select his scions wherever he can get them, but the fruit grower can easily mark the trees in his own or his neighbour's orchard that are giving extra big returns and can secure scions from these trees.—D. S.

Trees as a Form of Wealth

While on the general subject of planting trees I am reminded of an incident which occurred recently, says Peter McArthur in the Globe. An old man, well on in his eighties, was busy planting trees when a neighbor, a farmer of that half-horse, half-alligator type, met with him once in a while, came along and stopped to make remarks.

"What!" he whinniered. "You planting trees at your time of life?"

"Yes," said the old philosopher quietly.

"But you'll never live to get any good out of them."

"No, but many other people will!"

"How, how! Well, I never. How!"

Touching up his brothers in the harness, he joggled on to tell everyone he met the good joke about the old crank who was planting trees that he would never live to get any good out of. Of course, it would be useless to try to show such a man that practically every thing he is doing is working as if he will never live to get any good out of it. The dollars he is scrimping himself to put in the bank will lie there until after he is dead, and he will never get any good out of them.

Trees are a form of wealth, as well as things of beauty, and the man who transmits a part of his wealth to his descendants in trees is doing them as much good as if he were cash and at the same time is performing a public service. Plant trees on Arbor Day or any other day that offers an excuse. Plant them in the school grounds, the

cemeteries, by the roadside! Above all, start planting them in what remains of the wood lot. Plant! Plant! Plant!

Trees for Fence Posts

N. C. Campbell, Brant Co., Ont. Since fence posts have become such a valuable commodity, all problems of fencing have become more difficult of solution and perhaps it is just as well, for since it has become a expensive matter to erect a fence, we now make certain that a fence is absolutely needed before we proceed to erect or even to repair one. When supplemented by a temporary fence, fields may be 20 acres or larger in size. For fencing these large fields, woven wire, in the long run, proves to be



Soft Maples, Twelve Years Planted

It is surprising how rapidly trees planted on good soil grow to a useful size. The fence shown in the illustration will soon be substituted by one of woven wire, the trees to serve as posts.

The cheapest fence available, and it makes an extra substantial job when trees are used for posts.

Such posts, of course, cannot be had in a day. They require a term of years in which to grow after being planted where the ultimate fence is to be. It is surprising, however, how soon a row of good thirty maples obtain sufficient size to serve as fence posts. The three trees shown in the illustration herewith, and which is but a part of a long row, have been set out not more than 12 years. They are now plenty large enough to hold the woven wire fence which is soon to replace the old rail fence as shown.

These trees were taken from the woodlot. Young trees from one inch to one and one-half inches in diameter were selected. They were mere poles, and after digging them out, leaving the root about two feet across and the lifting as much soil as would adhere, the trees were transplanted to the fence row, the tops having first been

all trimmed off, leaving the trunks or poles about eight feet high.

Trees for fence row purposes should not be set closer than 28 or 30 feet apart. After setting, mulch with ashes, pea straw or strawy manure.

There are farmers who do not favor trees in the fence row, claiming that they shade the crops and rob the soil. Their contention is well founded, for but this disadvantage is greatly offset by their utility as fence posts and by the fine appearance that the rows of trees lend to the roadside, and in doing so raise the value of the farm.

How crops are excellent for an orchard, such as turnips, potatoes, etc.; nursery stock there, but it makes similar demands on the soil as do orchard trees; hence, in order to do this, fertilizers must be used. Peach and plum trees, etc., can be cropped two or three years, and apple orchards for seven or eight years. Orchards should not be left in sod except on side hills.—G. H. Carpenter, Wentworth Co., Ont.

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You pay but \$1.50 per square for PRESTON Safe-Lock Shingles. Allowed for 60 years of service their cost per year figures out as 9c. per square. Wooden Shingles and Prepared Roofing cost five times as much. Their cost per year is from 29c. to 35c. per square, according to the grade of roofing or shingle you buy.

PRESTON Safe-Lock Shingles are galvanized so as to resist the British Government's severe test. Shingles that will pass this test are practically everlasting. PRESTON Safe-Lock Shingles should last over 100 years, which would bring their cost per year down to less than 4/10c per square. No other roofing can compare with PRESTON Shingles as an investment. No other is so good enough for that new barn you are soon to erect. With no other roofing you get a Free Lightning Guarantee.

Before making any decision as to the kind of roofing you will buy get a copy of "Truth About Roofing" which tells the truth about the different roofing materials on the market. Contains information you simply cannot get any other way. We will send it free, providing you fill in and send the coupon promptly. Send it by next mail.

Metal Shingle & Siding Co., Limited, Preston Ontario BRANCH OFFICE AND FACTORY: LIMITED, QUE.

Dover Street Factory. Please send your booklet "Truth About Roofing." I am interested in roofing and would like to receive the information about PRESTON Shingles.

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Experience with Underdrains*

A. F. Begg, Stormont Co., Ont.

In some cases drains that have been installed upon my farm have repaid me the whole outlay in one year. In much of the low land that I have tiled, I could not raise anything previously but a little wild grass. To-day this land raises the best of corn. It is a distinct pleasure to one, aside from all consideration of profit, to see the water running out of the tile and the land it drains being kept in the best possible shape for cultivation. Of course, the difference in favor of the drained land is most noticeable in a wet year. It is worth while, however, even in a dry year, for well drained soil withstands drought much better than undrained soil.

For the main drains, I always use four-inch tile; three-inch tile are not big enough to carry the water away, where there is any considerable supply. I use the three-inch tile for laterals or secondary drains.

Before I cleared my farm, there were parts of it that never dried at all. I had to make open drains before much of the land could be cleared. After the land was cleared, I commenced putting in tile drainage.

The cost of installing these underdrains varied. Some cost twice as much as others, this depending upon the character of the soil in which they

*The farm owned and worked by Mr. Begg won first prize for its district in the Dairy Farms Competition. Underdraining has been the making of Mr. Begg's farm.

were installed. I always endeavor to install drains at a depth of three feet. The depth, of course, varies more or less with the character of the surface of the ground. In digging the ditches for the tile, they are made as narrow as a man can work in.

The total cost of draining our lowest land would not exceed \$37.50 for every 1,000 feet of tile laid. This amounts to about \$8 an acre as we have installed the drains.



One of the Simplest and Most Efficient Road Implements at Work

It is wonderful what can be accomplished by the use of the split-log drag. If each farmer would keep one of these drags and after each rain drag the road towards town "from his front gate to his neighbor's front gate," our roads would be left in the best possible condition. The illustration shows Mr. H. R. Nixon superintending the dragging of the road in front of his farm, Brant Co., Ont.

Queries re Alsike Crop

I would like to grow some alsike clover for seed this year. Kindly let me know (1) how much seed per acre should I sow? (2) When should it be sown? (3) By itself or with grain? (4) Broadcast or in drill? (5) Should it be cut this year? (6) If left this year, should it be cut early and then take the second cutting for seed, or should it be left until fall and then cut?—H. C. Peterboro Co., Ont.

(1) Sow about five pounds per acre.

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mistake. I am glad to hear that the Minister is going to put in a Holstein herd!

What about Jerseys?

Farm Sewage Disposal

(Continued from page 5) tributary system so as not to have too great a fall to the tile. The essential point is to have the tile so laid that the amount of liquid discharged from the flush chamber of the tank at one time should be distributed throughout the entire tile system, else the ground in one part of the system would soon become overloaded and be unable to purify itself.

PURIFICATION BY FILTRATION.

Under some conditions, as in very heavy clay soil the effluent from the septic tank may be disposed of by filtration. The principle of purification is the same. The sewage must still be filtered intermittently, and for the most satisfactory results the surface of the filter bed should be raked over to the depth of an inch every week. For a family of five, a filter bed with a surface of 300 to 400 square feet should be ample. The filtering material should be three to five feet deep and should be well under-drained.

To secure an even distribution over the entire surface of the bed, a six-inch galvanized roof gutter, pierced every three inches with one-quarter-inch holes, could be laid on the surface of the filter extending the entire length. Four-inch drain tile laid in open joints could be used, or a wooden trough having openings every two feet on each side. The construction of such a filter is shown in Figure III. Of all methods devised by the sanitary engineer for purifying sewage, its application to land has secured the best results, and this method is especially adapted to the needs of the farm.

Paint—As an investment, paint is a dollars and cents proposition. It costs money to buy it, but it costs much more not to buy it. To allow things to go without paint is somewhat akin to allowing an insurance policy to lapse after several premiums have been paid on it. Then there is the aesthetic side. Paint not only adds to the life of wooden material exposed, but, granted that suitable colors are chosen, it lends much to the appearance of the building or vehicle as well.—N. C. Campbell, Brant Co., Ont.

One can of bad milk, when mixed with the good milk delivered by the other patrons of a factory, is liable to cause a loss of many dollars to the best patrons of the factory.—G. G. Pablow, Chief Dairy Instructor, Kingston, Ont.

Never without a Bottle

Mr. James M. Smith, Hamilton, Ont. July 19th, 1910. "We are never without a bottle of your Spavin Cure in the house. We believe it the best on the market and have cured several Spavins with it." J. Lewis Van Fleet, Kendall's Spavin Cure is the only one for Spavin, Rheumatism, Gout, Sprain and other Lameness. Keep it handy for emergencies. The best horse balmer. Put a bottle in the box and other Lameness. Ask for "A Bottle On The Horn" or write us. Dr. R. J. KENDALL CO., Emsbury Falls, Vt.

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Is in the hands of experts of the highest skill in designing Hamilton Mowers, with an experience of many years of Mower Working back of them.

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Get in touch with us and we will help you to enjoy harvesting your hay crop.

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Holsteins at Ottawa

When asked in the House of Commons recently by Mr. Sexsmith, the member for East Peterboro, when the Government were likely to establish a herd of pure bred Holstein cattle at the Central Experimental Farm, Ottawa, Hon. Sydney Fisher, the Dominion Minister of Agriculture, replied that he hoped to establish the herd this year. Mr. Sexsmith's comment on Hon. Mr. Fisher's reply was as follows:

"I am glad to know that the Minister is taking that up. Last year I asked why he did not have Holsteins there, and I think his answer was that they had all they had room to house, or something of that kind. It seems to me a very bad excuse, if I may say so, have no particular fancy for one breed, but I think that, in the interests of the dairy industry, all leading dairy types should be found at the experimental farm. I agree with the Honorable Minister in what he said the other day that it would not be wise for the Department to make a distinction between one breed and another. There are different types of dairy cattle, and every man thinks that the one he fancies is the best."

"The Holstein is considered one of the best dairy types in America to-day, and when those who favor that type find they cannot get any information from the Experimental Farm, based on actual experience with that type, they are apt to think it a great

To M

S. The cising the structure post it of at seven means any length is attain in the stragg braces groins



about being tached This it one a bull tossing this pro and in the des exercise contriva condition In the out to each fin him the str the It is knotties



The Escri Read wh the adjois Photos knots all shown in a scratchi at about 2 weep. This serati him good.

We are to Farm a to be with weekly vis Co., Ontario

Go Bla the chew trem every its ric flavor

To Keep the Bull in Condition

S. Armstrong, Peterboro Co., Ont.
The contrivance we have for exercising our bull is shown fairly well in the illustrations herewith. It is constructed as follows: A 10-inch cedar post is set in the ground to the depth of at least five feet. It should be seven feet above the ground. By means of good stout iron, a pole of any light wood about 15 or 20 feet in length, five inches at the small end, is attached to this post, as indicated in the illustrations. This pole is so arranged that it will hang by the braces at about three feet from the ground. A good stout eye chain and



The Bull Tied to the Exerciser

about two feet of trace chain, the two being welded together, should be attached to the light end of the pole. This contrivance has many advantages. When the bull is attached to it one knows that he is safe, and as a bull has a natural propensity for tossing things about, he may satisfy this propensity by tossing this stick, and in doing so he will be kept from the desire to toss his owner. The exercise taken, while attached to this contrivance, keeps the bull in better condition and his feet worn down.

In the winter time we tie the bull out to this exerciser for a few hours each fine day. In summer we leave him there all night, keeping him in the stable in the daytime.

It is a good plan to set in the knottiest stick obtainable with the



The Exerciser Complete When Not in Use

Read what Mr. Armstrong has to say in the adjoining article about this device. Photos furnished by Mr. Armstrong.

knooks all trimmed to an edge, as shown in one of the illustrations for a scratching post. This should be set at about two feet from the end of the sweep. The bull will greatly enjoy this scratching post and it will do him good.

We are renewing our subscription to Farm and Dairy and would not like to be without it. We much enjoy its weekly visits.—George Boston, York Co., Ontario.

Get acquainted with
Black Watch
the big black plug chewing tobacco. A tremendous favorite everywhere, because of its richness and pleasing flavor.

2285

Our Veterinary Adviser

WARTS.—Yearling heifer's neck is covered with warts.—R. A. T. Halton Co., Ont.
Those with constricted necks should be clipped off and the flat ones dressed once daily with butter of antimony applied with a feather until they disappear. Some claim that the daily application of castor oil will remove them.

CANINE DISTEMPER.—Several dogs in this locality have suffered from a disease with the following symptoms: Loss of appetite, mattery discharge from eyes, difficulty in breathing. In from two to 10 days they commence to lose power of hind quarters. A few have recovered but most of them have died.—C. J. S. Trenholme, Que.

This is canine distemper. It is very infectious and liable to many complications. Treatment for the ordinary cases consists in keeping comfortable, giving one to four ounces syrup of buckthorn, according to size, frequently washing eyes and nostrils to keep clean, and giving three to six

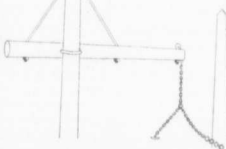


Diagram of Wire Bull Exerciser

I am quinine wine in a little milk three times daily. Give a little of anything they will eat and if complications arise, treat according to symptoms.

Our Legal Adviser

DAMAGE FROM DRIFT SAND.—Is there a law in Ontario which would allow a person who has a small drifting sand field to take such steps as may be necessary to stop the sand from blowing off his land on to the road and on to other people's property? In our section, the question is a serious one. The small spot at first, but it has blown so that it now covers almost three acres. I have asked the man to replant trees on it, and in the event of not being willing to do so, I offered to reforest it at my own expense, but he has refused to do anything. How can such a man best be reached?—A. S. Durham Co., Ont.

You have no remedy at law against a neighbor who allows sand to drift from his place on to the highway or on to your farm. All you can do is to protect yourself by putting up erections on your own place, but you have no right to enter your neighbor's.

DISAPPOINTED IN WILL.—When I was 21 years of age I left home. I learned the tailoring trade; I worked two years at it. Then my father asked me to come back home as my services were needed. He said that he would finally recompense me for my labor. I went back and continued to work there for nearly six years. Then I got married. He then gave me about \$100 worth of goods in all, and said that he would leave me the rest of what I was entitled to in his will. Nineteen years after this he died, and out of \$8000 in land and money, he left me only \$100. Can I sue and collect what I am entitled to? Would a case of this kind outlaw? If not, can I sue anywhere in the province or will I have to sue in county he died in?—W. Oxford Co., Ont.

Whilst ordinarily a son is not entitled to recover compensation for services rendered to his father, yet where the father definitely promises

to recompense him, and the son works for him on that understanding, then the son is entitled to recover such reasonable compensation as the court may fix.

If you and your father had a clear and distinct understanding that the compensation for the services you rendered him should be made you by his will, you are entitled (in spite of the fact that 19 years' work may have elapsed since your services were rendered) to recover from the executors the value of your services, less the amount already paid. You will understand, however, that the court will insist on your proving the terms of evidence apart from your own testimony.

Grassy Land for Alfalfa

I have a piece of land full of what grass (knot grass or chess) on which I raised millet last year. The soil is light and dry; cultivate it until the last of June and then sowed with a nurse crop? Or would the grass choke it out before it could get started?—P. H. Stanton, Ont. Que.
No, such a field would not do for alfalfa, or at least it would not do for alfalfa until perfectly free from "witchgrass." I would be anxious to see this particular field to alfalfa, the best plan would be to give a dressing of manure and grow a crop of corn thereon, sowing in hills three feet apart. Cultivate and hoe so thoroughly as to completely eradicate the witchgrass. The next year would be the time to try alfalfa. Would advise starting on a small scale, not over half an acre.—J. H. G.

Much of the cream that is being sold in Toronto is no richer or better than first class Jersey milk. There ought to be a standard for cream so that consumers would know where they are getting it.—R. Reid, Waterloo Co. Secretary Canadian Jersey Cattle Club.

NORTHERN ONTARIO

The Forest and Mineral Wealth of Northern Ontario has attracted many people from all parts of the civilized world.

One-third of the world's reported output of silver in 1908 was taken from Ontario mines.

New discoveries of undoubted richness are being constantly reported from sections far distant from the famous Cobalt. Yet a more certain reward is insured to the Settler who acquires for himself

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That the experimental stage is past is clearly demonstrated. The country is rapidly filling up with settlers from many of the other Provinces, of the United States and Europe.

For information as to Terms of Sale, Homestead Regulations, and Colonization Rates to Settlers and for Settlers' Effects, write to:

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The Director of Colonization
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Minister of Agriculture

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Space in the Association cars will be reserved for all stock coming from the East to B. C., providing the owners, or importers, make application for definite space before April 30th to R. W. Hodson, Live Stock Commissioner, Victoria, B. C.

The B. C. Stock Breeders' and B. C. Dairymen's Associations pay half the transportation expenses.

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I am in a position to give you the most valuable information regarding Western Canada Land and have many desirable properties to offer at all times. **250 ACRES—MANITOBA—SOURIS DISTRICT**—You have 200 acres of good land cultivated, clean, new land, 1000 set of frame houses, two large stables and 2000 bushels of grain last year, which was delivered at the elevator on machine, this is less than a mile from town, this is a terms arranged; forty-two per good Ontario farm as part pay.
320 ACRES—SASKATCHEWAN—JUST SOUTH OF WADENA—WADENA—JUST PLAINS; 270 acres tillable; 50 acres pasture; first class house, granary, two stables, implement sheds, pigsty, and hen-house under plating around buildings; 220 bushels of No. 1 Northern wheat per acre last season; \$20.00 per acre; terms arranged.

I have some attractive **FRUIT AND VALLEY FARMS** to offer in the PRASER HUNTER and CHILLIWACK, B. C. Write to me for one of my British Columbia Catalogues.
523 ACRES—SOUTHERN ALBERTA—one mile from shipping point, Alberta—Lethbridge; good house and out-buildings; all under cultivation; excellent land; \$25 per acre; 1.3 cash.

