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FARM AND DAIRY

RURAL HOME

PETERBORO, ONT.

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THE CONDITION OF COUNTRY ROADS HAS A VERY DIRECT INFLUENCE ON FARM VALUES

Roads that are well nigh impassable for one or two months of the year, in spring and fall, are characteristic of many of our best farming sections. The improving of these roads would be followed by an immediate increase in farm values. But how are we to bring this improvement about? Macadam roads are costly and can be had only for the main highways. The split log drag offers a solution of the problem. In the hands of many farmers this simple device has proven a cheap and efficient method of improving clay roads. We are just beginning to properly appreciate its advantages.

DEVOTED TO
BETTER FARMING AND
CANADIAN COUNTRY LIFE

FARM AND DAIRY & RURAL HOME

GRAIN SMUTS—THEIR IDENTIFICATION AND TREATMENT

Professor J. E. Howitt, O. A. C., Guelph

The Annual Loss Due to Smuts Totals Many Thousand Dollars a Year. Different Smuts Require Different Treatment. How the Different Varieties of Smuts May be Recognized.

EACH year the grain smuts levy a tax upon the farmers of Canada amounting to many thousands of dollars. A large proportion of this annual loss can and should be prevented. A proper knowledge of the nature of the various smuts and the best means of preventing them will enable any farmer, who will take the time and trouble and who is willing to spend a small amount in insurance, to secure a smut free crop and thus avoid a loss, which in some seasons amounts to several dollars an acre. A proper knowledge of the nature of the various smuts is the first essential to success in preventing loss. Descriptions of the various smuts and the histories of the casual organisms are, therefore, given before the methods of prevention are dealt with.

SMUTS OF WHEAT

There are two common kinds of wheat smuts: Stinking Smut or Bunt and Loose Smut. The fungus that causes the Stinking Smut or Bunt winters over as the spores upon the seed grain, while the fungus which causes the Loose Smut winters over as tiny fungus threads within the seeds. Formalin solution reaches and destroys the fungus spores on the seeds but cannot penetrate the seed and destroy the fungus threads within. This explains why it is that Stinking Smut or Bunt of Wheat can be successfully treated with the formalin solution while Loose Smut of Wheat can not. Many farmers do not recognize the difference between these two smuts and treat them both alike with the formalin solution, and hence are often dissatisfied with the results. Since Stinking Smut, or Bunt, can be prevented by treating the seed with formalin while such treatment is of no use whatever in preventing Loose Smut, it is very important that farmers should learn to distinguish between these two kinds of smuts. This is only a matter of a little careful observation.

Stinking Smut or Bunt attacks only the grains, causing them to become short and plump and filled with a black, somewhat oily powder which has an odor like decaying fat. The chaff is not destroyed, though it becomes bleached and distended, due to the swollen diseased grains within. Loose Smut attacks both the grains and the chaff and reduces them

to a dark brown powder, which has no disagreeable odor. This disease shows just as soon as the ear comes through the leaf sheath. (See accompanying picture which shows (A) healthy head of wheat; (B) a head attacked by Stinking Smut or Bunt; and (C) a head destroyed by Loose Smut. Note that the chaff of the head affected by the Stinking Smut is not attacked while the whole head, chaff and all, has been destroyed by the Loose Smut.)

This smut attacks both the grain and the chaff and reduces them to a dark brown powder. Like the Stinking Smut or Bunt of Wheat, it can be prevented by the formalin treatment as the

fungus that produces the disease lives over the winter as the spores upon the seed.

LOOSE SMUT OF BARLEY

This smut is very similar to the Loose Smut of Wheat. It attacks both the grain and the chaff but does not destroy the chaff so completely as does the Loose Smut of Wheat. The life-history of the fungus is similar to that causing the Loose Smut of Wheat, the organism wintering over as the fungus threads within the seeds. The formalin treatment is useless in preventing the Loose Smut of Barley.

WHERE AND HOW TO USE FORMALIN

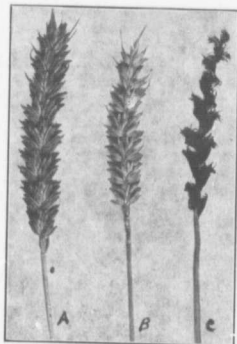
Formalin provides the easiest, cheapest, safest and most effective means of preventing both the Stinking Smut of Wheat and the Loose Smut of Oats. Secure a one-pound bottle or formalin (one pound equals one pint) and mix with water in the proportion of one pound of

formalin to 42 gallons of water; 30 gallons of water; 12 ounces of formalin makes a handy quantity to work with. Place the seed to be treated in a coarse sack; a bran sack is excellent for this purpose. Fill the sack about three parts full and immerse in the formalin solution for about 20 minutes. Then spread the seed out on a clean floor to dry.

Sacks, implements, etc., used in handling smutted grain must also be disinfected. The sacks may be boiled or dipped in the formalin solution, and a strong solution of formalin run through the seed drill. The floor on which the grain is spread out to dry should be scrubbed with a solution of formalin. Sprinkling the seed with the formalin solution is also practiced, but requires more care in order to be effective. The best results were obtained at the Ontario Agricultural College from the immersion method here described.

If the seed wheat to be treated contains luted grains, "smut balls," they must be removed before treating the grain. This can be done by placing the grain about a bushel at a time in a barrel of water. The smut balls being light, will rise to the surface and can be skimmed off.

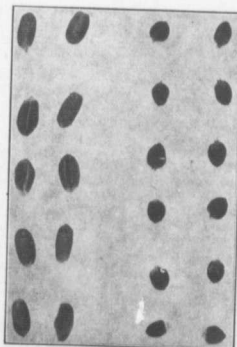
These smuts cannot be prevented by treating the seed with formalin. A modified hot water treatment gives good results, but requires too much time and labor to be practical under ordinary farm conditions. Clean seed is the best means of preventing these two smuts. Secure seed wheat and barley from districts where the Loose Smuts are not present. Such seed will produce crops free from Loose Smut.



Wheat Smuts



Loose Smut of Oats



Sound Grains and Smut Balls



Loose Smut of Barley

GREAT FORTUNES—HOW MOST OF THEM HAVE BEEN MADE

ARTICLE No. 18.

Most of the great fortunes of to-day have been made in some one of five different ways. These in the order of their importance are as follows:

THE LAND MONOPOLY

FIRST—By gaining control of land so located that the public must use it for trading and distributing centers. This is the land in our towns and cities. Land in New York City, for instance, is worth \$15,000,000 to \$20,000,000 an acre simply because the people who own it are able by means of the enormous rentals they charge, to squeeze that amount of money out of that portion of the public who use it. Among the great fortunes that have been made, to a great extent, in this way are those of the Duke of Westminster, the wealthiest landlord in Great Britain, and the Astors of the United States. Because their ancestors gained control of land in the cities of London and New York, when it was worth but little, thousands upon thousands of people to-day are forced through the rentals they pay, both directly and indirectly (see article 11) to contribute to the millions and millions of dollars a year these men exact from the public for the use of this land. And as population increases in these cities the power of these men and of thousands of others like them who own their pieces of land, to exact still greater sums from the public will increase in proportion.

THE MONOPOLY IN NATURAL RESOURCES

SECOND—By gaining control of the great natural resources of the country, such as its coal and iron mines, its oil wells, its water powers, and its timber limits. Once a man or a group of men have acquired the control of any natural resource of this character, their power to squeeze the public is limited only by the demand of the public for the products which they control. The more population increases and the need of the public for these commodities grows, the more does the power of the people controlling these commodities to exact tribute from the public increase, and the greater do their enormous fortunes become. Some of the greatest fortunes in the world have been made, for the most part, in this way, notably those of John D. Rockefeller, who obtained his great start by his monopoly of the oil fields, and Andrew Carnegie who obtained his wealth out of iron mines. Carnegie already has given away over \$300,000,000, more than the entire revenue of Canada will be this year.

THE MONOPOLY IN TRANSPORTATION FACILITIES

THIRD—By gaining control of our great public utility companies, such as our transcontinental railway systems and express companies. The public must use these services, not only for travelling, but for the shipping of the products whose use it requires. The men who control these services, by maintaining high rates, are enabled to bleed the public in a hundred different ways through increasing the cost to us of almost every article we buy. Among the great fortunes that have been made largely in this way, were those of the late Jay Gould and of E. H. Harriman, the latter of whom was estimated to have made over \$150,000,000 in about fifteen years.

THE EXTORTION OF COMBINES AND MERCERS

FOURTH—By means of combines and mergers, that form behind our protective(?) tariffs, and by gaining control of manufactured articles, such as clothes, boots, household furniture, farm implements, cement and scores of other articles, advance the cost of these articles to the public, and thus grow fat and prosperous at the public expense. Scores of great manufacturers in the United States and Canada have made their fortunes in this way.

THE MODERN METHOD OF WATERED STOCK

FIFTH—By the promotion of combines and mergers, and the sale of small pieces of paper, called stocks and bonds, for millions of dollars to a confiding and investing public, who do not realize that they have been buying what is known as "watered stock." This is a comparatively new method of getting rich quick, but it is now being used on a scale that is increasing rapidly. Among the recent fortunes that have been made in this way is that of Sir Max Aitken, who has only recently been given the title of "Sir," presumably because of his success in plundering the public and thereby gaining a fortune, rated at several millions of dollars, in the course of some five or six years.

THE GREAT UNDERLYING PRINCIPLE.

Some fortunes have been made by other means than those mentioned, but the great majority of the enormously wealthy people of the world to-day have acquired their wealth by some one or more of the foregoing methods, especially the first three. They have seized or gained control of those things which the public must use, and by means of this control they have taxed and plundered the public in all directions until at last we are beginning to awake to the true condition of affairs. As yet, however, most of us have only started to awake. We are still wondering what causes rural depopulation, and suggesting such paltry remedies as the building of country roads and tenant houses for farm laborers. We are still conjecturing over the influences that create city slums and suggesting as remedies the building of model suburbs. We are still asking for an explanation of the "high cost of living," and blaming the poor middlemen, who are themselves squeezed by the same influences that are squeezing us.

THE FIGHT IS NOW ON

The movement towards the righting of these conditions, and towards these influences that are operating a way in the background, but which are responsible for the increased cost of living and for enormous wealth on one hand and for poverty on the other, is now, however, well launched. We are beginning to see how true were the words of the great Henry George when he said: "Under all forms of government the ultimate power lies with the masses. It is not kings nor aristocrats, nor landlords nor capitalists, that really enslave the people. It is their own ignorance." The scales are dropping from our eyes, and as they do we are being led to realize that we have the power to right these conditions because they have been brought about, and are being continued, by a very small minority of the people. That the day of better things is close at hand is indicated by the fearless and outspoken stand that has been taken by such public men as Ex-President Roosevelt, who recently in his first public speech in his campaign for re-election as president, said: "I have scant patience with this talk of the tyranny of the majority. Whenever there is a tyranny of the majority I shall protest against it with all my heart and soul. We are to-day suffering from a tyranny of minorities. It is a small minority that is grabbing our coal deposits, our water powers and our harbor fronts. A small minority is battering on the sale of adulterated foods and drugs. It is a small minority that lies

"behind monopolies and trusts. It is a small minority that stands behind the present law of master and servant, the sweat-shops, and the whole calendar of social and industrial injustice. It is a small minority that is to-day using our convention (political) system to defeat the will of a majority of the people. . . . The only tyrannies from which men, women and children are suffering are the tyrannies of minorities."

Lack of space has prevented simple remedies for these conditions that are within the power of the people, being outlined in this article. They are well understood and have been endorsed by all the independent farmers' organizations in Canada. We hope to outline them briefly in our next article.

How We Lay Tile Drains

Jas. Marshall, Wentworth Co., Ont.

We take the easiest way. Some dig the ditches by hand. We find it a good way to plow the top with an ordinary plow as deep as possible, then use a subsoil plow with the handles narrowed in. When the ditch gets deep we use two horses, one on each side of the drain, hitched to a long double-tree with a long heavy chain connecting the double-tree with the plow in the drain. The chain will hold the plow down to its place. Six rounds with the subsoil plow used in this manner will plow down about six feet in ordinary clay bottom. Then we shovel out the loose earth. We had a regular ditching machine once, but it did not work as well as our subsoil plow. It would dig to a depth of only two and a half feet. This we did not think was deep enough.

Drains should be down much below the frost limit. The little water veins that form to convey the water to drains are destroyed by frost if tile is too close to the surface. Also the water in the tile may be frozen at a particular time of year, when the land needs draining, thus losing the benefit of drains altogether.

FALL AND OUTLETS

Three inches fall for each 100 feet is sufficient. Some farmers have drains with less fall than that. Where it can be done it is better to have the head of mains or branches at a higher level than the surface at the outlet, even if the person draining had to run a line at his own expense on a neighbor's farm above. We had a six-inch outlet for years which was three feet below the level of the ground, but on account of the higher head, about half a mile back on farm, the outlet kept clear and boiled up like a clear spring. I have one now about two feet below level, and the water is coming up fine.

From April to June is probably the best time to underdrain, as the ground is softer, the days longer and brighter, and the water in the drains can show the fall better than in the fall.

Where the higher land is of as wet a nature as the lower land, as we have it on our farm, the most thorough way of draining is to run the branch drains in parallel lines, joining with the main drains in the hollows.

There is a very nice little income to everyone who will keep a pure bred Clydesdale brood mare on the farm.—Walter Elliott, Halton Co., Ont.

Where the rations for milk cows lack succulence and palatability we find that molasses can be used to good advantage. For instance, a little along with a grain will be relished. A mixture of one quart of molasses in a gallon of water sprinkled over dry hay will make it much more acceptable to the cows. The cheapest kind of molasses costing 15 to 20 cents a gallon is as good as the best for this purpose.—A. P. McKennie, Peterboro Co., Ont.