120 ACRES—SOUTHERN ALBERTA—first class land. This is an 800 acre farm sold before he raised in a few weeks if not 1000 acres. **300 ACRES—MANITOBA**—3 1/2 miles from Rathville; about 70 miles from Winnipeg; pasture; 20 acres good meadow, balance prairie; \$1200; 1/2 cash; balance 5 yearly payments at 6 per cent.

900 ACRES—SASKATCHEWAN—3 1/2 miles from Hladworth on the C. N. Ry.; 1/2 acre; \$250 per acre cash; balance 10 per cent by payments at 6 per cent.
320 ACRES—CENTRAL ALBERTA—6 1/2 miles from Innisfail, the largest DAIRY centre of western Canada; \$15 per acre; easy terms.

400 ACRES—CENTRAL ALBERTA—Close to Innisfail; has been improved; this is a first class buy; \$12 per acre; easy terms.
220 ACRES—SOUTHWESTERN SASKATCHEWAN—7 1/2 miles from Innisfail; 10 acres tillable; 10 acre cement; 10 acres brook; 200 excellent pasture and hay land; balance and out-buildings; 150 acres fenced. This will make an ideal farm; fair offer; \$12 per acre; \$500 cash, balance any terms satisfactory to you.

600 ACRES—SASKATCHEWAN—1 mile from Gilvin and 5 miles from Davidson, American and Canadian; 400 acres under cultivation; 40 acres meadow, and the balance under cultivation; fair offer; house with stone foundation; good 6 room frame house; 2 horses with good harness. The machinery consists of 1000 lbs. traction engine, 1 binder, 1 mower, 2 harrows, 1 disk drill, 1 sleigh, 1 carriage, 1 hay rake, 1 set bob-tines, 1 set of plows, 1 set of mowing machines, and other tools too numerous to mention. We will sell this farm as a going concern at \$25 per acre; \$200 cash, balance half crop each year at 6 per cent. This is a Real Bargain.
In addition to the above I have hundreds of choice select grain, stock, dairy and poultry farms to offer at reasonable prices, on the easiest kind of terms, throughout Manitoba, Saskatchewan, Alberta and British Columbia. Write me, if you want. I can fill the bill and save you money.

H. F. LINDE, Box 44, WADENA, Sask.

FARM AND DAIRY

AND RURAL HOME

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

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

CIRCULATION STATEMENT

The paid subscriptions for Farm and Dairy exceed 8,300. The actual circulation paper, including copies of the paper sent to subscribers, but slightly in arrears, and sample copies, varies from 8,000 to 10,500 copies. No subscriptions are accepted at less than the full subscription rates. Thus our mailing lists do not contain any unrec'd circulation.

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

OUR PROTECTIVE POLICY

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

FARM AND DAIRY

PETERBORO, ONT.

INVEST MONEY ON THE FARM

Since time immemorial, for man to possess a bank account has been held in the light of an ideal. It has been the passion to possess a bank account and to keep it growing; and such enterprise is most laudable, in many instances. The trouble with most of us farmers, however, is that we continue to practise the penny wise, pound foolish business of putting money in the bank, where it draws three per cent., rather than invest it on our farms, where the opportunities afforded for investment will return many times the interest obtainable elsewhere.

There are few farms but whereon more or less drainage is needed. Under-drainage is, perhaps, one of the best investments before us farmers to-day. But there are countless other improvements that can be made with profit. Innumerable houses and barns everywhere throughout the country are in urgent need of remodelling and of being fitted with modern labor saving equipment. Fences need repairing. Many of them can be done away with entirely; fewer and better fences

need to be erected in their stead. Out-of-date, slow working tools, implements and machinery cost their owners untold loss annually. It pays to keep these up-to-date. Trees might be planted and many things about the farm put into better shape, all of which would make it more valuable, and a greater profit maker.

We need a greater appreciation of the opportunities afforded by the farm for profitable investment, and in view of the many opportunities right on our farms for profitable investment, few of us can reckon ourselves sane if we continue to pile away capital for three per cent. interest when there is a much more remunerative field right at home.

A LAWYER IN CHARGE

Farm and Dairy has repeatedly expressed the view that the work now being performed by the Deputy Minister of Agriculture at Ottawa should be subdivided and a new Deputy Minister appointed to represent the agricultural branches of the work. The present Deputy Minister of Agriculture not only supervises the work of the agricultural branches but of a number of other branches as well, such as patents, trade marks, copyrights, statistics and census. For this latter class of work, we understand, the present Deputy Minister to be perfectly competent. He is not competent to handle the work of the Agricultural Department in the manner in which it should be performed.

This matter was brought up recently in the House of Commons by Mr. J. E. Armstrong, of East Lambton, one of the best posted critics on the Conservative side. Mr. Armstrong called Hon. Mr. Fisher's attention to the fact that when he (Hon. Mr. Fisher) announced in 1903 that Mr. O'Halloran had been appointed Deputy Minister of Agriculture, he had given the House to understand that Mr. O'Halloran would have practically nothing to do with the Agricultural features of the work of the Department. Since Mr. Robertson's resignation as Commissioner of Agriculture, Mr. O'Halloran has had practically full control of the agricultural branches of the Department. He is a lawyer by training and inclination. In reply to Mr. Armstrong, Hon. Mr. Fisher made the following admission:

"The different branches of the Department are in charge of experts, each of whom deals with his own particular branch. The Deputy Minister is the administrator and supervisor of them all. They come to him and report as they would to the Minister and he deals with them on the reports of the experts."

Is not this an inconceivable situation? It means that the agricultural experts of the Government have to submit their plans and details to a lawyer for approval, as they would to the Minister himself. How would any body of lawyers like to have to submit their reports on legal matters to a farmer for approval? The one is no more absurd than the other. It is time that we had at Ottawa, a Deputy Minister of Agriculture of such large cali-

bre and recognized ability in agricultural matters that he may be able to bring the expert knowledge to bear on his work that the responsibilities of the position require.

UNDERDRAINAGE AS AN INVESTMENT

It is the experience of all who drain that underdrains pay for themselves in from one to three years. The value of increased yields on a considerable number of farms where drainage has been installed under the direction of the physics department of the Ontario Agricultural College, ranges from \$11.05 to \$36.25 per acre, the average being \$21.65. This increase was secured with such crops as barley, oats, peas, fall and spring wheat, hay and corn. The cost of underdraining varies widely, according to the soil and the district. It varies from \$14 to \$40 an acre, with an average not over \$25.

Underdraining moves the date of seeding, from three to four weeks ahead. It lessens the labor of tillage by one-half. It will produce barley, peas and oats, hay and corn twice as high and twice as thick on the ground the first week in July as on undrained land on the same farm, at the same date and under the same tillage. It will allow fruit trees to grow where otherwise they would not. It will practically double the yield of grain, straw and hay. On the average it will make every acre that is undrained produce \$21.65 more than before. It will repay the cost of drainage every year, or every two years, at the most. According to Prof. Wm. H. Day, who directs the drainage propaganda above mentioned, such results have been reported from the drainage work installed under his supervision.

If drainage will give ideal soil conditions for plant growth, and we know it will, then as Professor Day says, is it not high time that underdrainage became a general practice in all the flat wet parts of the country, as general, even, as the practice of tillage?

There is no other farm improvement that can be made with such assurance of profitable returns, and there is not another need so evident on Ontario farms in general, as underdrainage. In no way else can capital be so profitable invested. The dividends on well installed underdrains make bank interest seem infinitesimal, and they relegate all classes of stocks and get-rich-quick schemes to a class much beneath the notice of a man with land in need of draining.

LOOKING AHEAD FOR TROUBLE

When the deputation from the United Counties Council of Northumberland and Durham waited on the Ontario Government recently, and asked for assistance in reforesting the waste land in the united counties, the fear was expressed by the Government that were aid granted to Northumberland and Durham, the Government would be required to extend similar assistance to every other county that might ask for it. This is looking a long way ahead for trouble, especially as the united counties pledged them-

selves to refund to the Government any expense it might incur.

There are only some four sections in older Ontario where the waste timber districts amount to thousands of contiguous acres, as they do in north-umblerland and Durham. It is only natural that the Government should deal with these large areas first. In the event of their doing so, the public will not expect them to undertake other work of a similar nature in older Ontario, until the larger areas have been given proper attention. There is enough work for the Government in taking care of these large sections to occupy its attention for a number of years. By the time the large areas have been properly reforested, the best method of dealing with the smaller areas in other counties in the Province will have become clear and the problem of dealing with them simple.

By the way, what is the Government going to do in answer to the request of Northumberland and Durham for assistance? The silence of the Government is so loud that it can be heard.

THE DECLINE IN RURAL POPULATION

The announcement made recently by Mr. C. C. James, Deputy Minister of Agriculture for Ontario, that there are some 63,000 less farmers in the Province of Ontario than there were 10 years ago, has created much comment, but so far has not led to anything definite being done to ascertain the cause of such an important economic condition. Since Mr. James delivered his address, further evidence has been furnished of the serious decline in rural population in Ontario. The Orillia Packet has compiled statistics to show that in Simcoe County alone between the years 1881 and 1908, the rural population has decreased from 59,582 to 45,539, or almost 25 per cent. In Innisfil Township there are 1,300 less people than there were nearly half a century ago. During the same periods the populations of the towns and villages has increased. In 1881, the urban population was 17,007, in 1908 it was 32,078.

This tremendous drain from the county districts is not peculiar to Ontario alone. It is noticeable in many parts of Eastern Canada, and in many States of the American Union. It is a serious matter. If it continues for another period of years, economic conditions will become critical. If we are wise we will endeavor to find and remove the cause now and not wait until conditions become such that we will be forced to take action. As the question is one of more than Provincial importance, we feel that the Dominion Government might well consider the advisability of appointing a commission with power to look into the whole subject. In such an event, the commission should not only have power to visit various sections of Canada but other countries as well. In Canada, at least, the commission might hold public sessions, as did the commission appointed some years ago by President Roosevelt, and invite leading men to give evidence. The reason, we be-

lieve, lies much deeper than most people suspect, and it will require men of outstanding ability to locate them.

We are not in favor of the appointment of commissions to investigate all sorts of conditions. The success, however, that has followed the work of the Ontario Milk Commission, and of the Dominion Swine Commission, we believe justifies this suggestion for the appointment of a commission such as here proposed.

MAKE THE FARM WORTH WHILE

It is surprising how many of us farmers are content to mark time year after year making little or no headway, and resting content with a mediocrity of success. Is it any wonder that the boys get restless and decide to try their fortunes elsewhere? They see what looks to be a glorious future elsewhere opening on their horizon, and with the little encouragement they so often receive, who can blame them if they strike for pastures new?

The old Ontario farm at the present day is capable of being made a veritable gold mine. It offers inducements unexcelled by any farming land elsewhere. Often we find it rated at half its intrinsic value, such rating being due to the indifferent cultivation given it and to failure on the part of those responsible to make the best of the opportunities it affords.

We need to aim at the limit of production; it is not necessary, however, and in fact, it is highly inadvisable that we become mere money grabbers. The unimproved farm, the scrub stock, the undrained fields, on the other hand, should be things of the past. Severally and collectively, they pay for their improvement.

Aim high! Don't rest content with the 3,000-pound cow, or a 6,000-pound cow, but plan to have and develop the best in all things pertaining to the farm. Then and then only will young men see in the farm, work worthy of them, and be content to give their best thought and effort towards its development.

PUBLISHER'S DESK

No better evidence of the rapid growth in popularity of Farm and Dairy need be given than in the fact that up to the first of May our cash receipts from subscriptions this year have been 33 1/3 per cent. greater than they were for the same period last year. The receipts at this date last year were almost equally as much greater than those of the year before.

During the past two years a great many thousands of dollars have been expended in the improvement of Farm and Dairy. That our farmers have noted and appreciate our efforts is shown by the rapid manner in which the circulation of Farm and Dairy is growing. We intend making further improvements, and we expect that the circulation will continue to increase. You can help us greatly by speaking favorably of Farm and Dairy upon every opportunity. Tell our neighbors and friends about its good features. If each of our subscribers would talk up for Farm and Dairy the thousands of people who thus would be helping us in all parts of Canada would do more to promote our interests than we could accomplish by the direct expenditures of large sums of money.

The High Cost of Living

Editor, Farm and Dairy.—An old English song tells us how "A bushel of the best wheat was sold for 14 pence and 40 eggs a penny that were both good and new." Prices have certainly advanced since those days; the cost of living has increased. Many and varied are the causes to which this is attributed, and yet methinks the main cause is seldom touched upon.

We can sometimes best solve a problem by approaching it through unfamiliar channels of thought. When the Indians roamed these prairies the cost of living largely depended upon the natural supply of food. If food was plentiful living was cheap. When the chase was long and futile, and the search for fruit was fruitless, the cost of living was high, sometimes so high that the Indians starved to death. Then as now, before a hare (or a jackrabbit) could be cooked it first had to be caught. The Indian applied his labor to the natural resources of the earth, obtained wealth, and enjoyed the full product of his toil. He paid no tariff upon the food he took home; except, perhaps, to the wolves. He paid no toll for the use of the trail. He paid no rent for the use of the hunting ground, or for the land on which his wigwag stood. In times of plenty he was unemployed—and happy. He did not spend his time and energy digging gold out of a hole in the ground in the Yukon to put it into another hole in the ground in New York. He did not live to work, but originally he had to work to live. Then, as now, hares had to be caught before they could be cooked.

Had the Indians allowed some members of the tribe to monopolize the hunting ground, the site of the camp and the trail, the hunter would have had to give up to them a part of his catch for the use of the hunting ground, the wigwag site and the trail. If in addition they had imposed a tariff upon all food coming into the camp, his load of provisions would have been again lightened; but we can easily imagine that his mind would have been burdened and his heart heavy because of the high cost of living.

The high cost of living among the hare-catchers of today, i. e., all those who perform useful work, is due to the fact that some people eat a great many hares and catch none. These hare-eaters, clad in costly legal robes which are daily growing more and more transparent and can no longer wholly conceal an ever-increasing multitude of sins, levy tribute upon the hare-catchers.

Normally, the price of a commodity would be governed by its cost of production. Tariffs, trusts and combats undoubtedly raise prices, Augustus P. Gardner notwithstanding. But it seems clear to me that the principal cause of the high cost of living is the high price of land. We rend the air with our cries against those who corner wheat, sugar, cotton, etc., the necessities of life; but what of those who corner the land, the source of all the necessities of life? Is not the rent of land a factor in production? Do not high rents mean high prices? Truly, as Henry George says, "the reason why, in spite of the increase in productive power, wages constantly tend to a minimum is that the increase of productive power rent tends to even greater increase, thus producing a constant tendency to the forcing down of wages."

The remedy for the high cost of living is to abolish all taxes upon commodities, which artificially increase prices, and to raise all public revenues by the taxation of land value. This would break the corner in land and bring about a social condition in which the hare-eaters would also be hare-catchers.—F. J. Dixon, Winnipeg, Man.



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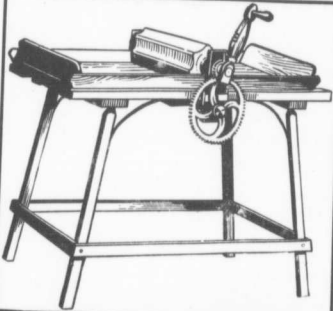
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Creamery Department

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.

Why We Do Not Pasteurize

J. A. McFeeters, Grey Co., Ont.
At "Pleasant View," which is one of the largest cream collecting creameries in Ontario and which was illustrated and described in Farm and Dairy, February 17, we do not pasteurize our cream for the following reasons:

1. Because of the low fat content of the cream; much of which is creamed in deep cans, set in spring water, which of course does not produce a cream testing much above 20 per cent.
2. The high acidity of the cream in warm weather would, under pasteurization, cause an undue loss of fat in the buttermilk. Two very unfavorable conditions for pasteurizing: cream low in fat content and high in acidity, which invariably causes heavy losses in churning.
3. Because of the late hour at which much of the loads arrive—from 4 until 7 p.m. To pasteurize from ten to fourteen thousand pounds after this hour would require more "jobs" than are to be found in this vicinity, especially on "lodge" nights.
4. Under existing conditions of marketing, etc., the expense and labor of pasteurizing would be largely for "fun," a commodity which doesn't go far in "paying the piper."
5. Pasteurized buttermilk is usually unsatisfactory for retail trade. Any pasteurizing enthusiast may buy our Reid pasteurizer for a song.

Results Obtained from Visiting Patrons

F. A. Keyes, Huron Co., Ont.
On taking charge of the Bluevale creamery in the spring of 1907 I found on looking over the books of the previous season that the average fat content of the cream had been about 17 per cent. I at once commenced to advocate a richer cream. I asked the cream hauler to try and urge the patrons to send richer cream. I then commenced to visit the patrons and show them the direct gain it would be to them to send rich and sweeter cream. I showed them how they would have less bulk of cream to cool and to take care of, also that they

would have a greater amount of sweet skim milk at home for feeding purposes, and again that I could make a better quality of butter from such cream and of course a better quality of butter meant a better price.

The result of this work was that the average per cent. fat in the cream for 1909 was about 25.5. One of our patrons who had been sending cream testing about 17 per cent. said she was quite sure that there was more money in sending a low testing cream. After a considerable amount of talk, she was finally persuaded to try it for a time. The separator was closed up to skim a 28 per cent. cream; the result was that she was much better satisfied than when sending the low-testing cream.

I could give Farm and Dairy readers a number of instances just like this one. I believe if we butter-makers would spend more time visit-

ing taken to skim a rich cream, afterwards cooling it as soon as possible to below 50 degrees F. After skimming at once, using from 10 to 15 per cent. of the culture. Keep the cream, ripen and churn it at the same low temperature.

They cream should be churned each day. One defect of whey butter is that the whey flavor, that is characteristic of the product when it is indifferently made. We get less of this objectionable flavor when the cream is churned each day and when a rich cream, not less than 40 per cent.—better still 50 per cent.—is taken. With the rich and fewer mottles in the finished product.—G. G. Publow, Chief Dairy Instructor, Kingston, Ont.

Cool Cream to 50 Degrees

Wm. Newman, Victoria Co., Ont.
The statement of mine which was printed in Farm and Dairy February 17 to the effect that I would rather have dirty cooled cream than clean, uncooled cream in creamery work, has shocked some of the authorities from the creamery side of dairy education. At least so it would seem from the reply by Miss Rose. The statement was not uttered because of a love of dirt, but rather because of the very indefinite way in which the need for cooling of cream has been taught from that educational centre.