Pointers on

C. A. D., N.

The shepherd should be getting milk. All right, they may have lost lanes in it that is difficult to see milk coming. As soon as our ewes from the flock are and a few roots. We get not give such grain a very few days to him. After we turn out pasture we still feed lambs for some time. fact, it will pay to feed them all summer, but don't do it after June 15.

DEEP THE LAMBS

We dip our lambs shearing time and again in about three weeks. That pays, as ticks are awful pest to lambs.

We always cut the tail off as soon as we see the lambs skipping and a lamb to run with a lot to sell him the next day might happen within a might get dirty and the gets get in and kill the find it a couple of days perhaps never know, w lamb.

This is the system the lambs, and we have had a lamb that weighed 130. We weighed him every pound a day until he was got \$15 for him for average weight of a bunch from five to seven pounds one that weighed 100 stood 20 inches high.

Don't Pasture

Turner Glydon, P.

I would urge upon of their stock on the grass good growth. We will grass from the same field off than by pasturing to a clover pasture is allowed bright before stocking wagen. It draws a much travel so much over the keeps down the growth the summer.

Do I hear some farm manage when feed is so pasture my hayfields for my stock upon the pasture found it a good plan to

Pointers on Spring Lambs

C. A. D., Norfolk Co., Ont.

The shepherd should be sure that the lambs are getting milk. Although they seem to suck all right, they may not be getting any milk. We have lost lambs in this way. We will often find if we strip the teat, a core or hard substance in it that is difficult to get out. We strip until we see milk coming, and then are sure that the lamb is getting milk.

As soon as our lambs arrive we separate the ewes from the flock and feed them bran and oats and a few roots. We feed roots all winter, but do not give much grain until the ewes come in. I never allow them to have any frozen root. In a very few days we will see the lambs eating the bran with their mothers. After they get to eating well, we fix a small trough for the lambs, separated so that the ewes cannot get to it. We always keep some bran and chopped oats in this trough. The lambs will not eat too much grain, and in a few days, or at just a week, one will soon see a difference in the lambs.

After we turn out to pasture we still feed the lambs for some time. In fact, it will pay to feed them all summer, but we don't do it after June 1st.

DIP THE LAMBS

We dip our lambs at shearing time and again in about three weeks. That pays, as ticks are an awful pest to lambs.

We always cut the tails off as soon as we see the lambs skipping and playing. We never allow a lamb to run with a long tail, even if we intend to sell him the next day, as we don't know what might happen within a day or two. This lamb might get dirty and the flies blow it and maggots get in and kill the lamb. And when we find it a couple of days later we will wonder, and perhaps never know, what killed that nice big lamb.

This is the system that we follow in raising lambs, and we have had good success. We had a lamb that weighed 13 pounds when it was born. We weighed him every week, and he gained one pound a day until he weighed 115 pounds, and we got \$15 for him for breeding purposes. The average weight of a bunch of young lambs would be from five to seven pounds, but last year we had one that weighed 19 pounds at birth, and stood 20 inches high.

Don't Pasture Too Early

Turner Glynn, Prince Co., P. E. I.

I would urge upon our farmers not to turn their stock on the grass until there is an extra good growth. We will have almost double the grass from the same field if we hold the stock off than by pasturing too early. If the grass in a clover pasture is allowed to grow to a good height before stocking we have a double advantage. It draws a much larger amount of nitrogen from the air and the cattle do not have to travel so much over the tender grass, which keeps down in the growth for the greater part of the summer.

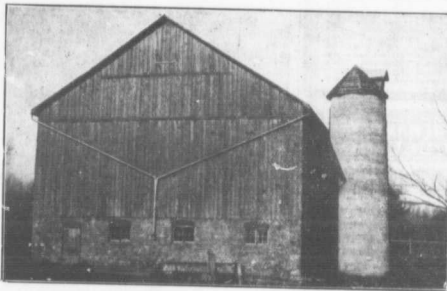
Do I hear some farmer say, "How can you manage when feed is scarce?" I would rather pasture my hayfields for a week or two than turn my stock upon the pastures too early. I have found it a good plan to let the stock on a few

acres of the pasture only until the rest gets a good start supplementing the pasture with as much concentrated feeds as is required to keep the cows in good condition. Then I plow that part up and sow to a mixture of oats, peas and vetches that will make green feed later in the season if required. If not needed for supplementary feeding it makes excellent hay for the coming winter. Or it may be saved for feeding next spring while we are waiting for a good coat of grass to cover the pastures.

Practical Methods With Brood Mares

J. B. Calder, Wentworth Co., Ont.

We try to keep our brood mares in a natural, healthy condition. We give them good food, but not too rich. We do not advise having them very fleshy. This winter our mares are getting out



A Farm Barn such as is Characteristic of the Best sections of Halton County

The barn and silo of Mr. Richardson, Halton Co., Ont., are here illustrated. The separator room in the basement and adjoining the stable is a model of cleanliness. And there is the silo. All good assets.

—Photo by an editor of Farm and Dairy.

straw, two quarts of oats each morning and noon, and some boiled turnips, chaff and oats at night. They have come through the winter in good heart and good condition.

Our mares are out in the yard for exercise every day when not working. We believe light, steady work is good, but avoid extra heavy pulls, rough usage, or any sudden strain, especially backing up suddenly.

When foaling time approaches, if before there is grass, we feed laxative food, thereby avoiding trouble with the foal. At this time the mare should have a poomy box stall, kept perfectly clean and dry, with plenty of fresh bedding.

BREAKING THE NAVEL CORD

We like to be on hand at foaling time, because if the cleaning does not burst, the foal is liable to be smothered. It is now some years since we have cut the navel cord. We are letting nature take its course. After the cord breaks, we saturate the end with some disinfectant; we use carbolicized oil or sweet oil, 20 parts, to one part carbolic acid. We saturate two or three times a day for a few days. We feed the mare a light diet at first. We take the chill off the drinking water for a few days. We let the mare rest for at least two weeks before commencing to work her again. When working her we leave the colt in the stable. Avoid overheating.

We have had foals come at all times between April 11th and November 1st, and all have done equally well.

Wheat straw is of very little use for sheep, but when spread on the ground, they will get a lot of feed from the chaff. Breeding ewes winter very well on barley straw and oat straw alone until within one month of lambing time, when oat sheaves should be given about one to five sheep a day.—J. B. Spencer, B.S.A., Ottawa, Ont.

Value of Alfalfa for Milk Cows

In experiments that have been conducted by Professor Geo. E. Day at the Ontario Agricultural College, as to the value of alfalfa hay for dairy cows, the following results were obtained from a group containing four Ayrshire cows, two of which had been milking for a long period. It will be noted that during the second period these two cows, namely, 156 and 136, received no meal, yet one of them gave a slightly higher average during the second period and the other held her own. In the case of the other two cows, both have held their own in milk production under the reduced meal ration. The following table shows details:

Cow No.	Days in lactating	Period II		Period I		Average milk per lb. of alfalfa per period	Average milk per lb. of hay per period
		Nov.	Dec.	Nov.	1 to 6		
118	32	Mixed hay, 13.5 lbs.	37.3	Alfalfa hay, 23 lbs.	30.4		
		Straw, 4 lbs.		Silage, 23 lbs.			
		Silage, 23 lbs.		Cottonseed meal, 3 lbs.			
		Cottonseed meal, 2 lbs.					
135	144	Roughage as above	21.7	Roughage as above	20.		
		Bran, 2.5 lbs.		Cottonseed meal, 1 lb.			
		Cottonseed meal, 1.5 lbs.					
		Oil cake, 0.2 lb.					
156	238	Roughage as above	14.6	Roughage as above	14.8		
		Bran, 1.5 lbs.		No meal.			
		Cottonseed meal, 1.5 lbs.					
136	303	1.5 lbs.	"	"	"		16

Methods That Have Brought Success

H. C. Hammill, York Co., Ont.

Four years ago we purchased our present farm without any great amount of capital. When we state that it required \$1,500 annually to pay interest and principal charges and hired help, it will be understood that it was necessary to follow a better system of farming than that practiced by the majority of our dairy farmers. We have not yet reached our ideal, but better methods will be adopted as convenient. Labor-saving devices will be installed as we can afford them.

The system of feeding that we follow we believe has much to commend it. We utilize the products we produce on the farm, place them before the cows with the least possible labor, and thus produce milk cheaply. We are aiming to build up a dairy herd worth while and to so regulate our farming so as to always have an abundance of clover, corn and roots, even in an off year.

MUST MEASURE UP TO STANDARD

The standard by the Record of Performance is the standard that we have set for our dairy herd. If after being given two fair trials, a cow is unable to qualify, she is not good enough for Craiglea Dairy.

If the greatest possible production of our cows was our object, regardless of the cost of feed and labor, we would feed all clover cut, roots pulped, and then mix clover, roots and ensilage together with chop at least 12 hours before feeding. We would have a separate mixture for each cow, regulating the ingredients according to her capacity and likes. We would add salt just before feeding. Such a system would involve a great deal of labor. The mangers would require to be cleaned thoroughly every day to prevent sourness. This system would also require great skill on the part of the feeder to feed a cow to her fullest capacity without overdoing it.

A short time ago I had a letter from a farmer who had talked over the matter of windows with me before he built his stable. In the letter he stated that his stable was now completed, and that when he took the window frames home his neighbors laughed at him for using such large windows, but now that the stable is completed they all agree that his idea is correct. The sooner we get away from the notion that large windows are a detriment to stables, the better it will be for all concerned.—Prof. Geo. E. Day, O.A.C., Guelph.

Reliable help for the farmer

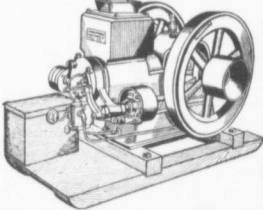
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SYNOPSIS OF CANADIAN NORTH-WEST LAND REGULATIONS

ANY person who is the sole head of a family, or any male over 18 years old may possess a quarter section available Dominion land in Manitoba, Saskatchewan or Alberta. The applicant must appear in person at the Dominion Lands Agency, or Sub-Agency, for the District Entry by proxy may be made at any agency, on certain conditions, by father, mother, son, daughter, brother or sister of intending homesteaders.

Duties—Six months residence upon and cultivation of the land in each of three years. A homesteaded quarter section may be sold by the homesteader on a site miles of his homestead on a tract of less than 640 acres solely owned and occupied by him or by his father, mother, son, daughter, brother or sister.

In certain districts a homesteader in good standing may pre-empt a quarter-section allotment the homesteaded. Price \$10 per acre. Duties—Must reside upon the homestead or pre-emption six months in each of three years. Free title of homesteaded entry (including the time required to acre homesteaded) and cultivate fifty acres extra.

A homesteader who has exhausted his homestead right and cannot obtain a pre-emption, may enter for a purchased homestead in certain districts. Price \$10 per acre. Duties—Must reside six months in each of three years, cultivate fifty acres and erect a house worth \$300.00.

W. W. COBB,
Deputy of the Minister of the Interior,
N. B.—Unauthorized publication of this statement will not be paid for.

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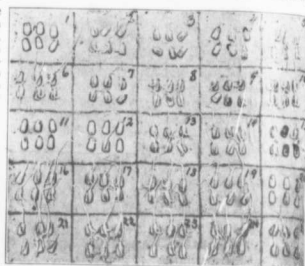
To Secure Plump, Heavy Seed

Only the best kernels of any kind of grain should be used for seed. The principle of selection should be that of size and weight. Any method of selection which prescribes only for the weight of grain as a basis is insufficient, while one that selects only for size is also insufficient. The two principles should be combined. Many of our ordinary fanning mills, by proper arrangement of sieves and the blast will separate grain on the above mentioned principles.

The fanning mill is the simplest and most practical means of grading seed on the farm. The seed crop should be secured by running through a large proportion of the grain obtained any one crop year. Out of this crop should be selected the best 20 or 25 per cent. of the grain that has been produced, this being used for seed the succeeding year. Such a separation can be made without materially affecting the selling price of the grain which remains. An ordinary fanning mill, such as is used on the farm, will handle about 40 bushels an hour, or 200 bushels in eight hours, at a cost of approximately one cent a bushel.

The best 10 per cent. could be selected, giving a very high quality of seed at a cost of approximately 10 cents a bushel. This 10 per cent. will contain the grain from the most productive and vigorous plants, the type of plant which we wish to propagate in our fields. The cost of making such a selection may appear high to some, but when it is considered that an increase of one bushel to the acre would pay for the selection of sufficient seed to sow seven or eight acres it becomes apparent that the time spent in selection is well paid for.

small grains, on light soil it probably would not give as good results as the rotted manure. Where manure is applied as it should be, however, on the grass land, or just ahead of the corn crop in rotation, the manure-fresh manure is better adapted to the succeeding crop than the rotted manure. The heat, and the effect of the acids developed in the process of decomposition, aid greatly in liberating



Be Sure You Sow Only Good Seed Corn

The testing of seed corn is so easy that there is no excuse for planting poor seed. Rule off a piece of blotting paper as shown in the illustration. Take six kernels of each ear of corn, two from each end, and two from the centre. Cover with another piece of blotting paper. Be moist and warm—behind the kitchen stove will do. The card will save the seeds from which don't germinate. Isn't it? The cheapest kind of crop insurance.

Get courtesy I. E. C.

plant-food and result in greater crop yields.

Some objections may be made of the score that weed-seeds or possible plant diseases are spread with the unrotted manure. Where applied as suggested above, however, at the proper place in rotation, neither the weeds nor the plant diseases resulting therefrom will be a serious consideration.

It is often difficult to make space between the door jam and air-tight. When I was building my new barn I sunk a clevis with a thread on the end into the cement, put the jam, and tightened the nut on the clevis when the cement was put soft. This gave a perfectly tight connection between the wall and jam. E. Terrill, Northumberland Co., Ont.