We received last summer a pamphlet to distribute among our patrons which was intended to help in improving the quality of cream delivered at the creameries. This pamphlet was a very good one, but was weak on the important subject of cooling cream. The pamphlet stated: "Since the introduction of separators, there has been little or no improvement in the quality of creamery butter as compared to the day when the whole milk was delivered at the creameries."

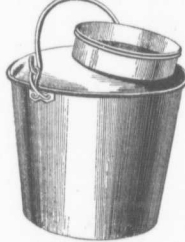
Why do we not progress?
Why is this the case? It is simply because under the whole milk system milk was received at the creamery while sweet, and this meant sweet cream, which meant good butter, unless the milk was flavored with turpentine or other food flavors.

Why is the cream-gathered system of butter making not making progress? Is it because we have more dirt than we can stand for? Our farmers will not have improved a grain of the last decade. It is not because of dirt that we have not improved, but because the cream and is very sour when the cream gatherer receives it.

The remedy is immediate cooling to a temperature of 50 degrees. This is where the dairy educators are out in their teaching. This pamphlet gave a page to cleanliness, with only one small paragraph asking that the cream be cooled to a temperature of 60 degrees. Another small paragraph asked that a tank be kept to hold the cream in iced water.

THE DIFFERENCE IN TEMPERATURE.
Now, I am as fond of clean cream as any person, but I don't consider clean cream kept at a temperature of 60 degrees as gathered only twice degrees is ripening temperature, and the difference between good sweet cream and poor sour, dirty cream is the difference between 50 degrees and 60 degrees, no matter how clean the cream has been produced.

We may preach cleanliness as much in the next decade as it has been preached in the last decade, but unless we cool the cream immediately to a temperature of 50 degrees, our churning time in quality will be simply for cheese making. Cooling to 60 degrees for cheese making will do, but for creamery work nothing less than 50 degrees will give sweet cream.



A Sanitary Milk Pail

A small top will reduce contamination by 25 per cent., or more. Such pails are becoming widely used by New York State dairymen.

ing our patrons it would not be long, with what help the instructors can give us, until we would have a much better quality of cream coming to our factories. Let us see, boys, what we can do in this direction during the season of 1910, and then report results through the columns of Farm and Dairy.

Why Butter Manufacture

What specific directions are given for the manufacture of whey butter? How rich should the cream be skimmed? How often should it be churned?—H. Peterboro Co., Ont.

When making whey butter, the whey should be skimmed as soon as possible after being drawn, care be-

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Cheese Department

Makers are invited to contribute to this department, to ask questions and suggest subjects for discussion. Address: Letter to The Cheese Maker's Department.

Loss from Uncooled Milk

John Hall, Prince Edward Co., Ont. Milk of first class quality properly cooled and delivered at the cheese factory in a cleanly condition will enable us cheese makers to make more pounds of cheese from a given quantity of milk. During the first two weeks of last August there were some nights that were quite cool. The milk on the following mornings came into the factory in a cool and sweet condition. The increased yields of cheese on those days were most marked. I shall cite one particular example. During the hot days of early August, I was making 12 cheese a day. When the weather changed and became cooler, I had a gain of 40 pounds of cheese on the day following from the

maker. It is well known that there are many good practical men working at this great industry of cheese making and who are successful from year to year. They go through the process and do things all right, but cannot tell why they do them. They lack the scientific part of the work. "Practice consists of doing things, science in knowing things." My advice to any cheese or butter maker who has not taken a course at a dairy school is to take such a course at his earliest opportunity.

This year I am getting samples of milk from individual cows of each patron and making tests of these samples. My patrons then will have knowledge of which are their best cows and which are the poor ones. I consider it invaluable to give patrons assistance in this way and to help them to build up their herds and to produce milk of better quality.

Making Prize Cheese

Editor, Farm and Dairy.—In answer to your request asking for an outline of how I made my prize cheese that won at the St. Thomas Dairy Show



A Western Ontario Cheese Factory Wherein Many Prize Winning Cheese Have Been Made

This factory located in Middlesex Co., Ont., made over 100 tons of cheese last year. The owner, Mr. C. Donnelly, has made a distinct success of the cheese making business, and has won many prizes at cheese exhibitions. Mr. Donnelly may be seen to the left of the three men in the photo.

same amount of milk. These 40 pounds of cheese at 11 cents a pound amounted to \$1.40 more on the make for that day. It is most reasonable to assume in addition that this particular cheese was better and worth more money than that made on previous days.

WHEREIN RESPONSIBILITY LIES.

Cheese factory patrons, no matter in what section they may be, should stop and consider what this means to them. It shows wherein the responsibility lies and points out the great loss that goes on at cheese factories when milk is delivered out of condition. All milk for cheese making should be cooled immediately after milking to at least 60 degrees.

As cheese makers, we should get examples of the kind indicated in the foregoing and point out these facts to patrons. There are quite a number of our patrons who cool their milk. A few have good milk stands and ice boxes for cooling the milk. Some, however, do not cool the milk, but I think this season they will wake up and see the advantages to be derived from cooling milk.

A COURSE AT A DAIRY SCHOOL.

I have had 12 years' experience as a cheese maker. Lately I have had charge of the Mountain View Cheese Factory, this being my second year. I attended the Eastern Dairy School last winter, where I won my certificate. Every cheese maker that manages a cheese factory should have a certificate and through securing it be equipped to meet the many obligations that fall to the lot of a cheese

last winter, I will outline it as briefly as I can:

In the first place, I chose clean, a sweet milk and set it in as sweet a condition as possible in a summer heat at a temperature of 86 degrees, and when showing about 29 seconds on the rennet test with Hansen's rennet. Time from setting to cutting was from 30 to 33 minutes; time from setting until cooking temperature was reached, 1 hr. and 35 min. I use Baird agitators and 10 minutes after cooking temperature is reached, which is 98 degrees, I take the paddles out and finish raking with a common hand-rake, not raking continuously nor hard. Time from setting until dipping was from three to three and a half hours with net more than 15 per cent. of acid or one-sixteenth of an inch on hot iron.

This point of dipping with a small acid seems to me to be the secret of getting a good body in the cheese. I drain my curds quite dry and pile in layers up the centre of sink four and five thicknesses deep. Time from dipping to miller was from three to three and a half hours, with about 7 per cent. of acid on acidimeter, or three-quarters of an inch on hot iron. In about five hours from dipping, the curds showed about one per cent. of acid and were well ready for salt. I use two and a half lbs. of Windsor cheese salt per 1,000 lbs. of milk; and press all cheese two days.

We have not a cool curing room, and did not pasteurize the whey last season. I am going to pasteurize this year. I am to get 75 cents a ton of

cheese.—Clarence Donnelly, Middlesex Co., Ont.

The Finish of the Cheese

D. J. Cameron, Campbellcroft, Ont. The weakest point in the cheese industry from the makers' standpoint is the finish of the cheese. If a lot of our makers could follow their cheese to Montreal and compare it with other cheese that comes in there, they would either quit the cheese business in disgust or go home and determine to finish their cheese properly.

No matter in what condition the milk comes in, one can always put a proper finish on the cheese. Finish has value, and other things being equal, well finished cheese will pass inspection where cheese indifferently finished would be rejected. There is no excuse for any man not finishing his cheese well.

If the makers would visit one another oftener, I feel satisfied they would benefit much. We have makers who finish cheese well and put them up stylishly and neat, and we have other makers who finish them—old way get through. Makers should take into consideration that when these cheese are sold probably the first thing the buyer will look at is the appearance of the cheese. They will close his eyes when he goes into the curing room if the cheese is unfavorably impressed from the very beginning.

Possible to Double the Yield

Hu. Glendinning, Ontario Co., Ont. The majority of cheese factories and a number of creameries that have been idle during the winter will shortly resume operations. A retrospective view of the dairy season last year shows that the finest quality of cheese were shipped from Canada in the history of the trade. This fact speaks well for the work of the instructors, the improvement of the factories and the condition of the milk supplied by the farmers.

The output of butter and cheese, however, was not what we would like to have seen. It should have been at least a half more. The yield could be doubled if a united effort on the part of the milk producers was put forth, and that increase is possible without any great increase in the number of cows.

Reduce the Loss in Whey

"We need to reduce the amount of milk that it requires to make a pound of cheese; we need better cheese and more of it, and it is possible for makers to help out on this score," said Mr. R. W. Ward, Dairy Instructor for the Peterboro District, when addressing the recent cheese makers' convention in Peterboro. "The average loss of fat in whey for the Peter-

boro district last year was 24. To show the possibilities of reducing this loss, we need only to look at the results of experimental work at the O. A. C. Dairy School last winter, where, even under the handicap of winter milk, they had an average loss of fat in the whey as low as .12.

"The loss for Peterboro district this year should not exceed 20 at any rate, and it would be possible to reduce this loss still further. I have seen the loss in whey as low as .14. A loss as low as .16 and .17 is quite possible for the whole district.

"These makers of any section should study how to save this loss. It would mean more money for the producers. They need to look after curd knives and to keep them in good repair so that they will cut exactly, then there is less loss of fat in the whey. One of the greatest factors causing the high loss of fat in whey is the poor condition of the milk as received. We need to get the milk in the best possible condition."

The best results are obtained in dairying when the patrons are well organized and work harmoniously together.—H. C. Duff, B.S.A., Peterboro Co., Ont.

THEY THINK You Don't Know

Any one who thinks he can hide from you the fact that it is filled or other common cream separators are complicated and hardest to clean must think you need your eyes. Any one who tries to convince you that dinks or other contraptions are necessary in a modern dairy must think you know nothing about the world.

Sharples Dairy Tubular Cream Separators

have neither dinks nor other contraptions, yet produce at least twice as much milk as machines at least twice as clean, wash many times easier, and wear a good many years longer, or than common, complicated separators. That is why farmers all over the world call Tubulars "The World's Best," and it explains why Tubulars succeed most, and all others combined and why Tubulars probably replace more common separators than any one maker of such machines sells. The manufacture of Tubulars is one of Canada's leading industries. Write for Catalogue No. 355



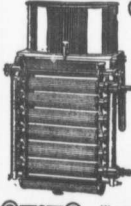
THE SHARPLES SEPARATOR CO. TORONTO, ONT. WINNIPEG, MAN.

The Secret of Pure Sweet Milk

You dairy-farmers can't afford to ship impure, germ-laden milk into the towns and cities. Our medical authorities are severely—don't you run any risks. If your patrons all your milk through the Root Cooler-Aerator immediately it leaves you, you can guarantee it pure and sweet and get a bigger price for it per gallon. The

ROOT SANITARY MILK Cooler-Aerator

will keep the milk sweet for 48 hours because it kills the animal heat quickly and cools the milk to the same temperature as cold running water, easy to clean."



The water is admitted at the bottom, flows through the tubes, and then, from the water cooler, to the second tube and so on until it reaches the top. Thus the outside of each tube is continually cooled. The deeply-corrugated milk flows down through the separator, heavily cooled with pure tin and granulated steel filter water, perfectly clean to operate in 5 minutes. Made in various sizes from 10 to 50 gallons. Made in various sizes from 10 to 50 gallons. Made in various sizes from 10 to 50 gallons. Address it should have a Root Cooler—it's a big money maker.

W. A. Drummond & Co., 177 King St. East, Toronto

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



POETRY frequents and keeps inhabitable those upper chambers of the mind that open towards the sun's rising.

—J. R. Lowell.

In a Fence Corner

By Minnie Barbour Adams.

"Ezry, oh, Ezry!" called a shrill, excited voice. The man sprang to his feet, stumbling over a milk-stool in his haste, as he called back, "What's up?"

Jennie answered shortly: "Your ma's gone."

"Oh, is that all?" he replied with a sigh of relief. "Gee! I thought something had happened," he said quickly.

"Why, Ezry Bingham! An' you don't call your ma bein' gone, bag an' baggage, somethin'?" his wife asked sharply.

"Is she that?" he cried in surprise as he rose heavily to his feet.

"She just is! You see," she said falling back to her usual aggrieved whine as they started for the house.

"I called her to get breakfast an' help Geraldine an' Fawtlorry with their dressin' while I run over to Mis' Slocum's to see if I could ride to church with 'em, an' she was gone."

"She's likely got kinder miffed at you, Jennie, an' has gone over to Dave's for a spell," he returned, the perplexity on his big face lifting somewhat.

"Dave's nothin'!" she retorted, scornfully.

"Is you s'pose she lugged her spring cot, which is as wide as a bed, an' her an' pa's rockin'-chairs, an' the trunk 'n' dishes 'n'—For the land's sake, look there, Ezry!"

Standing by the farm gate was Bill, the old white horse, his head droopingly hanging nearly to his big, knotty knees. The light wagon behind him was empty.

"I told you so!" said Ezra, after a long, staring silence. "You made her spunky somehow." "You made her Dave's."

"Well, I did jaw considerable about her not sewin' on Geraldine's dress, woods so much," admitted Jennie. "I just don't know what's got into you ma this spring, Ezry."

"She allers was a master hand for the woods," returned the man, resentfully, his hard face softening a little. "I never could see what her an' pa found in 'em. Why, I've known 'em to go moonin' off through the pastures an' timber a whole Sunday, instead of goin' visitin' or havin' company like other folks. An' they know the ways of every bird an' an' tree."

"I know I'd rather have your ma's yerbs when any of us was allin' than any doctor in the country," Jennie admitted reluctantly.

"Yes, an' you know how the city folks allers liked to have pa go huntin' with 'em when he was spryer, an' the presidin' elder said ma was a born naturalist."

"What did he mean?" asked Jennie, as she held the gate open for him to drive through.

"Oh, likin' things natural, I guess, without many civilized fixin's to 'em. But I don't like her runnin' off this way," complained Ezra.

"Well, she'll come back fast enough," returned Jennie grimly.



Part of a Farm Front Lawn of Pleshing Natural Beauty

The old fashioned flower beds have been done away with largely on account of the work necessary to keep them in presentable shape. The illustration shows a pleasing substitute for a flower bed. It is a rockery, and amongst the stones are grown Wandering Jew and other creeping plants. This lawn is on Mr. E. Terrill's farm, at Wooler, Ont., which won first prize for District No. 2, in the Dairy Farms Competition.

"Emmeline was tellin' me when I was over to Uncle Joshua's funeral, that she didn't believe that her half of the pension paid for your pa's keep, an' if she only had his room she'd take the teacher to board."

"Humph!" snorted Ezra, "I'd trust pa to earn his board anywhere, he's so handy; an' I think their half of the pension is clear gain, just as ourn is."

Two—three weeks slipped past, but the rumormongers did not return.

"I'll just bet she's helpin' Emmeline with the housecleanin' an' soap-makin'," grumbled Jennie as she leaned on the fence one Sunday morning, watching Ezra feed the calves.

"An' I ain't done a lick at it yet."

"An' if she stays, Dave'll be askin' me for all of the pension; an' I'd summer," replied Ezra gloomily.

"Your ma knew I'd laid out to have her make quilts an' get the rags sewed up before fall," sighed Jennie.

"Here's Dave's folks comin' now!" she cried excitedly. "Ezry, get me some rhubarb, quick, an' I'll slap a piece together an' then you ketch that Dominick an' get him ready for the pot." She started on a run for the house.

"Hello, Ezry, how's pa?" Hello, Dave, how's ma?" were the simultaneous greetings of the brothers.

"Pa? I ain't set eyes on him!"

"Ma? I ain't seen her on him!" were the excited exclamations that followed.

Then came a breathless, frightened silence, broken by a groan from Ezra, who had entered the house and was heavily mounting the stairs to his mother's room.

He soon returned with a mused scrap of paper that he was endeavoring to read.

"You must 'a' looked clost', Jennie," he sneered, and read aloud:

DEAR EZRA: You have heard me say lots of times that I would rather live in a fence-corner with your pa than with a king in a palace; and getting old ain't changed me a mite. Pa and me are tired of living apart and ain't a-going to do it any longer. Don't draw the pension; we'll attend to that. We have both took some chickens and other stuff that you will never miss, and we will take Sukey when she is by.

Your lovin', happy Ma.

"Well, I swanny!" ejaculated Dave. "I yum!" came from Ezra.

"How you comin' on with your spring work?" asked Ezra, as they leaned over the pig-pen, inspecting his new Poland Chinas.

"I don't seem to be as forlorned as I used to be when pa was with me," Dave replied gloomily. "Havin' all the chores to do, an' the garden to consider, she bin sort of ailin' this

"We don't know," stammered Dave. "They've run off," supplemented Ezra.

"What do you mean?" cried Robert, paling.

Dave began a halting narrative, in which they all soon joined.

"Have you any idea why they did it?" asked Robert, looking at them keenly.

(To be continued next week.)

Baby Bunting—Chaperone

(Concluded from last week)

"It's just as you say, sir, of course, if you don't mind the expense," he said, with an ingratiating smile. "I'll rush this right through," and he fell to pounding his telegraph key enthusiastically.

He did rush it, too, and he must have put some of his enthusiasm into the wire, for the answer came in an astonishingly short time; and it seemed to require a deal of talking damp message: "Are you crazy? Bring her back at once. Mollie faints."

W. R. Maxwell. "He paid for underwriting that 'at once'," explained the agent, with a dubious glance at the young man; "and he's waiting on the wire for your answer."

Maxwell nodded with nervous curiosity. "Let him wait—it'll do him good. I'll have an answer in a minute."

He dashed off the address of his message, then hesitated, and scowled over the one he had just received. Finally his face lightened and he began to grin wickedly.

"By dove" he chuckled, "that's just the thing" and he rapidly wrote: "shall I bring her as my wife or my bride-to-be? Tell Molly Baby is O.K."

Samuel Maxwell. "Try that," he said, pushing the paper through the opening. "I can't almost hear him yell when he gets it. It's a mean thing to do—but he wouldn't have given me the chance."

The agent nodded, rushed the message through, and then turned to confront the grinning young man.

"Say, Mr. Maxwell," he said, nervously fingering his key; "I hope this thing's all right?"

"What do you mean?" asked Maxwell suddenly serious.

"Well—I've heard about that Winnipeg kidnaping—picked the police message off the wires as it went through—"

"Oh, Lord!" murmured Maxwell; and then began to laugh. "That message wasn't directed to you?" he suggested.

"No."

"Oh, no?" retorted the sheriff?

"And you wouldn't have given us a second thought if you hadn't caught that message in passing?"

"No, I s'pose not."

"Then forget it! You're handling both ends of this affair, and it ought to be easy enough to figure the thing out."

"You might be using a cipher," suggested the agent, unwilling to lose his opportunity to get his name in the city papers.

"Oh, rot! You've been reading too many yellow-backs."

"It's just a plain elopement, then?" Maxwell glanced at the girl and the baby, and grinned. "Well—it's an elopement, all right—but it isn't as plain as it might be. It's been called a kidnaping expedition before, and asylum—"

The agent turned at the call of the chattering key.

"Here's your answer," he said shortly, and Maxwell eagerly snatched it.

"Take next train to Winnipeg or take the consequences. Will discuss wedding later."

W. R. Maxwell. "Looks as if the sheriff might get

a call yet," suggested the agent. "You wait till he does!" was the grinning retort. "The governor isn't the kind to loiter with sheriffs; he makes his own laws—and enforces them himself." He pushed another telegram under the screen. "Just feed that to him—and look out the wire don't explode."

"Refer to discuss wedding now. Will exchange Baby Bunting for church wedding and fall forgiveness. No other offer considered. Send final decision at once."

Samuel Maxwell. "The agent stared at the message and whistled over it; then he grinned and began to work his key."

"You're all right," he said, with an admiring glance. "Hope you win out."

"Thanks," answered Maxwell. "I'm feeling pretty cheerful." And he crossed to where Miss Claire was bending tenderly over the child.

"Claire," he said seriously, "I've got the governor on my wire, and he's acting rather nasty. If we marry now he may turn me into the street, as he's threatened to do; but if we don't marry now the Lord knows how long we'll have to wait. What do you say?"

"What do you want me to say?" she asked, searching his face anxiously. Maxwell shifted his glance and moved restlessly.

"If the governor turns me down," he said, "it will mean pretty hard going for some time. I can't earn much—yet, but I'm young and strong, and I love you enough to work night and day for you." A sudden passion of longing swept him toward her and set strange lights in his face. "Claire, do you love me enough to go hungry for me—and with me—if necessary?"

She slipped her hand into his and let her love shine through her eyes.

"Enough for that—or for anything," she answered softly. "I'll do just as you say, Sam."

"Then you don't think I'm quite a fool—in spite of the mess I've made?"

"You did it for me, Sam—"

He caught her close and sought her lips with his own.

"Oh, don't!" she cried, suddenly realizing where they were. "He'll see!" and she nodded toward the agent.

"He's busy," was the careless answer; "and he'll be busier in a minute when the governor begins to send us his blessing."

The Upward Look

The Power of Need

God is love, and he that dwelleth in love dwelleth in God, and God in him.—1 John 4:16.

And this is the confidence that we have in Him, that if we ask anything according to His will, he heareth us: And if we know that He hear us, whatsoever we ask, we know that we have the petitions that we desired of Him.—1 John 5:14, 15.

Are you discouraged? Are there conditions in your life that are hard and unyielding? Does failure seem to dog your steps? Are you unloved? Then be sure that as yet you have not had a vision of God's love for you and for all mankind. Once we get a glimpse of God's love and of some of the means He uses to help us, we soon find our troubles dropping from our hearts and a new spirit springing up within us that gives us the power we need to enable us to overcome the conditions in our lives that previously threatened to crush us.

FOUNTAIN PEN FREE

A 14 kt. Gold Fountain Pen will be given to any person who secures only one new subscription for Farm and Dairy. These pens are guaranteed to give satisfaction. Try and win one.

In his great book, "Natural Law in the Spiritual World," the late Prof. Henry Drummond has shown us that just as there are fundamental laws known to science in the natural world, law that never change, so there are even greater laws governing spiritual matters. One of these laws is that just as a tree, when planted and left to grow under favorable conditions, that is, in a suitable environment, will grow and thrive, so will a man or woman develop when their environment is such as to encourage and promote improvement. Unless we take an interest in music we cannot become musical, unless we read and study we cannot acquire an education, unless we develop our souls we cannot become spiritual. We, however, are greater than trees or plants, inasmuch as we have the power inherent within us to mould the conditions that enter in our lives instead of being moulded by them. This power is derived from the spirit within us. Our ability to promote our own best interests, as well as the interests of others, depends absolutely upon the character of the spirit dwelling within us. Our supreme duty, therefore, is to recognize this fact and regulate our lives and thoughts accordingly.

We all know that if a pin in our clothing is sticking in us we have the power to remove it. We often fail, however, to realize that we have the same power to remove or overcome other unpleasant incidents and conditions in our lives if we but know it. Our power to do this is in exact proportion to the strength of the spirit within us that directs our thoughts and actions. If we feel and think that we cannot overcome the difficulties we encounter, then we cannot. If we believe that we can, then we can.

Our first duty is to recognize that God is love, that God is a spirit, that God is infinitely powerful, that God is, as our text shows, will, under certain conditions, come and dwell in us and that in this way we can have a new spirit within us, the Spirit of God. When we realize and believe that God is love and that He loves us, we are prepared to believe that God does desire to give us gifts and that He will do so as soon as we so order our lives that He will see that we are worthy to receive them. We will recognize further that if we are not receiving good gifts from God it is an indication that there must be something displeasing to God in our lives and with His help we will strive to search it out and remove it, counting not the cost. This is what Christ meant when He told us that we must first seek the Kingdom of God and that afterwards, that is, after we have found it, the other things, the earthly blessings, will be added unto us. Once we have found the Kingdom of God, there will not be the same danger that earthly blessings will make us proud and selfish. When we know that we have God in our hearts we will feel a new power within us. We will realize that with God all things are possible, and we will have the strength to overcome our troubles.—Take God at His word, test Him and see how He will transform your life.—I. H. N.

Mothers' Day

Sunday next, May 8, will be observed in many cities, towns and villages in Canada for the first time this year, as Mother's Day. A description of the aims and objects of this day appeared in last week's issue of Farm and Dairy. We urge our readers, young and old, who have yet with them their mothers, and who are away from them this Sunday, May 8, to send the best and dearest letter possible to the dearest mother on earth—your mother." Don't let the day pass without some recognition on your part of your mother, or if you have

not that blessed privilege, do something for some other little mother.



The Song of the Old Mother

I rise in the dawn and I wind and blow
Till the seeds of the fire flicker and glow.
And then I must scrub, and bake and sweep,
Till the stars are beginning to blink and peep;
But the young lay long, and dream in their bed
Of the matching of ribbons, the blue and the red;
And their day goes over in idleness,
And they sigh if the wind lift up but a breeze;
While I must work because I am old,
And the seed of the fire gets feeble and cold.

To bring out the brilliancy of all glass, ammonia should be put in the water in which it is rinsed.

A Welcome Visitor

We have only been subscribers to Farm and Dairy a few months, but we look forward every week for its visit. The first thing I do when I receive Farm and Dairy is to look for the fashion department. It seems to always have something in it that I want. I like also very much to read the Home Club. Of course men folks never look at the fashions, but my husband likes to read about pigs and the care of horses, etc.

Farm and Dairy seems to be a paper that has something in it for everybody in the home. We would not like to do without it.—Mrs. Andrew Picken, Grey Co., Ontario.

Music Folios, your choice of a large selection, free, in return for a new subscription.

A Churn For Women



This is our "LEADER" CHURN—made of the best White Oak—which won't chip or peel like glass or crockery—absolutely sanitary—and may be operated by foot or hand. If your dealer does not handle Leader Churns, write us direct.

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WINDSOR BUTTER SALT

Prize Butter

—the kind that wins cash and medals at the fairs, and brings top prices in the market—is always made with

Windsor Butter Salt

Water Systems in Country Homes

Geo. B. Snyder, Ridgeway, Ont.

The first essential in a complete and successful water system in the home is to secure sufficient water pressure to force the water through the pipes to the places required. Water pressure is secured in the city by having reservoirs or stand-pipes built as high as possible above the city. In our country communities there are two ways of securing water pressure: First, by building an elevated tank; second, by the use of the hydro-pneumatic tank system, where the water is pumped into an air-tight tank with a windmill or gasoline engine; the air becomes compressed, giving a water pressure sufficient to force it wherever required. In the latter case the tank may be placed in the cellar. It will be a simple matter to put a system of pipes through the house and install all the modern conveniences. A heater and boiler will complete the outfit. The latter will be found very convenient for the bath room, as well as supplying a liberal quantity of water for washing, etc. With a water system, the cesspool will become a necessity, in order to dispose of the sewage and the waste water. A hose will be found useful also for watering the lawns and as a protection against fire.

Since I have enumerated the parts of the water system, you can easily see what uses it will fill, and be able to count its advantages over a home without it. It is a great saver of la-

bor. In the kitchen there is no water to carry and no water to pump, because the water is drawn from a tap and carried away by the sink. In the bedroom the toilet set is not required; there are no slops to empty; at the barn and in the yard it saves time and labor. A tap is turned and the water trough is filled for the stock.

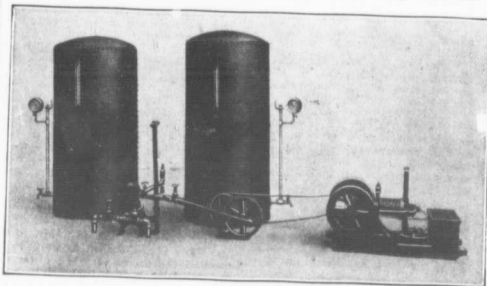
The convenience of a water system is one of its best features. It is always handy and is always ready. When you come in at night you are hurried and tired; you would like a bath and realize that it would be refreshing and make you sleep better; it would take the burning out of your legs and feet and the nervousness out of your body, but the trouble of getting a pail of hot water and a warm room is too much bother; whereas if you have a bath tub and hot water and a warm bathroom, you may jump into the bathtub, take a good bath and go to bed, and enjoy the sleep of the blessed, without waste of time and trouble.

Only those who have toilet rooms in their home can fully appreciate the advantage of the closet. No one needs to go out of doors in the rain or snow, at day or at night, and especially the latter. This advantage is especially convenient for old people who are not able to get about very well. In the case of small children, who have to be taken to the closet, a great deal of labor is saved and the children are taught regularity and cleanliness, bad odors from standing vessels used by the children through the night are also dispensed with. I

maintain that the toilet room should always be on the same flat with the bedrooms, so that it is convenient at night and that a bath may be taken in the morning or evening without the extra undressing or redressing, a hot bath being sufficient to go from the bedroom to the bathroom.

Another advantage of the toilet room is the improvement in the sanitary conditions. The constant stench over your head, door is done away with and the sewage is carried into the cesspool and does not pollute the

more country homes have a water system and toilet room?" Well, I think there are two or three reasons. First, they can get along without it. Second, the people do not properly understand the system; they have heard of someone who had a bathtub and it did not work or the pipes froze up and burst, the water leaked over the house, etc. They might put it in and it would not work and then money would be wasted. They have listened to other people's complaints of a poor and defective system, and have not themselves made a study of a good and suc-



One Tank for Soft Water and One for Hard Water

air with bad odors. In the cesspool the sewage is liquefied and purified by bacteria and absorbed by the soil and not carried away by freshets into

cessful system. The extra cost has prevented many from putting in a water system. I firmly believe that in the next ten years it will be more

1. Rainwater tank in the garret, size 12 feet long, 5 feet wide and 2 feet high. This tank is lead lined and expensive \$70 00
 2. 60 feet of eave-troughs half way up the roof to supply rain water. The supplies us about half the year 6 00
 3. Supply of well water from our neighbor's tank for the balance of the year 6 00
 4. Wash basin, 18-inch, with back and board 15 00
 5. Cast iron lathtub, white enamel. A-1 quality, 6 feet long 35 00
 6. Closet (low down) 20 00
 7. Boiler 9 00
 8. Heater 6 00
 9. Hand force pump to force water up from cistern 9 00
 10. Nickel fittings and taps, etc. 10 00
 11. Piping inside and out 6 00
 12. Labor—Plumbing, etc. 10 00
 13. Cesspool, small, cement, one compartment 8 00
- Total \$210 00

the water-courses and natural streams. The closet inside the house is also antagonistic to health in that it relieves any danger of catching colds by going out in cold and wet and stormy weather. It is also a noticeable fact that people are inclined to keep the house more carefully regulated when there is a convenient clean and warm closet, and permit me to say that a large percentage of our ailments are directly due to constipation. In my mind constipation is only a habit, a lazy habit, due to neglecting the bowels when nature demands attention.

Then the advantages of fire protection and lower insurance rates are not to be overlooked, neither is the advantage of having water for the barn, lawn and garden.

Are the advantages of a water system worth its cost? I have just enumerated some of its advantages. In my opinion the water closet alone is worth more than its cost to a family, but let us compare its cost with that of other rooms in the house, kitchen, bedroom, library, drawing room, etc. No one of these rooms is used more constantly than the toilet room, and the furnishing of any one of them will cost about as much as a toilet room. In these days everything is for convenience and to save labor. This principle is applied for the men in the use of the binder, hay loader and hay-fork, etc. Then why should it not be applied to the third most used in the home? You might ask me, "Why do not

usually to hear of a good home being erected without a water system and toilet room, than it is now to hear of a good home being erected with one.

cost or system. The cost depends principally upon the quality and amount of fixtures you use, therefore, you can adopt a system that suits your own pocket. From \$175 to \$500 is the amount required, depending upon how

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THE increasing demand for perfect-fitting clothes at a reasonable price, is responsible for the introduction of **PAQUET GUARANTEED CLOTHES**. Heretofore, the main feature in Men's Clothes has been **STYLE AND QUALITY**. If a man wanted **STYLE** at a reasonable price, he was forced to accept low grade material. If he wanted **QUALITY**, he had to pay more.

The idea back of **PAQUET GUARANTEED CLOTHES** is entirely opposite to both of these old conditions. The first consideration is the making of **PAQUET GUARANTEED CLOTHES** is **FIT**—the second, the look with **MUST BE PERFECTLY**. The Materials, to give lasting satisfaction, **MUST** possess **QUALITY**. The Style, to be saleable, **MUST BE FASHIONABLE**. Our New System of Clothes Making combines these three essentials. For \$10.00 to \$125.00 we GUARANTEE you \$13.50 to \$20.00 values.

THE SUIT ILLUSTRATED

is made from absolutely PURE WOOL, navy blue or black serge, best Indigo Dye, thorough color. The workmanship guaranteed to keep its color. The workmanship guaranteed to keep its color. The workmanship guaranteed to keep its color. The workmanship guaranteed to keep its color. The workmanship guaranteed to keep its color.

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THE PAQUET COMPANY
QUEBEC, CANADA

simple or elaborate you wish to have it. Two years ago we had a water system installed in our home at a cost of \$210, and we would not do without it for \$500. It works completely, never blocks, supplies hot and cold water, flushes the closet well and disposes of the sewage most satisfactorily.

The tank might have been lined with galvanized iron, but would rust out and not be so safe—at cost of \$25 less.

I might have had a steel tub for \$18, and it would have been better, not so heavy and would not take so long to warm up when the water is turned in—would have cost me \$15.

The system described is very simple, reasonable in price, contains the best in every article, and is complete and satisfactory in working.

Prize Garden Contest

Let the young folks have a garden of their own this year. Give them a plot of ground of their very own, on which they can, under your supervision, work and see the results of their work. Give them a few seeds, and plants, and start them. For one year's new subscription to Farm and Dairy, we will send a selection of seeds to start the garden with.

For a photograph of the best three gardens with a short letter not over 400 words, describing the garden, and



Beginning Their Contest Garden

the results of the work, telling size, what was planted, and yields, we will give three prizes. Photographs MUST accompany letters. Better have a photograph taken now of the garden before it is planted, and another one later showing the growth. More about our Garden Contest later. Remember it is for the young folks only. No competitors over 16 years will be allowed.

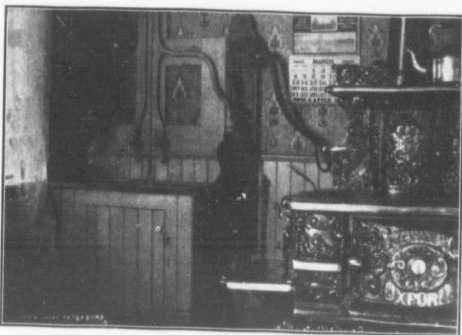
A Well Appointed Home

A home worthy of all that this word should imply has been the ideal of Mr. and Mrs. Alex. Smith, whose farm last year won first prize in the Good Farms Competition for Durham Co., Ont. It is rare, indeed, that the passing stranger happens upon a farm home the equal of the subject of this article. While there are many farm homes to-day that equal, and possibly surpass it, Mr. Smith's home is unique in that, although it has been built for 17 years, no improvements having since been made, it is essentially modern.

The two illustrations given herewith, one showing a view of the parlor and the other showing an important part of the kitchen, convey some idea of the comforts and the appointments of this home. Particular attention is called to the kitchen. What would any farmer's wife not give to have had water, both hot and cold, on tap, right where it is most needed during the past 17 years? The water system in the Smith house has been a part of it for that length of time.

LABOR SAVING.

That this convenience of water on tap in the kitchen and in the bathroom, which is also installed in this home, has been worth while, is at once



Hot and Cold Water on Tap in a Farm Kitchen as It Has been for Seventeen Years

How many steps, such convenience as shown, must have saved during the past 17 years! A corner of the kitchen in Mrs. Alex. Smith's home, Durham Co., Ont., is shown in the illustration. Read the adjoining article for a further description.—Photo by an editor of Farm and Dairy.

evident when it is learned that during all these years Mrs. Smith has taken charge of her part of the work and performed it alone. Never has she had a girl since the house was built, even while building the barns, and always at threshing times, when it was necessary to have extra men in the house, Mrs. Smith has managed her work single-handed. This she never could have done had her kitchen and her house throughout not been equipped with conveniences and labor saving contrivances, all of which have gone so far towards lightening her load.

It is to be commended that so many heads of farm homes are coming to realize the great advantage of modern conveniences and are having them in-



A Real Comfort in Any Home

One of the many appointments that is really worth while in any home, is a grate. No other means of heating is so equal of it for good solid cheer. The illustration shows a view in the parlor in the home of Mr. A. Smith, Durham Co., Ont.—Photo by an Editor of Farm and Dairy.

stalled. There is no reason whatever why the farm home should not be equipped with all that is modern and tending towards labor saving. There is no hesitation about installing labor saving equipment in the larn and outside departments of the farm. Why should there ever have been any hesi-

More Butter



The amount of butter you get out of your cream, depends much on the kind of churn you use.