The Feeders'
The Feeders' Corner one of our subscribers secured are invited to send all questions will receive attention.

Feed of the New
Prof. E. J. Underhill
During the time Belle DeKol, the new pon milk and butter cow received nearly 100 lbs. more or less during. When available she received a mixed grain ration, of which was bran and heavier feeds were varied according to the condition of that which seemed



This is the
Barnette Belle DeKol, illustrated, affords a splendid basis for breeding and fecundity in farm and cow. She is the type to breed time did not seem best as she was also fed some dried especially when fresh room available. Her grain ration was gradually increased to 25 lbs. a little more, but later reduced to nine pounds a day as can be estimated the amount of grain fed was pounds daily. She also received

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Preparing for Alfalfa

We are going to seed alfalfa this spring. That is the best method of preparing the soil—W. E. York Co., Ont.

Alfalfa will usually make its best stand the year following some best crop such as corn or roots. Fall plowed land also is to be preferred to that plowed in the spring. The system now generally advocated by our most successful alfalfa growers is to work the land thoroughly and at frequent intervals up to the middle of June or the first of July, and then seed with an early or a nurse crop at the rate of 20 lbs. of good seed to the acre. A good stand of alfalfa is practically assured when this method is followed and the future increased yields will more than compensate for the lack of the grain crop that might be grown as a nurse to the young plants. Seed should be inoculated with culture obtained from the Ontario Agricultural College, Guelph, Ont.

How to Use Manure

It should not be understood that the coarse, fresh, barnyard manure is adapted to all crops. It would not be suitable for certain forms of garden and vegetable crops; and even for the

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The Feeders' Corner

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

Feed of the New Champion

Prof. E. J. University of Ohio
During the time that Banostine Belle DeKok, the new world's champion milk and butter cow, was in test she received nearly, if not all the same, more or less ensilage and alfalfa. When available she received roots and a mixed grain ration, the foundation of which was bran and oats. The heavier feeds were varied frequently according to the condition of the cow and that which seemed best at one

it was available, green corn with the stalks and also green clover and any other green feed that might be available, including feed from the pasture. Banostine Belle DeKok has given birth to three calves, this record having been made after the birth of the third calf. All of her calves to date have been heir calves.

Success with Pure Bred Ayrshires

Editor, Farm and Dairy.—In the Dairy Annual of Farm and Dairy, I notice that Mr. Walter Payne, Victoria Co., N.B., would like the advice of breeders as to the best methods of getting better stock. The experience of one who started in somewhat the same way may be of benefit to him. Seventeen years ago I bought a pure-bred Ayrshire heifer calf. I was fortunate in securing a first-class one. I had a pure-bred bull at the

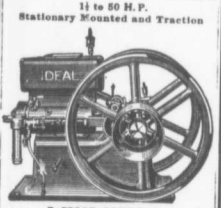
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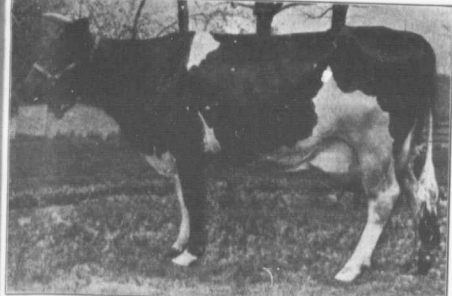
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This is the New Queen of the Dairy World

Banostine Belle DeKok, the new world's champion milk and butter cow, here illustrated, affords a splendid demonstration of what we can do with our dairy cow by breeding and feeding. A full account of this cow's breeding and production. She is the type to breed for.

time did not seem best at other times. She was also fed some dried beet pulp, especially when fresh roots were not available.

Her grain ration from the first was gradually increased to 25 pounds, or a little more, but later reduced to as low as nine pounds a day. As near as can be estimated the average amount of grain fed was 12 or 14 pounds daily. She also received, when

time. I have since sold about \$2,000 worth of bulls and about the same of heifer calves. Two years ago I sold \$1,000 worth of cows. I still have on hand four bulls for sale, and have about 25 head of females left.—Peter McIntosh, Dundas Co., Ont.

A New Book on Horses

The effectiveness of the horse and the safety of the master and his family depend largely upon the understanding between man and horse. "The Training and Breaking of Horses," a new book of which M. W. Harper is the author, gives the most full and concise information on the subject of training horses and understanding them of any book that we have seen in recent years.

In this volume, beginning with the foal, each class of horse is considered and a special chapter is devoted to the education of the more common classes. Special attention is given to the training and subduing of wild horses as well as to overcoming all vices that render a horse useless and sometimes dangerous. Many applications for overcoming a vicious horse and making him subservient to his master's will are described, and illustrations make very plain the methods followed.

The book is nicely gotten out in a attractive cloth covers, good paper and large readable type. It contains almost 400 pages of just the kind of information that all who are interested in horses would like to have. This book is published by the MacMillans, of Canada, and can be secured through Farm and Dairy at \$1.75, post paid.



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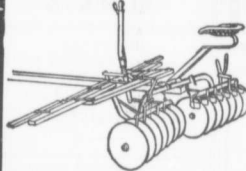
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HORTICULTURE

Winter Injury to Trees

Why does the bark on some apple trees turn black and dead and peel off? The trouble usually is caused by canker and is sometimes covered with hois, made by woodpeckers; also it usually runs in stripes up the tree trunk—David Woods, Northrup Brothers, Ont.

If the black dead areas on the trunks of trees are at the south or south-west side the trouble is what is known as "sun-scald." This is a form of winter injury caused by alternate freezing and thawing of the bark. If the trouble is not confined to this part of the tree, it is probable that black rot canker or fire blight may be the cause. Black rot canker, in addition to causing the blackening of the bark, is usually accompanied by roughening of bark and also by a slight swelling. Fire blight injury is usually characterized by the sinking of the blackened area, and around the edges of the same will be found decided cracks

Lay aside and plow a good rich strip of land, near the house, for a garden and fruit plantation. It will pay.

Queries About Grafts

What is the best kind of graft for winter fruit? There are many different grafts in quickness of bearing—E. B. Dufferin Co., Ont.

I am not sure as to what is meant by the question "What is the best kind of a graft for winter fruit?" If the question refers to variety, I may say that in the colder parts of Dufferin country there are very few winter sorts that can be grown with satisfaction. Northern Spy is sufficiently hardy, I think, but the variety requires so long a season that it does not properly mature. In the warmer parts of Dufferin country, Northern Spy would be a satisfactory winter apple. Golden Russet would succeed almost anywhere in Dufferin county. I have seen an excellent winter apple grown in Eastern Ontario and (perhaps known as "Bethel.") It might be worth a test in Dufferin county.