There are more "FAVORITE" Churns used in Canada than any other. Because the farmers and dairymen know that the "FAVORITE" is best, and they won't use any other. Foot tread and hand lever—8 sizes.

Our new "CHAMPION" is the champion of all washing machines. Easiest, quickest hand washer ever made. Write us if your dealer does not have them.

DAVID MAXWELL & SONS, - ST. MARY'S, ONT.

NEW SCALE WILLIAMS



THE EXQUISITE APPEARANCE

of the New Scale Williams Pianos, shows the result of our special study in the designing of cases and the selection of rare veneers.

Our Period Pianos—Louis XV, English Art Case, Baby Grand, Mission, Sheraton, etc.—are marvellous reproductions both as to detail and art.

The woods are finished in their natural colors—figured and inlaid Mahogany, White Mahogany, Green Oak, Circassian Walnut with dull satin finish, French Burl and American Walnut, etc.

Our beautiful new catalogue shows the new styles in New Scale Williams Pianos, and also describes the many exclusive features which make these pianos the choice of pianists and singers, as well as the favorites in homes and schools.

Write for copy of the catalogue and information about our plan of buying a New Scale Williams Piano on easy payments.

THE WILLIAMS PIANO CO. LIMITED, (Winnipeg, Man., 323 Portage Ave.) **OSHAWA, Ont.**
 BRANCH OFFICES: (Montreal, Que., 733 St. Catherine St. W.)
 (London, Ont., 261 Dundas St. 106A)

"I want to express my satisfaction and the pleasure enjoyed on my recent Canadian tour, at which time we used your 'New Scale Williams Piano.'"

It satisfied me in the most complete manner, and I tell you this with sincerity, and beg you to believe in my best sentiments."

BLANCHÉ MARCHES,
 (PRIMA DONNA.)

tation on this point when it concerns the house and woman's work?

COMFORTS ENJOYED.

The furnishings in the Smith house throughout are such as one might expect, and although much of it verges on the lavish, it is not so good but that it is used to the great comfort and enjoyment of all members of the family. Among other things, the long-distance telephone and a private telephone installed by one of Mr. Smith's own boys, add greatly to the life of the home.

Possibly there is no one thing that goes farther towards making that all that Mr. Smith's home embodies is worth while, than the fact that his four boys, three of whom are grown and manhood, are all with him, living and working contentedly on their farm, which was described in Farm and Dairy, April 21.



The Housekeeper's Friend

In another column of Farm and Dairy, appears an advertisement of a new and, we think, valuable premium that will be of interest to every housekeeper reading the Household Department of Farm and Dairy. It consists of nine separate pieces, each one of individual use. These articles are all of exceptionally fine quality, and hang on a fine enameled rack, with a serrated edged hanger. The special working for to secure us is also the long handled fork for use in taking articles out of boiling water, etc. The split mixing spoon is a popular article in the kitchen, and the cleaver or heavy meat cutter, is almost indispensable. The other articles speak for themselves from the illustration. Two new subscribers to Farm and Dairy are not hard to come by, and the comfort and assistance derived from using the above articles will more than repay you for your trouble in securing them.

OUR HOME CLUB

TWO NEW MEMBERS

We are glad to welcome two new members to the Home Club. The "Country Philosopher" who has long been a reader of the April 21st issue, entitled, "Farm Tragedies," will probably have been read by all the members before now. Discussion on this article is sure to follow. We want all the members to get after the "Country Philosopher" if they do not agree with him. Another new member is "The Country Cousin." We will hear from her soon. Several timely and interesting articles are about to appear in the Club which, we trust, will be productive of considerable discussion in the near future.—The Household Editor.

POLITENESS AT HOME

Children can never learn to be ladies and gentlemen by rule any more than they can learn to be musicians or artists by rule. But of course as rules in anything else are useful as well as in anything else, it is well to teach children the fundamentals of politeness and then keep before the place to do it. Children should never be allowed to get the impression of the little girl who when asked for a definition of politeness replied: "Why, it means from home." Children are natural imitators and their parents are ideal to them. If parents are kind and polite in the home, children will unconsciously absorb their ways, in fact they will know of no other. Home manners should prevail and the good rules of homes where politeness is the life will never behave impolitely elsewhere. Politeness is the lubricant of life which keeps the wheels of society

running smoothly. A man or woman who lacks it is constantly in trouble and always misunderstood. Politeness is a sure passport to success and honor.—"The Daughter."

GOOD ROADS

Can any of our members suggest a road by means of which our country roads can be put in a passable condition during the winter? During the past winter several accidents have happened, some of them very serious, owing to the neglected condition of the roads. On one occasion at least two people came, very nearly losing their lives. They were driving through the fields and got lost and drove over a lake. It was found afterwards that they had driven within a few inches of a hole where ice had been taken out.

The individual farmer cannot be expected to keep the road open all along his farm without any recompense. I hear some say, "That is the work of the pathmaster." Yes, that may be true, but how many pathmasters look after this work? Fortunately I was born and raised on a farm and can generally manage to cut the wires of the rail fence and open a gap or manage to take some road not quite so badly drifted, but these delays are very serious to the public. Would be pleased to hear what plans are adopted in the neighborhood of roads, possibly in winter weather.—"The Doctor."

BOOKS

It is rarely one reads anything so delightful as the article published recently in the Household Department of Farm and Dairy on "Books and Reading." It is an ideal for all girls, and the story of how that library was collected brings tears and smiles of pleasure in quick succession. One of the most interesting women I ever met was a dear old young woman I will call her, living in a quiet country place. She was almost helpless; with a painful disease, few friends and seemingly so much alone. Yet close by her chair front of her a book case of just such books as we have had quoted and at supplied with all kinds of stationery. She was so happy. I would tell you she was never lonely! It was an inspiration to visit her. Such I mention. The creation of such thoughts and ideals is a revelation of any life.

Postscript.—May I make a suggestion?

A booklet containing this article either written or cut from the Farm and Dairy with the wish inscribed that "the persistent desire, the wisdom and the love of good books here shown in Mother's birthday wish for her daughter."

I think it is Jane Austen who says, "If I have one wish for my children it is this: 'A sense of the ridiculous' and a love of good books."—"Aunt Faithie."

HOUSE CLEANING TIME

The advent of such favorable weather has plunged us into the agonies of housecleaning earlier than usual this year, and many of us will find our present state of mind corresponding to the parodist's idea, when he wrote:

"When earth's last picture is painted, and the floors are matted and dried, and the youngest spider has died, and we shall rest and faint, we shall need it!—lie down for an hour or two. Till the dust on the grand piano shall set us to work again."

Seriously, however, the annual housecleaning has been robbed of half its horrors by the many household appliances now available. Sal soda, washing-aid, germ, etc., are powerful cleansers and useful in every line of the eradication of germs, microbes in the eradication of cheapness of paint and paper has

made possible the covering of one time bare floors and walls, and the saving in "elbow grease" alone warrants the change. Another helpful feature of modern housekeeping is the wholesale doing away with clumsy carpets, and the substituting of rugs, which may be easily shaken and re-



Starting out to secure a club of new subscribers for Farm and Dairy. Several young lads all under 15 years of age are working for Farm and Dairy. Would you like to be one? We have many fine premiums for boys. Write for our Premium List.

placed. Another hopeful tendency is the elimination of superfluous furniture and doubtful ornaments. Just here, let me say that there is no time like the present season for sorting out all household accumulations, and disposing of all dust-gathering knick-knacks or distinctly unnecessary articles which are not absolutely necessary or distinctly ornamental. Just try it, and note the improvement, both as regards the appearance of the home and the marked decrease of labor.—"Sister."

THAT PIN MONEY

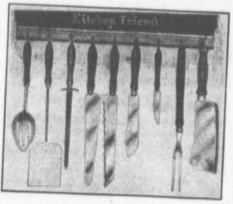
I am glad I am not the only one who has tried to solve this problem. I see by Farm and Dairy of March 3 "Club" for a suggestion along this line. I would like to find some way of earning money outside of butter and egg money. There are great inducements in some papers to grow mushrooms. Has anyone tried it? Some women seem to have the knack of making a little money (on the side) with very little trouble. Most of mine seems to come by the sweat of the brow; at least I feel that way about it. Surely some member of the "Club" has found the secret and will pass it on to us poor, unfortunate "Aunt Jane."

A Camera Enthusiast

I have just received a camera from Farm and Dairy for a club of four new subscriptions. Please accept my thanks for it. It is well worth working for, for such a small club. I hope you will be able to publish some snapshots in Farm and Dairy taking with this camera in the far future.—F. Halbert, Grey County, Ontario.

Woman's Kitchen Friend

This kitchen rack should be in every woman's home. You cannot afford to do your work another day without it. The articles shown are household con-



veniences. Handles are black, and well finished. All regulation size and length. You can have FREE, for a club of two new subscribers to Farm and Dairy, at \$1 each. Get the boys and girls to subscribe. Two of your neighbors to subscribe. It will surprise you how easily this can be done. Address Greatulation Manager, Farm and Dairy, Peterboro, Ont.

The Sewing Room

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

CHILD'S BISHOP DRESS 687

This simple little frock is dainty and changing. The sleeves are joined to the dress after the bishop style and there is a round yoke which can be made either low or high as liked. Material required for medium size (4 yrs) is 3/4 yds. 24 or yds. 32 or 44 in. wide. The pattern is 2 1/2 for children of 2 to 4 1/2 years and will be mailed on receipt of 10 cts.



GIRL'S PRINCESS DRESS 649.

Princess dresses are pretty for schoolgirls. This one is made with a panel at the front. It is made from all-oc embroidery. The slightly elastic waist will find the dress a good one for graduation, which will be pretty made or embroidered bustle with Swiss muslin and trimmings of lace.



Material required for medium size (12 yrs.) is 4 yds. 24 or 27, 4 1/2 yds. 32 or 35, 5 yds. 44 in. wide with 4 1/2 yds. 44 in. wide, 1/2 yds. of binding. The pattern is cut for 8, 10, 12, 14 and 16 yrs., and will be mailed on receipt of 10 cts.

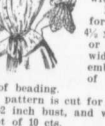
MISSER'S BLOUSE 615.

The blouse that is tucked over the shoulders yet plain at the front is a favorite just now for it allows most effective use of embroidery, and trimming of the sort. This one is designed for young girls and includes the new tucked sleeves and is altogether attractive. Material required for 10 yr. is 3 1/2 yds. 24, 3 3/4 yds. 32 or 3 1/2 yds. 44 in. wide. The pattern is cut for 10, 12 and 16 yrs., and will be mailed on receipt of 10 cts.



BREAKFAST JACKET 5915.

Such a breakfast jacket as this is in demand. It can be worn with odd skirts to make a dress from any pretty reasonable material. It can be made with skirt to match. Material required for medium size is 4 1/2 yds. 24, 4 yds. 32 or 2 1/2 yds. 44 in. wide with 6 yds of embroidery. 4 yds of insertion and 1 1/2 yds. of heading. The pattern is cut for a 32, 34, 36, 40 and 42 inch bust, and will be mailed on receipt of 10 cts.



Persuaded and Satisfied.—It took a great deal of persuasion to get me to first subscribe to Farm and Dairy. I was taking so many other papers, but I am well satisfied with it, and would not want to be without it. Find \$1 enclosed for my renewal.—A. E. Riddell, Galetta, Ont.

Hom... other dairy... ers is all of th... are b... ories is Au... was b... broode... cows... Neidp... cow, i... is of... was b... are th... milk... and of... and 5... This... the fa... her ca... by the... of the... ported... Bessi... is a h... of mil... 2 yr... has a... T... to... subs... sent... Ber... F... is... The... breem... Mr... 350 lbs... for the... record... Farm i... average... the 3rd... Importe... cow whi... 773 lbs... One o... in the... a daugh... cow of... 2nd, ill... for Apri... the year... 5,985 lb... tyne ref... his herd... lbs. of m... fail to... found th... easily fe... Animal... been ship... and J... ment hav... herd on... cent sale... J. Grute... yr. old h... River, m... hull to F... tia Agric... of anim... Alberta... While... not new... venient... well equi... stable of... in commo... show bree... quality. B... dales, wit... driving p... The dai...

Home of a Well Known Ayrshire Breeder

(Continued from page 7)

other essentials looked for in good, dairy cattle.

That the animals are good performers is shown by the fact that almost all of the milk cows have either been through the Record of Performance or are now entered in it. The herd comprises 18 milk cows. The herd bull is Auchinbrain Alb. imp. This bull was bred by the far-famed Scottish breeder, Robert Wallace. Among the cows noticed were Kirsty the 5th, of Neidpath Farm, just fresh in. This cow, which has a magnificent udder, is of Mr. Ballantyne's breeding. She was bred from imported stock. Among the good official records in the herd are those of Kirsty the 2nd, 9,521 lbs. milk and 445 lbs. butter in a year; and of Kirsty the 3rd, 12,640 lbs. milk and 550 lbs. butter in a year.

This last record was not accepted in the Record of Performance, owing to the fact that this cow did not drop her calf within 15 months as required by the rules of the Record. All three of the Kirsty cows are out of an imported Auchinbrain cow.

Bessie the 16th, of Neidpath Farm, is a heifer with a record of 7,625 lbs. of milk and 385 lbs. of butter as a 2 yr. old. Rose the 10th, a 2 yr. old, has a record of 6,442 lbs. of milk and

eye to economy of labor. Two large silos furnish silage for summer and winter feeding and are so located that a truck car can be wheeled down to the centre of the barn for the feeding of the cattle. Water is in front of every animal. Mr. Ballantyne believes in liberal feeding and plenty of bedding, with the result that the stock, when seen by an editorial representative of Farm and Dairy recently were found to be contented and thrifty looking and neat and clean as though they had been regularly groomed.

A FINE PIGGERY.

In the piggery was noticed as fine a bunch of feeding pigs as could well be found anywhere. There was not an unthrifty looking pig in the lot. The pens were neat and clean. The feed was arranged conveniently. Everything about the piggery indicated that Hon. Sidney Fisher had acted wisely when he selected Mr. Ballantyne as a member of the Dominion Swine Commission.

The same care noticeable in every feature of the farm was detected in the henery. The henhouse is commodious and has plenty of light and a roosting room and good floor space. The hens have a large yard in which they are kept and thus are not allowed to run over other portions of the farm buildings.

The farm machinery is ample for the requirements of the farm, and includes a steam engine which furnishes power. A commodious house for the farm help is located on a corner of the farm.

Mr. Ballantyne has the distinction of being the first graduate detected in the Agricultural College at Guelph to have a son graduate at the same College.

Mr. Ballantyne's son, Norman, is now assisting his father on the farm. This farm is in such excellent condition that it reflects great credit on Mr. Ballantyne's son, who had entire charge of the farm for many months last year, while Mr. Ballantyne was in Europe and judging at fairs in western Canada and at Seattle.

The Right Kind of Pigs

It only took me a few hours to secure the club of seven new subscribers for Farm and Dairy, and I feel that the premium sent me of a pure bred young Berkshire pig, bred by Mr. W. F. Elliott, of Coleman, Ont., is an exceptionally good one. The pig is a great credit to the breeder and a good advertisement for Farm and Dairy.—Mr. George Whetter, Victoria Co., Ont.

350 lbs. of butter. Her average test for the season was 4.6 per cent. The record of Rose the 3rd of Neidpath Farm is 9,087 lbs. of milk with an average test of 4.1 per cent. Daisy the 3rd and Daisy the 4th are in the test now. They are daughters of the Imported Daisy of Auchinbrain, a cow which has a prize record of 12,773 lbs. of milk in less than 10 months.

One of the most promising animals in the herd is Annie Laurie the 3rd, a daughter of the champion Ayrshire cow of America, Annie Laurie the 2nd, illustrated in Farm and Dairy for April 21, and having a record for the year of 15,588 lbs. of milk and 5,985 lbs. of butter fat. Mr. Ballantyne refuses to keep a mature cow in his herd that produces less than 8,000 lbs. of milk in a year. He pins his faith to Ayrshires because he has found that they are good producers, easily fed and easily handled.

Animals from Neidpath Farm have been shipped to all parts of Canada and to Japan, the Japanese government having made purchases from this herd on two different occasions. Recent sales include two heifers to W. J. Grutchfield, of Salmon, B. C., a year old heifer to Wm. Baird of Oak River, Man., and a particularly good bull to F. L. Fuller of the Nova Scotia Agricultural College. A number of animals were shipped last year to Alberta.

THE FARM BUILDINGS.

While Mr. Ballantyne's stables are not new, they are commodious, conveniently arranged and thoroughly well equipped and lighted. The horse stable is large and has a number of commodious box stalls. The horses show breeding and exceptionally good quality. Mr. Ballantyne keeps Clydesdales, with one or two Hackneys for driving purposes.

The dairy stable is laid out with an

Cawthra Mulock & Co.

OWN AND OFFER FOR SALE

AT PAR, \$100 PER SHARE

\$2,000,000 of the 7% Cumulative Preferred Stock with a bonus of 25% Common Stock, of

MAPLE LEAF MILLING CO. LIMITED

(Incorporated under the laws of the Province of Ontario)

Head Office - Toronto, Canada

Capital Stock, Issued and Fully Paid Up
Preferred (7% Cumulative) - \$2,500,000
Common - - - - - \$2,500,000
\$5,000,000

THE COMPANY HAS NO BONDS ISSUED OR AUTHORIZED.

GUARDIAN TRUST COMPANY, Limited

In prepared to receive subscriptions for \$2,000,000 of the above seven per cent. cumulative preferred stock at the price of \$100 for each share, with a bonus of common stock equal in par value to 25 per cent. of the par value of the preferred stock allotted, to be delivered on payment of subscription in full. The dividends on the preferred stock accrue from April 5th, 1910.

Subscriptions will be payable as follows:
10 per cent. on application and 90 per cent. on Allotment.
100 per cent. or
In instalments as follows, in which case interest at the rate of 6 per cent. will be charged:
10 per cent. on application.
15 per cent. on Allotment.
25 per cent. on 1st June, 1910.
25 per cent. on 1st July, 1910, and 25 per cent. on 1st August, 1910.
100 per cent.

The right is reserved to allot only such subscriptions and for such amounts as may be approved and to close the subscription books without notice. This Application will be made for the listing of the securities of the Company on the Toronto Stock Exchange.
The subscription list was opened at the office of the Guardian Trust Company, Ltd., Toronto, on Monday, April 25th, 1910, and will be closed on or before Monday, the 9th day of May, 1910, at 3 p.m.

BANKERS OF COMPANY

Imperial Bank of Canada and Bank of Montreal

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D. C. CAMERON, Winnipeg, President.
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JOHN CARIBICK, Toronto, Secretary The Maple Leaf Flour Mills Company, Limited.
CHARLES W. HAND, Toronto, Vice-President James Carruthers Company, Limited, Grain Exporters.

SECURITY AND EARNING POWER

The assets of the old Companies taken over as above stated stand in excess of \$3,752,411, this amount being ascertained on the basis of an appraisal by the Canadian American Appraisal Company, Limited, as of March 17th, 1910, of the capital assets taken over, and the certificate of Messrs. Price, Waterhouse & Company, as of February 28th, 1910, as to current assets and current liabilities with a liberal allowance for all contingencies. There has also been placed in addition a 6,000 barrel mill and a million bushel elevator and storage warehouse at Port Colborne, and of fifteen additional elevators. There has also been provided the new company with further working capital.
As per certificate of Messrs. Price, Waterhouse & Co., of London, the earnings of the old company on the present plant amounted from September 25th, 1908, to August 26th, 1909, to \$218,843.38
And from August 21st, 1909, to February 28th, 1910, to \$186,781.29 being for the latter period at a rate equal to over 11 per cent. on the preferred stock of the Company.
Prospectuses and forms of application may be obtained at any branch of the Imperial Bank of Canada or the Royal Bank of Canada, from Guardian Trust Company, Limited, Toronto, and from Cawthra Mulock & Company, Toronto.

Applications for shares should be made upon the form accompanying the prospectus and should be sent together with remittance due on application to

**Any Branch of The Imperial Bank of Canada or the Royal Bank of Canada
Guardian Trust Co., Limited, Toronto
or to Cawthra Mulock & Company
Members Toronto Stock Exchange
Royal Bank Bldg. - - TORONTO, ONT.**

Coming Events

- Auction sale, Alberta Cattle Breeders' Association, Lacombe, June 1, 1910.
- Exhibition, Royal Society of England, Liverpool, England, June 21 to 25, 1910.
- Alberta Provincial Exhibition, Calgary, June 30 to July 7, 1910.
- Portage la Prairie Exhibition, July 11-14, 1910.
- Winnipeg Industrial Exhibition, Winnipeg, July 13-23, 1910.
- Exhibition, Highland and Agricultural Society of England, Dumfries, Scotland, July 19 to 22, 1910.
- Regina, Sask., Provincial, Aug. 2-5, Vancouver, Aug. 15-20.
- Sherbrooke, Que., Great Eastern, Aug. 27-Sept. 3.
- Sherbrooke, Quebec, Pomological Society (summer meeting), Aug. 30-Sept. 1.
- Toronto, Canadian National, Aug. 27-Sept. 12.
- Dominion Exhibition, St. John, N. B., Sept. 5 to 10, 1910.
- Ottawa, Central Canada, Sept. 9-17.
- London, Ont., Western Fair, Sept. 9-17.
- Charlottetown, P. E. I., Provincial, Sept. 20-24.
- Halifax, N. S., Provincial, Sept. 26-6.
- Victoria, B. C., Sept. 27-Oct. 1.
- New Westminster, B. C., Provincial, Oct. 4-8.
- Toronto, Ontario Horticultural, Nov. 15-19.
- London, Eng., Royal Horticultural Show (for colonial-grown fruit and vegetables), Dec. 1-3.
- Maritime Winter air, Amherst, N. S., Dec. 5-8, 1910.
- Exhibition, Smithfield Club, at Royal Agricultural Hall, London, England, Dec. 5 to 9, 1910.

Commission on Control of Tuberculosis

M. H. Reynolds, Secretary.

It seems desirable that the public should be given opportunity to know what the International Commission on Control of Tuberculosis Among Domestic Animals is doing inasmuch as the Commission represents indirectly the Canadian and United States governments, and involves live stock sanitary control work of all of the individual states.

The last session held at Detroit was devoted largely to reports. There were present representatives of Canadian and American breeders, Canadian and United States Departments of Agriculture, American and Canadian veterinarians. The following reported: Committee on Education and Legislation; Committee on Location of Tuberculosis in Cattle; Committee on Dissemination of Tuberculosis; and the Committee on Disposition of Tuberculous Cattle. The Committee on Education and Legislation made a partial report, presenting a critical study of experience of certain states in their efforts to deal with this problem. The purpose of this was to present full information for the Commission concerning mistakes and failures and comparative successes of communities that have undertaken serious work with tuberculosis.

The Committee on Location of Tuberculosis in Cattle presented their report under such headings as "Provision for Notification," "Location by Tuberculin Test," "Location of Infected Herds Through Meat Inspection Service," "Most Important Sources of Animal Tuberculosis."

The Committee on Dissemination of

Bovine Tuberculosis presented its study under such headings as "Introduction of Disease Into the Herd," "Dissemination by Feeding to Calves," "Dissemination by Contact with Healthy Animals in Contaminated Stables," "Dissemination by Transportation of Healthy Animals in Infected Cars," "Dissemination by Pasture." The discussion on this report gave considerable attention to the problem of tracing back from the killing floor to the infected farm with a view to detecting the diseased herds and concentrating control work as much as possible on diseased herds.

The Committee on Disposition of Tuberculous Cattle reported concerning the necessity of accepting tuberculin for diagnosis as a fundamental; the necessity of voluntary co-operation, and the superiority of voluntary co-operation to measures of compulsion. This committee considered the feasibility of the Bang and Ostertag methods of dealing with tuberculous herds under American conditions. It also made recommendations concerning the relation of indemnity to final disposition of carcass; the principle of carcass salvage; the obligatory disposal of all clinical cases; and a study of the conditions which should determine the disposition of reacting cattle.

A very considerable amount of discussion on this report was given to the question

of remuneration for owners and particularly as to whether this should be regarded as a temporary or as a permanent provision in tuberculosis control work. A number of members held that it must necessarily be considered as a useful preliminary and temporary measure.

Careful consideration was given to the possibility of making either the Ostertag or Bang method of dealing with tuberculosis in the herd, or a

In the case of an ordinary, healthy tree it is certainly best, but at injured places, such as before mentioned, it is advisable to scrape gently, if at all. On an old tree you cannot apply enough pressure with a short-handled hoe or 'L'-scraper to do any injury, and you will remove many insect pests, such as codling moth, woolly aphis and certain hibernating creatures, and exterminate insects and other pests to the action of the weather and of the



We Are Thankful That Farms Like This are the Exception, Not the Rule

It is dark, damp stable, like this one that develop tuberculous cattle. Practically all of our barns are capable of being greatly improved in this matter of light and ventilation; in fact they are in urgent need of such improvements. How about your stable?

combination of the two feasible in America and Canada for grade herds. This is along the line of finding some method more economical than slaughter for as many herds as possibly to be.

The next meeting of this International meeting will be held in Ottawa.

insecticides which you will doubtless apply before the leaves appear.

Have you forgotten to renew your subscription to Farm and Dairy?

BICKMORE'S GALL CURE

Be sure and work the horse

like Bickmore's Gall Cure for common horse ailments. Don't try unknown remedies. Bickmore's Gall Cure is standard everywhere. Cures galls, sores, cuts, wounds, grass head, everywhere by local dealers who are directed to relay your money if it fails. Send direct for trial free, enclosing 2c postage.

Wingate Chemical Company, Ltd.,
844 Notre Dame St. W., Montreal, Can.

Amatite ROOFING

A Frank Statement

HOW many manufacturers of ready roofing will tell you frankly how their goods are made?

Mighty few.

They will talk about "secret formulas," "special waterproofing compounds," etc.—all nonsense.

They don't tell you what the goods are made of because they don't dare.

From the start we have never hesitated to tell the buying public just what Amatite is made of and just what it will do.

How Amatite is Made

Amatite is made of two layers of *Caul Tur Pitch*—the greatest water-proofing material known.

Alternating with these two layers of pitch are two layers of coal-tar-saturated wool jute to give it tensile strength.

On top of these four layers is a real mineral surface—five layers of protection.

The mineral surface is permanent, fireproof, and absolutely requires no painting.

It Needs No Painting

Roofings that require painting are a worry and an expense. Every year or two you have to climb up and give them a coating with some special compound sold by the manufacturers, or you are pretty sure to have a leaky roof.



Amatite on Lumber sheds of B. F. Harris & Sons, Brantford, N. Y.

Amatite is Making Good

We are constantly receiving letters from customers telling us how satisfied they are with Amatite—how much better it is than the old-fashioned roofing.

Year after year, in all weather, Amatite will give perfect service without any painting or attention of any kind.

Surely this is the kind of service that wins and keeps customers.

Free Sample

Before you go to your dealer and buy a roofing, we should be very glad to send you a sample, so that you can see for yourself just what we are talking about—what a solid, substantial, reliable roofing we are offering to the public.

Something Back of It

Remember, in this connection, that Amatite is made by the largest manufacturers of roofing materials in the world, and that when you buy this roofing there is something behind it. We stand back of every roll. We know we are offering the best and the most economical ready roofing on the market.

For the sample and booklet address our nearest office.

THE PATERSON MANUFACTURING COMPANY, LTD.
Toronto, Montreal, Winnipeg, Vancouver.

Widening Field of Instruction in Saskatchewan

W. A. Wilson, Supt. of Dairying.

The importance and value of the dairy industry of Saskatchewan together with the growth of the work during the past few years, has made it necessary for the dairy branch of the Department of Agriculture to widen the field of instruction to meet the requirements of the trade's growth and demands. Mr. L. A. Zufelt, Chesterville, Ontario, who has been instructor in butter making at the Kingston dairy school, has been secured for the coming season as creamery instructor in Saskatchewan.

Mr. Zufelt has been for many years associated with the dairy work in Eastern Ontario and is a man of known ability. With his experience and qualifications he will be able to render valuable assistance to the creamery managers and their patrons.

Scraping Bark from Trees

In reply to a correspondent who asks in regard to the advisability of scraping rough or shaggy bark from apple trees, State Entomologist H. A. Surface of Pennsylvania says:

This depends upon the conditions in general. I would advise such treatment, especially where it is rough, scaly bark of old trees; but if it be bark that has been roughened by the injurious action of oil sprays, or by burning with fire or by some other injury, I can assure you that I am satisfied it would be wrong to scrape off such bark, because it is to the tender bark beneath just what a scab is to a sore which it is protecting. Therefore, if the bark beneath be tender, so that it would be injured by being scraped, it is not best to do it.

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Who Will Be the New Principal

(Continued from Page 4.)

Meal, Cowspea Hay and Wheat Bran for the Silo. Increasing the Yield of Corn, etc.; and bulletins for the U. S. Department of Agriculture on The Comformation of Beef and Dairy Cattle, and Silage and Silo Construction for the South. Numerous articles were also furnished to the leading agricultural papers of the country, and many important lectures and addresses were made during this period before agricultural and other scientific organizations, such as the Illinois Breeders' Association and the Minnesota Stock Breeders' Association. The work done by President Soule on the improvement of winter wheat and in determining the efficiency of silage in the nutrition of beef and dairy cattle is recognized as a "Standard" throughout the country, the work done since in these departments bearing testimony to both the excellence and comprehensive nature of the original investigations inaugurated under his direction.

ANOTHER HONOR.

The excellence of the work done at the University of Tennessee resulted in President Soule being appointed a collaborator of the U. S. Department of Agriculture and organizing some of the first co-operative work which the Bureau of Plant Industry undertook with the state stations. This work has now grown to immense proportions. The Eastern Tennessee farmers' Convention was revived while he was secretary and made one of the most influential organizations in the country. It soon achieved a national reputation and was attended by as many as 3,000 farmers at one time. The first dairy school in the south and among the first short courses in agriculture were organized in connection with the University of Tennessee while the University farm was brought under a systematic method of crop production.

President Soule was one of the jurors on the International Jury of Awards at the Louisiana Purchase Exposition, and was appointed a member of the Tennessee State Commission by Governor Francis Pickens while through his efforts that a large number of awards thereon were secured by the state of Tennessee.

PRESIDENT OF THE VIRGINIA COLLEGE.

In 1904 President Soule was elected Dean of the College of Agriculture and Director of the Experiment Station of the Virginia Agricultural Institute. During the three years of his incumbency he reorganized the Experiment Station; established a department of field experiments covering an area of 60 acres; inaugurated experiments in feeding beef and dairy cattle and hogs, and conducted among the first comprehensive tests to determine the relative cost of finishing beef cattle in the stall and on grass.

In the experimental field a strain of barley was discovered and disseminated which is of superior merit and is now being extensively cultivated. Special buildings and equipment were secured through the legislature for the College of Agriculture, and new barns erected on the farm. The course of instruction in the College was reorganized, and the first appropriation was secured from the state for the establishment of tobacco substations. Through his efforts a truck station was established in Norfolk, Va., the only one of its kind in the United States. He organized the Virginia State Farmers' Institute, which at one time had a membership of over 1,000 and its annual meetings were attended by more than 1,200 farmers.

POPULAR WITH FARMERS.

President Soule has been wonderfully successful in getting in touch with the farmers wherever he has been, organizing them effectively, redirect-

ing their efforts and stimulating their interest in agricultural education. Through their aid he has been successful in securing large sums of money for the equipment of the institutions with which he has been connected and the promotion of agricultural education and research in general. The efficiency of the work done in Virginia is witnessed by the fact that while the best received calls to Pennsylvania and Texas as Dean and Director.

VALUABLE WORKS.

Among the bulletins that were issued while President Soule was connected with the Virginia station are the following: The Inoculation and Cultivation of Alfalfa; Gluten and Cotton Seed Meal with Silage, Hay and Stover for Dairy Cows; Silage, Hay and Stover in Beef Making; Stall Feeding Versus Grazing; The Improvement of Corn; Corn and Various Amendments as Food for Hogs; Experiments with Oats, Millet and Various Legumes; Protein Requirements for Dairy Cows; Studies in Milk and Butter Production; Finishing Beef Cattle; The Cultivation of Potatoes in Georgia. From the State Department of Agriculture for the Corn Growing in Virginia and Cattle Raising in Virginia.

In 1907 President, then Professor, Soule was called to Georgia to become President of the State College of Agriculture and the Mechanic Arts. Since that time the largest, handsomest and best equipped building for instruction in agriculture in the south has been erected. Fifteen specialists are now employed in the College of Agriculture and while the attendance of students in the institution as a whole has more than doubled.

President Soule operated the first educational train to make a complete tour of a southern state. This train was out five weeks, made more than 150 stops, and visited by 150,000 people. It gave a new impulse to educational activities in the state, which resulted not only in the liberal extension of the College of Agriculture but other institutions as well. The tour of the train resulted in the farmers' institutes being reorganized and greatly magnified, and in the establishment of an extension department employing five men as an agency under the direction of the College for the dissemination of agricultural knowledge to farmers who cannot attend in institution.

Consistent work has also been done in encouraging the teaching of agriculture in the secondary and common schools, and to this end extension schools are now being organized in cooperation with the state and county school commissioners. A correspondence bureau constitutes a feature of the College work. The interest in the activities of the College is evidenced by the fact that more than 60,000 farmers were reached last year, and it is hoped to increase the number to 100,000 this year. The pioneering efforts of the College in extension work in the south and in the organization of a demonstration field and a department of cotton industry are attracting national attention. This is evidenced by the fact that President Soule was recently offered the position of Dean and Director of the University of Minnesota, which is regarded as one of the oldest and best organized institutions of its kind in the United States.

PRESIDENT SOULE'S PERSONALITY.

As may be judged from his record, President Soule has a strong personality. He is an enthusiastic believer in education and the essential relation which scientific investigations bear to the preservation of the natural resources of a country and the conservation of its interests and its people. He believes intensely in agricultural education and feels that it is destined in the future to play a much more important part in the success of the civilized nations than it has in the past.

Our readers will see that few men have had a wider experience in the field of education and research. The opportunity he has had to associate with the people of several states and to assimilate their point of view has broadened his conception of things and better equipped him for public work.

President Soule has not yet reached the prime of life. When we spent parts of two days with him two years ago we found that he was full of enthusiasm, energy and aggressiveness and that he viewed the future with rare optimism. It is not surprising, therefore, that at the end of 16 years more than a national reputation in the field in which he has labored so assiduously. He is full of big plans for

the future and proud of the great opportunities that we Canadians possess. Given the opportunity and financial support needed, there is no way of reckoning what might be accomplished by one possessed of his executive capacity, fluency as a speaker and writer and ability to organize and lead men should he be offered and accept the principalship of Macdonald College.

The roughage for calves should first be fed at two or three weeks of age when the calf begins to eat grain. Good clean hay, either timothy, blue grass, clover or alfalfa may be used. Corn silage is an excellent calf feed when fed in moderate amounts. Good pasture is an essential after four to six months.



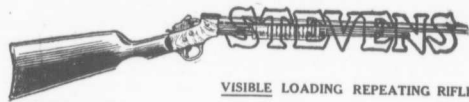
Kill Off The Crop Thieves and Poultry Pilferers

GOPHERS
WEASELS
RABBITS

HAWKS
CROWS
SKUNKS

WOOD CHUCKS
BEE JAYS
PARROWS

A big family of farm pests. The four-tooters outrun your dogs—the others laugh at your scare-crows. But there's one thing they can't get away from and that is a bullet fired from a



VISIBLE LOADING REPEATING RIFLE

Made by the makers of the famous Stevens Favorite single shot rifle. More Stevens sold because they shoot straighter, are lighter, farther and hit harder on account of the extreme care used in our system of accurate rifling.

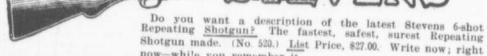
If your dealer hasn't it, let us hear from you at once. List price \$8.00. Ask for Number 70.

With this wonderfully accurate Rifle (which only weighs 4½ pounds) you can send a hail storm of lead into the boldest snarl or the craftiest fox that ever robbed a hen coop.

Two models: The first takes fifteen .22 Short cartridges only. The second takes any one of three cartridges—22 Short, 22 Long and 22 Long Rifle, but the greatest accuracy is obtained in this model by using only 22 Long Rifle cartridges.

You see the cartridge go into the chamber—you know when the rifle is loaded. You don't have to think whether you have an extra shot or not. Each cartridge as it comes out of the magazine shows plainly before it passes along into the chamber.