Orchard Spray Calendar for 1912

FIRST APPLICATION	SECOND APPLICATION	THIRD APPLICATION
APPLE Use 1 (a), or 2 (a) just before the leaf buds open. Fire blight injury is usually characterized by the sinking of the blackened area, and around the edges of the same will be found decided cracks	Use 1 (b), or 2 (b) just before the blossom buds open for curculionid, canker and leaf spot.	Use 1 (c), or 2 (b), or 3 (b) or 5 immediately after blossom petals have fallen, and before closing of the calyxes
PEAR As for apple, to control scab, scale, blister-mite.	As for apple, to control curculionid, tent-caterpillar, scab.	As for apple, to control scab, curculionid and other
PEACH Use 1 (a), or 2 (a) before buds begin to swell, to control scale, leaf-curl and brown rot.	Use 3 (b) after the fruit is set to control curculionid and brown rot.	Use 3 (a) a month later for brown rot and scab.
PLUM AND CHERRY Use 1 (a), or 2 (a) just before the buds burst for scales, brown rot and shot-hole fungus.	Use 1 (c), or 2 (b), or 5 when fruit is fairly set, to control curculionid, worms, brown rot and black-knot.	Use 1 (c), or 2 (b), or 3 (b) or 5 about two weeks later. Brown rot thrips, etc. "sing" appears use 1 or 2 just after dry, streaked lime.
GRAPE Use 4 or 5 or 3 (b) as buds begin to swell, or when third leaf makes its appearance, to control black rot, mildew and flea-beetle.	Use 4 or 5, or 3 (b) before the blossoms open, to control black rot, mildew and flea-beetle.	Use 4, about two weeks later, for black rot and mildew.
CURRENT AND GOOSEBERRY Use 1 (c), or 2 (b) before buds open, to control mildew.	Use 1 (c), or 2 (b) just before blossoms open for mildew and currant-worm.	Use 1 (c), or 2 (b) after fruit is formed for mildew and "worm."

- ### Spraying Mixtures
1. HOME-MADE CONCENTRATED LIME-SULPHUR WASH—1 (a) in early spring on dormant wood have a specific gravity of 1.030; 1 (b) for spraying before blossoms burst a sp. gr. of 1.029; and 1 (c) for spraying just after blossoms fall—1.008.
 2. COMMERCIAL LIME-SULPHUR WASH—2 (a) used on dormant wood at the rate of 1 gal. to 3 gals. water; 2 (b) on foliage 1 gal. to 40 gals. water.
 3. ARSENATE OF LEAD—(a) alone 2 lbs. to 40 gals. water; (b) with lime sulphur wash or with Bordeaux mixture—2 lbs. to 40 gals. of water.
 4. BORDEAUX MIXTURE.
 5. POISONED BORDEAUX—2 to 3 lbs. added to Bordeaux, as prepared in 4.

separating the diseased area from the healthy tissue.

If your correspondent will specify more fully as to which injury is probably present, I shall be glad to outline remedies.—Prof. J. W. Crow, O.A.C., Guelph.

Orchard and Garden Notes

Prune and spray fruit and shade trees and shrubs.

Topworking of plums or apple trees may be done this month.

Spinach and Swiss chard are splendid greens, and are easily grown.

Onion carrot are early, but the Chantenay is a better late-season variety.

Procure a good supply of garden and flower seeds, if this has not been attended to before.

A cold-frame can be made good use of late this month, for growing onions, celery, cabbage and annual flowers for transplanting.

In grafting young trees, the method used is frequently what is known as "whip grafting." This applies only to branches ranging in diameter from one-quarter to one-half inch. For anything over this size, cleft grafting is the ordinary method.

I do not know that there is any special difference between different styles of grafting in the time required for the scion to bear fruit. The size of the stock, however, has considerable influence. It is not possible to whip-graft large trees, and, therefore, it is not easy to compare the two points. Grafts placed in a young tree by the cleft-grafting method form a very good union and are not likely to bear much earlier than is natural for the variety. Scions placed in old trees or on larger branches frequently bear early because of the imperfection in the union, which is evidence for a number of years. It is the failure of the parts to unite perfectly that hastens bearing.—Prof. J. W. Crow, O.A.C., Guelph.

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For Corn Prices see paper, page 438.

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Hershey Seed prices go up on date of issue of this ad. If you live in Ontario 100 lbs. or more of our Timothy, we will pay you nearest station, prices are six-wares—ton bags for Clover and Red Clover. Gov't Standard
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Bags	\$1.25 per bush
Siberian65 per bush
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If you order 50 bush or more we will reduce above prices \$ per bush. We also offer the Scotch grown

BLACK BARTARIAN REGENERATED BANNER REGENERATED ABUNDANCE.

They test 44 lbs to the bush. We offer them in 5-bush lots or over at \$3 per bush, bags free. If you order 50 bush or more we will reduce above prices \$ per bush.

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O.A.E. No. 21, best lot, at \$1.35 per bush D.A.C. No. 1, best lot, at \$1.35 per bush. Mandar, best lot, at \$1.50 per bush.

Mangels

Price in 5-lb. lots or over, the lb. post paid. If ordering mangels along with freight orders deduct the postage 5c per lb.

Champion Yellow Intermediate Yellow Leviathan Gate Post Mammoth Long Red Yriestaker The Golden Tankard Giant Half Sugar

For Core Prices see last issue of this paper, page 418.

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Herewith find prices good for one week from date of issue of this paper if unused. If you live in Ontario and order 50 lb. or more of our Clovers and Timothy, we will pay the freight to your nearest station, otherwise our prices are ex-warehouse, Toronto. Ontario bags for Clover and Timothy at 35c.

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Secretary Wilson of the U.S.D.A., estimates that between the producer and the consumer there is an annual loss of \$45,000,000 in the crop of the United States, the greatest portion of which falls on the farmer, who is by far the largest producer. Of this enormous loss, about one-third, or \$15,000,000, is caused by hens which develop the embryo of the fertile egg, causing what is known to the trade as a "blood ring." As it is impossible to produce a "blood ring" in an infertile egg, such an egg will stand a higher degree of temperature without serious deterioration than will a fertile egg.

If farmers and others engaged in the production of eggs would market their male birds as soon as the hatching season is over, a large saving would be made, as practically every infertile egg will grade as a first or second if clean and promptly marketed. No more simple or efficient method for the improvement of the egg supply of the country could be adopted than the production of infertile eggs. And what applies in the United States is equally true in Canada.

"Rural Life" Pointers

Sell your good pullets if you are going out of business or cannot house and feed them. To sell them for any other reason is foolish. The good pullet is an asset on the poultry farm and the rule is, none of us can get too many of them.

If you do not want anybody to cheat you or afterwards have doubts as to the correct weight of shipments, have your own scale, but use some scaled or dry picked, will lose some weight, even if iced. Bear this in mind, when comparing the returns from the city house with your own weights.

Raise your own pullets, if you wish to be sure of what you are going to rely on. Like breeds like, is an old saying, and hens mated right should have pullets that are good in quality. Again, pullets grown up on the farm, will do better on the old farm than anywhere else. Every move, every change is a setback to their productiveness.

Go over the apples and sort out all the rots. In cutting out the rot spots, the hens will delight to take the rest. Variety is the spice of life and apples are a relish to hens that are confined to the henhouse during the winter. As rots will favor the eggs, they should be cut out.