We guarantee this rifle to be the most accurate .22 Calibre Repeater in the world. After the first shot remember that you have fourteen more lightning shots without reloading.



Do you want a description of the latest Stevens Shot Repeating Shotgun? The fastest, safest, surest Repeating Shotgun made. (No. 53.) List Price, \$27.00. Write now; right now—while you remember it.

POINTS FOR THE SHARPSHOOTER, HUNTER AND TRAPSHOOTER.

We will give you short cuts to expert marksmanship, which will not only make you a better shot than you already are but will reduce your ammunition expense.

J. STEVENS ARMS & TOOL COMPANY, Dept. 565, CHICOPEE FALLS, MASS.

THE FACTORY OF PRECISION

LIST PRICE OF STEVENS RIFLES

Little Scout, No. 14	.....	\$2.25
Stevens-Maynard Jr., No. 15	.....	3.00
Crack Shot No. 16	.....	4.00
(For Young Shooters. Accurate and made for real work.)	.....	5.00
Favorite No. 17 (The Only Boy's Rifle made by Men)	.....	8.00
Visible Loader, No. 70	.....	8.00
Ideal Rifle No. 71 (Man's heavy Single Shot Rifle.)	.....	10.00

OUR FARMERS' CLUB Contributions Invited.

NOVA SCOTIA

ANTIGNONISH—Clover has come through the winter in good shape. Farmers are taking more care than usual in selecting and cleaning their seed grain and are sowing more clover than ever before. Mr. Brunswick, has been holding a series of meetings throughout the county. Owing to a drop in the price of milk, and the failure of the milk condensing company, a large number of farmers are buying sheep and keeping to grow pigs to consume the skim milk. Potatoes—Tom Brown is selling for 60c a bushel—Tom Brown.

ONTARIO

GRENVILLE CO., ONT.

PRESCOTT—Some farmers who are short of feed have their young stock out to pasture. The pastures look good. Clover and alfalfa fields look very promising on high fields. Hay sells for \$15 to \$17, ton; eggs, 16c to 19c a dozen; butter, 50c to 55c a lb; potatoes, 15c to 20c a bush; beef, 6c; dressed hogs, 12 1/2c a lb; hides, 8c—G. W. C.

HASTINGS CO., ONT.

SIDNEY CROSSING.—Feed is holding out fine. Cows are looking well and stock heavy rains have we fear hurt a lot of blossoms are just beginning to harden upon and are very abundant. Pasture is in excellent condition. Wheat, clover and meadows generally are fine. Timothy hay is selling at \$15 to \$16 a ton; oats, 45c; corn, \$23; eggs, 18c and 19c; butter, 50c to 55c; potatoes, 40c to 50c a bag; hogs, \$9.20 a cwt.—J. K.

PETERBORO CO., ONT.

GALWAY—Spring is about a month earlier this year than it was two years ago. Grass and clover are further advanced than they were on the middle of May last year. Cattle, instead of feeding in the barnyard, are making use of feeding in the helping those out that would otherwise be short of feed. Farmers are feeding potatoes at any price. Farmers are feeding quite scarce. Hay is selling at \$16 and oats at 35c. Seeding is well under way and will probably be finished about the first of May.—C. C.

DURHAM CO., ONT.

BETHANY—Feed is more plentiful than was expected during the fore part of the winter. Cattle as a rule are in fair condition and high in price. Hogs are very few and have reached the price of nearly \$10 a cwt. Fall grain has wintered well and shows prospects of a good crop. Grass and clover have done remarkably well considering it's condition last fall. It is making a rapid growth.—W. M.

WESTWORTH CO., ONT.

KIRKWALL.—The spring seeding is nearly finished, and farmers are now preparing their corn and root ground. There is but very little growth as yet, but because the pasture is rather short, but most farmers have fed enough to last until the grass gets a good length. All farm products are selling for high prices except potatoes, which are only worth from 50c to 55c a bag. Most of the fat cattle are sold, the price being 7c a lb for choice. Horses are very high. One man sold a fine young team for \$500. They are somewhat lower, being only about \$8.65 a cwt. Butter, 50c a lb; eggs, 20c a doz. The cheese and butter factory will start May 15.—W. C.

OXFORD CO., ONT.

NORWICH—Nearly everyone is through splendidly and fall wheat are doing condition, and growing very fast. Hay has dropped a couple of dollars a ton, and hay has hogs are down to \$8.75 a cwt. Oat sell for 35c; wheat, \$1; bran \$22; middlings, \$23.50; gluten meal, \$24; linseed meal, \$36; eggs, 20c; potatoes, 50c—J. McK.

ELGIN CO., ONT.

TALBOURVILLE—Seeding is all done; it was well put in. Preparations are now well advanced for corn and other hoe crops. The wheat and clover wintered well, and both display an unusual advancement for so early in the season. Long stretches of wire fences are being put up on many farms, while the local dealers in

codar poles wear a happy smile. Milk is already going to the cheese factories, and expectations are pointing to a first class season.—E. O. C.

MIDDLESEX CO., ONT.

On Archie Thompson's farm the writer saw a fine spruce wind break about 20 rods long. The owner said: "Twenty years ago, I brought all these trees home in a feet ball, and now look at them, 40 and 50 feet in my orchard. I would recommend an abundant planting of spruce, but plant them only in well prepared ground. Use a summer-fallowing mine one year, before setting the trees out permanently, and use a fine orchard, and has just purchased an up-to-date sprayer. When asked how he liked the telephone, he said, "Fine, and in one deal, in selling my apples, I saved enough to pay for my complete telephone outfit."—E. O. C.

BRITISH COLUMBIA

NEW WESTMINSTER CO., N. B.

MUNRO.—Seeding is going on and from the prospects of the weather the most of the April. Sheep are staying on at night. Pasture is good. Potatoes are selling at from \$15 to \$17 a ton, and could not be gotten at that. Fruit trees are out in blossom and give promise of a bounteous crop. Sheep are looking better, on account of better herbage and sunny days.—J. C.

GOSSIP

The official announcement of the organization of the Maple Leaf Milling Company Limited, indicates that Ontario is coming into its own in the milling industry. This company, besides having five of its six mills situated within the Province, will have a total daily capacity almost equal to that of any of the other corn mills operating in Canada. Prominent Toronto interests are identified with the organization of the new company, along with the interests who have been for some years past behind both the Maple Leaf Flour Mills Company Limited, and the Hedley Shaw Milling Company Limited.

I like "Farm and Dairy" fine, so enclosed you will find my renewal subscription—Richard Harris, Wellington Co., Ont.

LIVE HOGS

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

THIS WEEK'S PRICES FOR HOGS DELIVERED AT FACTORY \$9.00 a Cwt. FOR HOGS WEIGHING 160 TO 220 LBS. THE GEO. MATTHEWS CO., LIMITED PETERBOROUGH, - HULL, - BRANTFORD

AYRSHIRE NEWS

Farm and Dairy is the official organ of the Canadian Ayrshire Breeders' Association, all of whose Members of the Association are invited to send items of interest to this column.

MORE AYRSHIRES FOR CANADA

Editor, Farm and Dairy.—The clipping given below and which is taken from the Scottish Farmer, April 16, refers I believe to the importation recently made by Robert Hunter & Sons, Maxwell, Ont. These cattle have recently landed in quarantine. One of the junior members of this firm, Mr. William Hunter, took to himself a fair companion, a Scottish lassie, when on the other side of the water. Ayrshire men in Canada will all join in wishing Mr. Hunter many congratulations and his fair Canada—W. F. Sheldon, Secretary-Treasurer, Ayrshire Breeders' Association, Huntington, Que.

PEDIGREE AYRSHIRES FOR CANADA

The merits of the Ayrshire breed of cattle are at length being fully appreciated

In the colonies and in other parts of the world. During recent weeks we have recorded some important transactions as a further list of animals of the great Scottish breed of dairy cattle which have been purchased at long prices to augment and improve the herds in the Dominion of Canada.

From the famous herd of Mr. Wallace Auchenbrunn, four animals have been obtained. One of them is a grand five-year-old cow, sired by Spicy Robin, and showing much promise of making a great dairy youngster. Her heifer calf, a very promising one, was also paired with, as well cow, in milk. The latter is sired by a cow, sired by Spicy Robin, and gives every prospect of making a grand milk cow, an exceptionally good, thick, bull calf was selected. He is sired by Lassnessock Good brain. The dam of this calf is a well-made three year old out of the famous cow long price. Castlemains, New Cumnooch, yearling heifer. The former has a grand udder, with large teats. She belongs to the Sweet Maria strain, members of which have already done well in Canada. The yearling is a grand example of the Violet family, and should maintain its reputation.

(Continued on page 30)

PAROID ROOFING



David Harum knew the horse business, but even David himself could never have sold you a horse on his mere say-so. You'd want to see the horse—want positive evidence of his "good points" before you'd pass over a dollar. Good horse-sense too!



Why not use common-sense and caution when it comes to buying roofing? A roof costs money. It takes time and money to apply it whether it is good, bad or indifferent. And a bad or indifferent roof will cost you a Wear is told by actual duration—not fanciful claims and slyly-worded guarantees. That's exactly why you should insist on Paroid Roofing. More than likely your dealer can show you a Paroid Roof, or tell you where you can see one. Send us your name and address and we'll tell you where you can see a Paroid Roof if your dealer can't show you one. Paroid Roofing is one of the famous Neponset Products. The "Little Girl" Trade Neponset Product or refund your money if it proves defective in manufacture. Look for the "Little Girl" Trade Mark.

N.B.—Write to our Building Commission Department for free information concerning any building specimen you have to solve. Give full particulars and state dimensions. Write for copies of Neponset Products and we will give you name and address of your nearest dealer. F. W. BIRD & SON, 500 Ledridge Street HAMILTON, ONT. Western Branch—123 Bannatyne St. E., Winnipeg. Eastern Branch—144 Union St., St. John, N.B.

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MARKET REVIEW AND FORECAST

Toronto, Monday, May 2nd, 1910.—In the midst of an unexampled era of prosperity there are not wanting a class of people called "croakers" who try to predict all sorts of upheaval and disaster. That there are many thoughtful persons in undeniable, predicting a financial tempest, is undeniable. There are two factors on which they base their belief. One is the curious position in which the late crisis has placed the Bank of England in regard to Treasury bonds, on which it has been lending money to the government, ostensibly without sufficient security, and which is the solid speculation in rubber that has taken possession of the people of that country. Prophecies do not always turn out correct so Canadians can afford to meet the matter with equanimity, especially in view of the fact that our own trade at home and in foreign markets is increasing by leaps and bounds. The Bank of England rate is unchanged, at 4 per cent. Call money in Toronto rules at 5 1/2 to 6 per cent.

WHEAT

The bulls have not succeeded in their efforts to tighten the market by alarmist reports of fresh damage to the southern crops through frost. The accounts have been much exaggerated and prices in Europe and at the chief centres in America have weakened. In Chicago, May was quoted at last advices at 81.05%; July, at 81.05%, and September at 79%. On the local market Manitoba wheat is quoted at 1 1/2 to a bushel lower than last week. No. 1 Northern, is quoted at \$1.04; No. 2, Northern, at \$1.02, late sowing; Ontario mixed winter wheat, No. 2, \$1.04 to \$1.05 outside. On the farmers' market, fall wheat is quoted at \$1.06 to \$1.07, and good wheat at \$1.02 to \$1.03.

COARSE GRAINS

The decline in some of the outside markets has had its effect, and whilst trade is dull, prices are unchanged, with the exception of oats which are quoted lower than last week. Prices on the local market are: American corn, 55c to 57c; Canadian, 56c to 58c; Canada No. 1, 56c to 58c; No. 2, 56c to 58c; lake ports; Ontario, No. 2, 56c to 58c; No. 3, 34c to 36c, outside; peas, 75c; barley, 52c to 54c, according to quality; rye, 68c; buckwheat, 61c bushel. On the farmers' market, oats are 41c to 42c; peas, 75c; barley, 55c; rye, 68c; buckwheat, 56c to 57c a bushel.

HAY AND STRAW

Although hay is still selling at a good figure, notwithstanding the anxiety of many farmers to get their surplus stock out of hand, mainly owing to the fact that

American buyers are still busily purchasing for the late season, it can only be a matter of a few days before prices begin to tumble. On the Toronto farmers' market, good No. 1 hay finds ready purchasers at \$3.20 to \$3.25, clover mixed at \$3.14 to \$3.16 a ton; straw remains nominal at \$7.50 to \$8 a ton.

In Montreal, good Timothy is selling at \$15 to \$15.50; and clover mixed at \$12 to \$12.50 a ton. Quotations for haled straw remain unchanged at \$5 to \$5.50 a ton.

MILL FEEDS

Owing to the coming on of the pasture, millfeeds are declining slightly in price. On the local market, Manitoba bran is quoted at \$19 a ton; shorts \$22 a ton, on track, Toronto, Ontario bran, \$20 a ton; shorts, \$22 a ton on track, Toronto.

In Montreal prices have also lowered somewhat, Manitoba bran being quoted at \$19 to \$20; shorts, \$21 to \$22; Ontario bran, \$20 to \$21; shorts, \$21 to \$22 a ton.

EGGS AND POULTRY

Prices in eggs remain unchanged, although heavy supplies are daily coming into the market. Many cases find their

Ad. Sold His Bull

I received four answers to my advertisement published recently in "Farm and Dairy" offering my bull for sale. I have sold him to one of the enquirers. One letter came all the way from Capt. Edward Island—Samuel Armstrong, Peterboro Co., Ont.

way to cold storage. Dealers quote them at 20c to 21c a dozen in case lots. On the farmers' market eggs are quoted at 22c to 24c a doz.

Montreal advices tell practically the same tale as in Toronto. Supplies, although heavy, are not too much so for the moment, and prices are well maintained. Strictly new laid eggs are selling at 19c to 20c a dozen in case lots. The poultry market shows no change, and last week's figures stand for the various classes.

POTATOES AND BEANS

Potatoes seem to be the only commodity for which the farming community cannot establish a paying price. The tremendous crop of last season has tended to lower the prices beyond all precedent, and many seem to be willing now to get rid of what surplus they hold at almost any figure.

On the local market, Ontario are selling 25c to 35c a bushel and 40c a bag on track and at 45c to 50c out of store. Delaware are fetching a better figure, at 45c to 50c a bag on track, and 60c out of store.

In Montreal, Green Mountains have been offered at the ridiculously small price of 20c to 35c a bushel. The trend to lower them nominally at 40c a bag on track (average).

The price for beans on the Toronto market remains unaltered, being \$2 to \$2.10 a bushel for primes and \$2.15 to \$2.25 for three pound pickers.

In Montreal beans are quoted at \$1.90 a bushel, with seemingly no demand.

HIDES

Local quotations for hides are as follows: Inspected steer and cow hides, No. 1, 11 1/2c a lb; No. 2, 10 1/2c a lb; calf skins, 13c to 15c a lb; horse hides at country points, 22c to 23c; sheepskins, \$1.20 to \$1.30 each a horse hair, 5c a lb; tallow, 9 1/2c to 6c a lb.

Montreal prices are as follows: Choice beef hides, 13c to 15c a lb; cow hides, 10c to 11c, according to quality; sheepskins, \$1.40 each.

SEEDS

The following are retail prices for seeds in Toronto: Timothy, \$2.50 to \$3.50 a bushel, according to quality; choice red clover, \$3.50 to \$4.50; alfalfa, No. 2, quality, \$9 to \$9.50; alfalfa, No. 1, \$8.50 to \$9.50; No. 2, \$7.50 to \$8.50; alfalfa, \$14 to \$15 a bushel.

DAIRY PRODUCTS

The outlook for the dairyman farmer and for all engaged in the dairying industry is of the brightest description. Not only has the dairyman been favoured by the good conditioning of cattle, enabling them to get on the pastures in the best

of shape, but the small stock of butter and cheese on hand, and the continuing flood of supplies, however abundant, sufficiently high in price to afford a substantial profit to the manufacturers. Canadian cheese notwithstanding the complaints that are occasionally heard from English importers, still finds high favour in English markets, and there is at the least doubt but that with the adoption of the improved methods which are being urged upon the industry by our alert government officials, the commanding position of Canadian cheese holds in the butter and cheese markets of the world, will be preserved. The market for butter, Toronto is steady, a heavy demand helping to maintain good prices. Creamery prints are 12c to 23c a lb; dairy, 24c to 25c; separator prints, 25c to 26c; and inferior quality, 15c to 20c a lb. On the farmers' market choice dairy butter is quoted at 25c to 35c a lb, and ordinary quality at 20c to 25c a lb.

New cheese is coming in and prices rule at 15c a lb for large and 13 1/2c a lb for twin.

In Montreal consignments of butter are coming in in fairly large quantities, and the demand is greater than the supply. Fresh creamery butter is quoted at 20c to 30c a lb.

Cheese is selling at 11 1/2c to 12c a lb for new, and 10c to 10 1/2c for old.

HORSE MARKET.

The rush of spring work has found many farmers with few employees, and a' hands for purposes of agriculture, and although good prices are still being offered by western buyers, the market seems to be to a large extent knocked out of the market. The following prices have been ruling during the past week: Heavy draught horses, \$190 to \$240; agricultural horses, \$175 to \$200; drivers, \$125 to \$250; express cobs, \$175 to \$225; serviceably sound horses, \$80 to \$100.

LIVE STOCK

Receipts of cattle has been heavy during the past week and contrary to expectations, prices are showing signs of decline. The true test of not only the local market, but of the live stock centres across the border.

The reason for this is not very obvious at present, as supposing the possibility of a large increase in numbers since the market took an upward trend there still remains the important fact that such animals having arrived at the right maturity for butchering purposes. Possibly the great fall-off in the consumption of meat throughout both countries may be the chief factor in the decline. Whether or not that decline is going to be permanent it is impossible to say.

Export buyers for United States dealers state that quotations for butcher cattle are all grades are 25c cheaper a cwt. than there is every other commodity, and that there is every probability of further reductions. Choice steers and heifers fetched prices ranging from \$6.50 to \$7, in a lot instance, the highest as \$7.25 or \$7.50, and butcher cattle ranged from \$5.75 to \$6.40 a cwt. Milkers and springers were in great demand and realized excellent prices. Hogs have declined in price from last week's quotations.

The following quotations ruled at the end of last week: Choice beef cattle—medium, \$5.50 to \$6.25; ordinary quality, \$5 to \$5.50.