Do not work hard for your money and then squander it. If you paid out good money for hens or eggs for hatching, see to it, that the former have a chance to do their best, while you take care of the latter and be sure to keep lice down on the chicks. Do not wait till lice appear, but work on the preventive plan. Use grease on head, neck, below wings and around vent liberally.

Poultry Pointers

Make the nests for the early sitting hens of fine hay so that they will be warm.

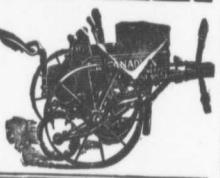
Always disinfect the incubator that was used last year before using it this year.

The few dirty eggs that are produced should be consumed at home and not washed and sent to market.

Don't put eggs in an incubator until you have operated it a few days to make sure that you have it under control.

ABSORBINE

Removes Bursal Enlargement, Enlarged, Swollen Testes, Curled, Filled Tendons, Swollen from any Bruise or Strain; Cures Piles, Hemorrhoids, Ailure Vain; Does not blister, remove the hair by any means. For all ailments, apply a little, rubbed in. For all ailments, apply a little, rubbed in. For all ailments, apply a little, rubbed in.



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The machine that is easy to operate as a horse rake - and enables you to plant from four to six acres of Potatoes a day.

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Special prices on orders of 10 bushels or more.

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Fleming's Spavin Cure (Liquid) cures the lameness and removes such blemishes as are soft to the touch - Eg Spavin, Curb, Thoroughpin, Capped Hock, Collar and Shoe Boils, and recent cases of Splint and Bone Spavin.

Fleming's Spavin and Ringbone Paste cures Bone or "Jack" Spavin, Ringbone and Sidebone.

These remedies do not **always** cure - but we'll refund your money every time they fail. Try them: on the worst cases you can find - we'll stand behind them, as we stand behind all Fleming's Remedies.

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Fleming's Colic Cure will surely cure if anything can.

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CITY MILK SUPPLY DEPARTMENT

Milk in Towns and Cities

Prof. H. H. Dean, O.A.C., Guelph

In many cases milk leaves the farm in good condition, but is spoiled during distribution. In many towns and cities milk is sold by irresponsible milk dealers, or in shops which are not by any means sanitary, and where goods are kept with the milk. We frequently see cans of milk distributed by a man smoking a dirty pipe, and the air for several feet around the rig reeks with a vile-smelling tobacco odor. The milk from such a milk wagon or sleigh cannot be clean. Just fancy a man drawing smoke into his mouth, then exhaling it through nose and mouth, and then compelling all those near him to breathe such smoke, and those who deal with him drink milk which has been exposed to the vile odor. A man who does this, so far as his manners go, is no better than a hog.

We look for the time when the work of milk distribution shall be entirely controlled by a municipal authority, directly, as a matter of public ownership, which is the modern tendency, or indirectly through companies or corporations acting under franchises which will safeguard the interests of producers and consumers. The present method of having several small dealers driving over the same streets and distributing milk from cans and sagnons which are not at all up to sanitary requirements, is a wasteful plan, lacking the essentials of hygienic and economic principles. What a waste of human energy, horseflesh and whirling wagon "vitality" goes on every year in connection with the distribution of milk in towns and cities.

Where the municipality does not feel free to engage directly in milk distribution, it would, in our judgment, be a good plan to place the work in the hands of suitable corporations. It is the duty of a town or city to see that the inhabitants are supplied with pure milk. This is especially an important function in supplying pure water, if anything more important, because the very life of the children depends upon pure, wholesome milk.—Extract from an address.

Which Breed is Best

I would like some advice, sound and practical, on the following problem, through your paper. A and O have a bush in each, in the very fertile bottom land of the Saline River about one-third cleared. The soil produces luxuriant crops of clover, alfalfa, timothy, fodder corn, and winter wheat, also potatoes, roots, etc. Pasture in the bush is somewhat scant, but keeps growing all summer and ripens well the leaves fall. There is abundant grazing on the hay meadows. They keep a herd of 10 cows each and a few heifers, of fairly good size. Shorthorn cows, from which they derive an income of say \$700 a year by letting them rustle all they can as long as they can and feeding them mostly on hay through the winter. They are aware that this is not the best method, but as they cannot afford to hire much labor for clearing land and doing all the other work besides, they have to do it themselves and cannot spare much time for the better treatment of the cows. Feed also has hitherto been rather hard to get in sufficient quantity from the limited cleared areas. The most of dairying consists of making butter and selling cream.

Now the time has come when an abundant supply of feed (rough) is assured. They feel that on their high-priced land it would be well to get into dairying more thoroughly, as it is questionable whether they can compete with the prairie in raising beef or dual purpose cattle.

They feel they ought to go into pure bred dairy cattle of some grade in order to obtain the highest returns. Holsteins are very popular here among milk producers, and there are some good ones; their milk test is rather low for the purpose of the men. Ayrshires appeal to them as able to sustain a certain amount of roughing, Jersey also because of the high test, but yet pigs have to be kept, and these cows might not give enough skim milk. Would any other breed answer the purpose—Canadian, Brown Swiss, Guernsey? He is wise to try and obtain a milk strain of either of the above—A or Durhams? A. B., Yarrow, Cariboo Dist., B.C.

A and C are at the parting of the ways as to whether they shall make an effort to farm with dual purpose cattle or turn their attention to particular purpose cattle and make a special effort to farm along one of the lines. I am of the opinion that he will do better to go into special line dairying rather than attempt to farm with dual purpose cattle.

As to whether they had better keep Holsteins, Ayrshires or Jerseys, Canadians, Guernseys or Brown Swiss, is a matter they will have to decide for themselves. I am convinced that they can make a success of their dairying operations when any one of the breeds mentioned, excepting possibly the Brown Swiss, which is not likely to prove a very satisfactory animal for dairying in Canada, are kept. Under the conditions which they describe I believe the Canadian or Ayrshire would prove most satisfactory, and if it is proposed to do much in pork production then it is possible that the Ayrshire would prove the better of the two.

My experience and observation lead me to conclude, however, that a male is likely to get along best, that he will make the greatest success, with the breed that pleases him best, and I would accordingly suggest to A and C that if they defer changing their line of breeding until they have an opportunity to visit a good farm, say such as that at New Westminster or Victoria next summer, look over the different breeds of cattle as shown and then make up their minds as to which breed they like best. They will be able to find most excellent individuals that will give most satisfactory results in all the breeds.—J. H. Grisdale.

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GERMAN POTASH SYNDICATE
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TORONTO, ONT.

Planting the P

Fm. Naimith, Mont.

I begin this short reference to the continued that the ki was largely con success as a grower. My farm is slightly tural drainage, expos and good shelter, a rest by a granite being a rich, war quickly responds to get being underlaid by a moisture, even in the such as 1911.

As potatoes require in the soil, I prefer tation following peas, and the previous year credited with drawing manural constituents the vines, acting as a wood growth, and clean, mellow seed bed, crop. I also grow breaking pasture land in August, disking an one, haying, decom and proved a great success. This is repeated as of until snowfall. When and before the snow, use of the acre to go to the new ground.