Butchers' cattle—Choice, \$6.50 to \$7.25; medium, \$5 to \$6.50; ordinary, \$5 to \$6.

Feders—\$3.50 to \$5.65, according to quality.

Stokers—\$3 to \$5.25; canners, \$3 to \$3.50. Milch cows—\$45 to \$70; springers, \$40 to \$60; calves \$17 to \$20.

Sheep—Ewes, \$6 to \$7; bucks, \$5 to \$6; yearling lambs, \$8 to \$9.50 a cwt., according to quality; spring lambs, \$5 to \$8 each.

Hogs—f.o.b., \$4.65; fed and watered, \$5.30 a cwt.

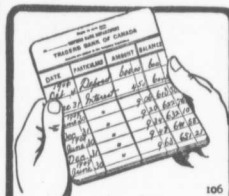
The Trade Bulletin's London correspondent cables that the market for Canadian bacon has been firm up, Canadian bacon being quoted at 65c to 69c.

PETERBORO HOG MARKET

Peterboro, Monday, May 2.—Danish hogs delivered on the English markets last week totalled 37,000. The demand for bacon in the Old Country is increasing, and George Matthews Co. quote the following prices for this week's shipments: f.o.b. country points, \$2.75 a cwt; weighed off cars, \$9.5 a cwt; delivered at abattoir, \$9 a cwt.

MONTREAL HOG MARKET

Montreal, Saturday, April 30th.—The market for live hogs opened with a weaker feeling this week, and prices declined 30c a cwt. in the face of the increased receipts, which were rather more than could



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THE TRADERS BANK OF CANADA

Capital & Surplus over \$6,550,000

be conveniently handled at the prices current last week. Selected lots sold at from \$10 to \$10.15 a cwt., weighed off cars.

Dressed hogs were also weaker in tone, and quotations were reduced to \$13.50 a cwt. for fresh killed abattoir stock. There was a fair trade done at these figures.

EXPORT BUTTER AND CHEESE

Montreal, Saturday, April 30th.—The market for cheese this week is closing with a decidedly better tone, and orders from the other side are coming in more freely at the prices now current. There is sufficient demand to warrant the belief that prices will not go below 11c in the country for a week or two or at least until the make increases to such an extent that the supply will be more than equal to the demand. The trader, however, is looking for a steadily increasing demand from now on and there is not likely to be any great fall in prices for some time.

Prices in the country this week ranged all the way from 11 1/2c down to 11c. In most cases colored cheeses were at a discount and buyers would not touch them unless at about 5c per lb. under white, based at Pictou the entire offering on the other side was colored, sold at 11 1/2c. There may be a slight premium paid for white again next week, but after that both sides of cheese should be at a par.

The receipts are increasing steadily, the total for the week being 5,104 boxes, as compared with 3,589 boxes for the corresponding week last year. This is a substantial increase and indicates to some extent how far we are ahead of last year owing to the early start of the navigation from Montreal opens next week, and the shipment of cheese will begin. The trade is looking forward to a bumper year, and as stocks on the other side are almost exhausted, the importers are prepared to handle all we can send them.

The marketmen were firm, and prices have been steadily maintained throughout the week. We are closing with the market bare of stock, everything having been taken up at full prices. Country markets have ranged all the way from 20c to 30c, quotations in Montreal ranging from 30c to 31c, according to quality.

The receipts for the week amount to

QUESTIONS AND ANSWERS ON BUTTERMAKING

By CHAS. A. PULBOW, A.B., M.D., C.M., Assistant Professor of Dairy Industry in the New York State College of Agriculture at Cornell University.

This book is entirely different from the usual type of dairy book, and is undoubtedly in a class by itself. The entire subject of buttermaking in all its branches has been most thoroughly treated, and many new and important features have been added. The tests for moisture, salt and acid have received special attention, as have also the questions on cream separation, pasteurization, commercial standards, ripening, cream overrunning, marketing of butter, and creamery management. The arrangement of the contents in the form of questions and answers, makes the book especially valuable. Practical buttermakers, short course students and all persons interested in buttermaking, will find in this book a way to prepare themselves for civil service examinations, and will find a most useful help in the questions and answers contained therein.

The book is certainly one of the most useful contributions to dairy literature in recent years.

Illustrated, 5 x 7 inches, 100 pages. Cloth, 50 cents, postpaid.

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BULLS! BULLS! BULLS!

A less than half their value for the next 30 days. Write

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SPECIAL OFFERING

Full one year old, Dam Jessie Bewande... Price \$110 for immediate sale.

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OFFERS A GREAT BULL, Duchland Sir... Price \$100 for immediate sale.

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Count Hengerveld Fayne De Kol heards the herd... Price \$100 for immediate sale.

E. F. OSLER, Bronte, Ont.

GLENSPRINGS HOLSTEINS

Several fine young bull calves from A.R.O. and E.O.P. cows now on hand... Price according to value as producers.

E. B. MALLORY, Frankfont, Ont.

RIVERVIEW HERD

FOR SALE, 3 Bull Calves, sired by Sir Aggie... Price reasonable considering breeding.

P. J. BALLEE, Lachine Rapids, Que.

THE SUMMER HILL HEAD OF HOLSTEINS

Is making some wonderful records. This year it has produced the champion Canadian bred butter cow for 7 days record... Price according to value as producers.

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Vaudreuil, Que. Dr. Harwood, Prop. D. Bolen, Mgr

FOR SALE

An extra good yearling Holstein bull for sale from a 30 lb. sire and a 17 lb. dam... Price \$100 for immediate sale.

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From great milking strains: three bulls both sexes... Price \$100 for immediate sale.

GEORGE ROACH, Abbotsford, Que.

THE EVERGREENS HERD OF HOLSTEINS

Has just passed seven more young cows in record of merit... Price \$100 for immediate sale.

GEO. W. ANDERSON, Rossford, Ont.

LYNDALE HOLSTEINS

We are now offering for sale a 13 mo. old son of 'Count' L. Kol... Price \$100 for immediate sale.

BROWN BROS., LYN, ONT.

NORTH STAR HOLSTEINS FOR SALE

Bulls ready for service, out of high testing A.R.O. dams... Price \$100 for immediate sale.

J. W. STEWART, LYN, ONT.

Ridgedale Holsteins

I have left three bull calves for quick sale... Price \$100 for immediate sale.

R. W. WALKER, Utica, Ont. Phone connection.

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Bull Calves out of A. O. P. cows and others now on test... Price \$100 for immediate sale.

JAS. BEGG, Box 58, St. Thomas, Ont.

SPRINGHILL AYRSHIRES

Imported and home bred stock of all ages for sale... Price \$100 for immediate sale.

ROBT. HUNTER & SONS, Long distance phone, Maxville, Ont. E-7-10

FOR SALE—AYRSHIRE BULLS

From one month to 2 years old; all bred from large good stock... Price \$100 for immediate sale.

DANIEL HATT on to HON. W. OWENS, Manager, Proprietor, 52-919-Riversdale Farm, Montebello, Que.

BURNSIDE AYRSHIRES

Having disposed of my 1899 importation, I intend leaving about March 1st... Price \$100 for immediate sale.

"La Bols de la Roches" Stock Farm, Here are kept the choicest strains of AYRSHIRES... Price \$100 for immediate sale.

HOB. L. J. PROPRIETOR, J. A. BIBEAU, Manager, 5-5-25-10, Ste. Anne de Bellevue, Que.

FOR SALE

Registered Ayrshire Bull, two years old, from extra milking strain... Price \$400.00.

ROBT. PATTERSON, East Belton, Essex Co., Ont.

SUNNYSIDE AYRSHIRES

Imported and home bred... Price \$100 for immediate sale.

J. W. LOGAN, Howick Station, Que. (Phone in house.) 6-5-15-10

2,500 packages, as compared with 3,175 packages last year... Price \$100 for immediate sale.

MORE AYRSHIRES FOR CANADA

(Continued from page 5) One of the other side of the Atlantic... Price \$100 for immediate sale.

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TAMWORTH AND BERSHIRE SWINE... Price \$100 for immediate sale.

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A. A. COLWILL, Box 9, Newcastle, Ont.

NITHSIDE FARM... Price \$100 for immediate sale.

E. E. MARTIN, Cambridge, P.O., Paris Station, Oxford Co., Ont.

FOR SALE... Price \$100 for immediate sale.

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AYRSHIRES STONEHOUSE STOCK FARM

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Ayrshires, Cystedeals, and Yorkshires... Price \$100 for immediate sale.

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such, supplies one big useful two year old, Winter, and out of May... Price \$100 for immediate sale.

AYRSHIRE NEWS

Registrations increased considerably... Price \$100 for immediate sale.

The Press has dealt generously with Ayrshire interests during the year... Price \$100 for immediate sale.

Official Organ—The Farm and Dairy was sent to 354 members... Price \$100 for immediate sale.

Importations were again made by Messrs. Robert Hunter... Price \$100 for immediate sale.

Correspondence has increased far beyond my expectations... Price \$100 for immediate sale.

There is a great future before the Ayrshire breed... Price \$100 for immediate sale.

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HOLSTEIN-FRIESIAN NEWS

Farm and Dairy is the official organ of the Canadian Holstein-Friesian Association. All of its members are readers of the paper. Members of the Association are invited to send items of interest to Holstein breeders for publication in this column.

OFFICIAL RECORDS FOR MARCH, 1910.

(Continued from last week)

Geraldine Netherland Doran 3rd, (3650) at 8 years, 7 months and 5 days of age, butter; 391.86 lbs. milk. Owned by L. H. Lipst, Stratfordville, Ont.

Holvie Pieterz Inka Paul 2nd (15230) at 4 years, 11 months and 23 days of age, butter; 465.2 lbs. milk. Owned by I. N. Howe, Crampton, Ont.

Mina Oreta Korndyk (737) at 4 years, 10 days of age, 12.4 lbs. butter fat, equivalent to 18.92 lbs. butter; 482 lbs. milk. Owned by Rhoda Crowning Shield Colanthe (7618) at 4 years, 8 months and 25 days of age, butter; 486.8 lbs. milk. Owned by Fred Pride of Inka Hill (11673) at 4 years, 5 months and 10 days of age, 5.42 lbs. butter fat, equivalent to 18.64 lbs. butter. Fourteen day record, at 4 years, 5 months and 10 days of age, 29.62 lbs. butter fat, equivalent to 37.62 lbs. butter; 509.7 lbs. milk. Owned by C. Hardy, Brockville, Ont.

Judy Pieterz Maid (622) at 4 years, 5 months and 15 days of age, 14.16 lbs. butter fat, equivalent to 18.98 lbs. butter; 527.6 lbs. milk. Owned by George W. Pallett, Summerville, Ont.

Veltra Triumph De Kol (7851) at 3 years 11 days of age, 17.07 lbs. butter fat, equivalent to 21.34 lbs. butter; 351.4 lbs. milk. Owned by George W. Anderson, Rosmore, Ont.

Vronka B 2nd (6971) at 3 years, 9 months and 15 days of age, 15.65 lbs. butter fat, equivalent to 19.57 lbs. butter; 374.12 lbs. milk. Owned by D. C. Platt & Son, Millgrove, Ont.

Wopke Posch (7406) at 3 years, 11 months and 18 days of age, 14.88 lbs. butter fat, equivalent to 18.60 lbs. butter; 462.8 lbs. milk. Owned by E. Laidlaw & Sons, Aylmer, Ont.

Olive Abbecker Posch 3rd (7526) at 3 years, 11 months and 24 days of age, 14.64 lbs. butter fat, equivalent to 18.30 lbs. butter; 416 lbs. milk. Owned by Elias Snyder, Burgessville, Ont.

Ormsby's Belle (7045) at 3 years, 11 months and 14 days of age, 14.36 lbs. butter fat, equivalent to 18.13 lbs. butter; 374.12 lbs. milk. Owned by D. C. Platt & Son, Millgrove, Ont.

Birdie 2nd's Netherland (8257) at 3 years, 10 months and 24 days of age, 12.18 lbs. butter fat, equivalent to 15.23 lbs. butter; 316.87 lbs. milk. Owned by D. C. Platt & Son, Millgrove, Ont.

Veltra Triumph Edler (6863) at 3 years, 10 months, 5 days of age, 11.96 lbs. butter fat, equivalent to 14.96 lbs. butter; 374.6 lbs. milk. Owned by George W. Anderson, Rosmore, Ont.

Daisy Netherland 2nd (1123) at 3 years, 6 months and 27 days of age, 10.07 lbs. butter fat, equivalent to 12.59 lbs. butter; 340.3 lbs. milk. Owned by L. H. Lipst, Stratfordville, Ont.

Belle De Kol Korndyk (6857) at 2 years, 10 months and 29 days of age, 21.67 lbs. butter fat, equivalent to 27.57 lbs. butter; 389 lbs. milk. Owned by Ford B. Wilts, Athens, Ont.

Veltra Keyes (7952) at 2 years, 11 months and 16 days of age, 14.41 lbs. butter fat, equivalent to 18.02 lbs. butter; 358.7 lbs. milk. Owned by George W. Anderson, Rosmore, Ont.

Queen Inka De Kol (6937) at 2 years, 11 months and 7 days of age, 13.20 lbs. butter fat, equivalent to 16.53 lbs. butter; 394.3 lbs. milk. Owned by Lakeview Farm, Bronte, Ont.

Netherland Pearl's Dollie 2nd (12133) at 2 years, 10 months and 11 days of age, 11.95 lbs. butter fat, equivalent to 14.94 lbs. butter; 347.2 lbs. milk. Owned by L. H. Lipst, Stratfordville, Ont.

National Calamity Posch (10132) at 2 years and 23 days of age, 10.71 lbs. butter fat, equivalent to 13.59 lbs. butter; 280.9 lbs. milk. Owned by E. Laidlaw & Sons, Aylmer, Ont.

Canary Starlight Calamity (10310) at 2 years and 23 days of age, 10.26 lbs. butter fat, equivalent to 13.10 lbs. butter; 281.3 lbs. milk. Owned by George W. Pallett, Summerville, Ont.

Rosalind Calamity Posch (7780) at 2 years, 11 months and 28 days of age, 10.33 lbs. butter fat, equivalent to 13.21 lbs. butter; 288 lbs. milk. Owned by Elias Snyder, Burgessville, Ont.

Vereille May (9384) at 2 years, 9 months and 23 days of age, 10.01 lbs. butter fat, equivalent to 12.82 lbs. butter; 332.3 lbs. milk. Owned by Elias Snyder, Burgessville, Ont.

Abbie Foforit Posch (9500) at 3 years and 5 days of age, 9.70 lbs. butter fat, equivalent to 12.15 lbs. butter; 334.8 lbs. milk. Owned by Elias Snyder, Burgessville, Ont.

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Sprays four rows while you drive; no hand pumping to do. Wheels and nozzles adjustable for wide and narrow rows. Can be adjusted to spray vines 6 inches to 2 1/2 feet high. Can be furnished with broadcast vineyard and tree spraying attachment.

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I H C Manure Spreaders

embody all that is best in manure spreader construction—all that makes for greatest manure profits. They have strength in abundance to withstand the hardest usage; they are simple, sure and steady in operation; they work perfectly with fertilizer in any condition; they are exceedingly light in draft.

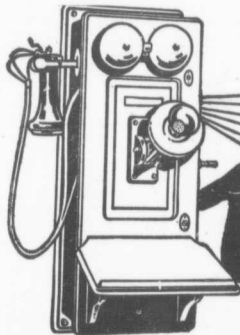
I H C manure spreaders are made in three styles; each style is made in three sizes, ranging from 30 to 70 bushels capacity. Corn King spreaders are of the return apron type; Cloverleaf manure spreaders have endless aprons. Two styles of feed are furnished—either ratchet or double pawl worm gear. There is an I H C to suit each requirement—large sizes for large operations, medium sizes for the average farmer, small sizes for orchards, vineyards—for every condition. I H C spreaders have lime hoods to spread commercial fertilizers; drilling attachments to distribute manure in rows. Whatever I H C spreader you buy will pulverize and spread manure or commercial fertilizer perfectly. You will find it durable, and it will net you big dividends on your investment.

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THE telephone is in several respects unlike anything else in the civilized world today; it is at once a convenience and a necessity. In fact, so much so is this true that let its service be anything but absolutely perfect and its user feels its loss in a way he could never have believed possible in days before he realized what a telephone meant to him. When you remember that out of 259,000 phones in use in Canada today, all but 9,000 are our make, you will realize the quality we must put into our instruments and begin to understand what

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WHILE "Northern Electric" telephones are as near perfection as brains backed by years of experience can make them, even yet are we trying to still further improve our instruments. Our newly designed No. 1317 Telephone Set—absolutely the most modern farm phone in the whole telephone world—represents years of study, an expenditure of \$10,000 in cash, and months of patient experiment and test before we have allowed it to go on the market.

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Examine it for yourself—or if you are not sufficiently well posted on such matters, get your own electrical expert to give our No. 1317 the severest tests of which he knows.

Take it up point by point. There is the transmitter, for instance, the same, standard long-distance type that is used on all standard long-distance phones. The general manager of the biggest telephone company in the world could have no better on the private phone he uses on his own desk. There is no better made. And not only is ours the best transmitter but it is also the cheapest in point of maintenance; it requires less battery cur-

rent than any transmitter on the market—as little as 1-7 of some of the others. Then the receiver on No. 1317 is worthy of attention. Here the magnets demand consideration: made from a special grade of steel, they are permanent—retain their full strength indefinitely. And the bell pieces are made of special annealed Norway iron. This receiver is so constructed that dust cannot accumulate on the back of the diaphragm nor can local noises disturb the listener and spoil transmission. Each part of the receiver on No. 1317 is the result of long and careful study—throughout, it is the best combination possible.

Or look at the switch-hook—note how compact and self-contained it is,—how all contact springs are vertically mounted as to afford no resting place for dust and other accumulations. Our standard self-contained switch-hook is equipped with platinum points—you can understand the efficiency for which that makes.

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THIS book, Bulletin No. 1316 we call it, (and that's what you ask for), not only tells you all about our instruments, but also tells you all you need to know—every detail—about the steps necessary to take in the organization of a rural telephone company. It describes the simple procedure—goes into it minutely—tells about the very small amount of capital necessary, explains how to interest your neighbors and informs you how your own community can have just as efficient a telephone service as the largest city on the continent. Write for it,—learn why a telephone on your farm will actually save instead of costing you money. Send today.

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