In the spring, ear soon as the land is dry over the field. I th machine under and ha surface. With a plough, with marker a begin on one side of the land out planting furrows, I alternate four planting by hand, depending upon habit of covering by a simple by one horse, resemb plough, which covers a time and does the work. I run a short toothed lengthways of the rows, intervals, finishing just appear above the grou

Control of Bovine

Tuberculosis in cattle, rentable, is found in al cality in which cattle a is much more prevalen munities than in other is most prevalent when are closely stable. W saw evidence in the herd contracted in the fall. Since the cause is mow it is spread as know, now is to keep it out of herd and to eradicate diseased ones. All that is to remove the disease infect the premises, pro with other diseased herd healthy animals to herds. This sounds easy characteristics of tubercu it quite difficult. For in colosis is somewhat slow oppent and in the ear animal shows no outward diseas is thought to be is used as a healthy, re really is spreading the o.

TEST WITH TUBERC Early diagnosis is nec there are no dependable, the positive diagnosis, the However, the tuberculin derived and is reliable, competent and experience is of the herd is healthy purchase only tuberculin mals which have come berds. If they come fr berds they should be kept three months and re-kept

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There is no better work and last longer than any other separator. Go to the nearest I H C dealer who handles these separators and see how carefully they are made. You will find that they have phosphor bronze bushings—that the gears are spiral cut—are entirely protected from grit and milk, and at the same time are easily accessible. The neck bearing is trouble-proof. The patented dirt-arrester chamber removes impurities before separation begins. These separators are made in four sizes. Ask the I H C local agent to show you one, and give you a catalogue, or, write the nearest branch house for catalogue and any other information desired.

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The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizers, etc., make your inquiries free of charge to I H C Service Bureau, Harvester Building, Chicago, U. S. A.



Planting the Potato Crop

Wm. Naimith, Muskoka Dist., Ont.

I begin this short article by making reference to the soil, for I am convinced that the kind of soil of Muskoka has largely contributed to my success as a grower of seed potatoes. My farm is slightly rolling, with natural drainage, exposed to south and east, and sheltered from the north by a granite ridge. The soil, being a rich, warm, sandy loam, quickly responds to good culture, and being underlain by a compact subsoil, commonly called hardpan, it retains moisture, even in the driest seasons, such as 1911.

As potatoes require arduous humus in the soil, I prefer to grow in rotation following peas, which has been used the previous year. Legumes are credited with drawing lightly on the manurial constituents of the soil and the vines, acting as a mulch, tend to smother seed growth and leave a clean, mellow seed bed for the following crop. I also grow on sod land, breaking pasture land the first week in August, disking and harrowing at once to hasten decomposition of the sod and prevent grass from growing. This is repeated as often as required until snowfall. When sleighing comes, and before the snow gets deep, I haul and spread 20 loads of barnyard manure to the acre.

In the spring, early in May, as soon as the land is dry, I run a disk over the field. I then plough the manure under and harrow to a level surface. With a common single plough, with marker attached, I then begin on one side of the field, throwing out planting furrows, right and left alternately, four inches deep, planting by hand, distances apart depending upon habit of variety, and covering by a simple device drawn by one horse, resembling a snow plough, which covers two rows at a time and does the work satisfactorily. I run a short toothed, steel harrow lengthways of the rows, three times at intervals, finishing just as the plants appear above the ground.

Control of Bovine Tuberculosis

Tuberculosis in cattle, though preventable, is found in almost every locality in which cattle are raised. It is much more prevalent in some communities than in others and usually is most prevalent when the animals are closely stabled. Where the disease exists in the herd it may also be contracted in the pastures.

Since the cause and means by which it is spread are known, the problem now is to keep it out of the healthy herds and to eradicate it from the diseased ones. All that need be done is to remove the diseased cattle, disinfect the premises, prevent contact with other diseased herds and add only healthy animals to the healthy herds. This sounds easy, but certain characteristics of tuberculosis render this a very difficult task. For instance, tuberculosis is somewhat slow in its development and in the early stages the animal shows no outward signs of the disease, but is thought to be healthy, and is used as a healthy animal, while its pailly is spreading the disease.

TEST WITH TUBERCULIN
Early diagnosis is necessary. As there are no dependable, visible signs in the early stages, the problem of diagnosis is all important. However, the tuberculin test has been devised and is reliable when used by competent and experienced men.

If the herd is healthy, one should purchase only tuberculin tested animals which have come from reliable herds. If they come from doubtful herds they should be kept isolated for three months and re-tested.

If the test shows only a few diseased animals in the herd they should be removed at once and the stable disinfected. If the diseased animals are of a special value for breeding they may be kept isolated and the offspring removed at birth and never allowed to feed upon the milk of the diseased cow unless the milk is pasteurized.

MAKING A NEW HERD

If the majority of the herd is diseased, it is necessary to treat them all as diseased and to build up a new herd from the offspring. This is possible by removing the calves at birth and feeding them pasteurized milk and testing them every six months so that the diseased, if there should be any, may be taken from the new herd before they begin to spread the disease. This requires several years time, great perseverance in preventing the disease from being transmitted to the new herd, and persistent use of the tuberculin test.

We must have systematic and regular tuberculin testing. The disease is a slowly developing one; hence, to eradicate it requires several years of systematic and cooperative work on the part of both stockmen and veterinarians. If every community did its share of this work, eventually we should be rid of this dreaded disease.—Washington State Agricultural Experiment Station.

Avoid Loss from Short Pastures

Prof. W. Fraser, Illinois Exp. Station

For the farmer who can make the larger investment, the most practical way of all to provide green feed for summer drought is to fill a small silo with corn silage. It not only saves the labor and inconvenience in the putting in and the cultivation of small patches of different kinds of crops, but also in harvesting from day to day in a busy season of the year.

These siloing crops can be dispensed with and all the feed raised from one planting in one field in the shape of corn, in the harvesting of the silo may be cut at just the right stage of maturity, when the most nutriment can be secured in the best possible condition for feeding. It also avoids the possibility of the silage in crops failing to ripen at the exact period when the drought happens to strike the pasture. For the silo may be opened whenever the pasture fails, regardless of the date, and the silage will remain in the best condition as long as needed.

When the pasture again supplies sufficient feed what is left in the silo may be covered with and thus preserved with little waste and added to when refilling the silo.

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Via Chicago and St. Paul, April 30th, and every second Tuesday thereafter until Sept. 17th, inclusive. Tickets will also be on Northern Navigation Company's Special train will leave Toronto 10:30 p.m. on above dates for Edmonton and points in Manitoba and Saskatchewan, stopping at all points on Grand Trunk Pacific Railway west of Winnipeg. Through coaches and Pullman Tourist Sleepers will be carried fully equipped with bedding and porter in charge. Bertha may be secured in sleepers at a low rate. This is an exceptional opportunity for those wishing to take advantage of the remarkably low one-way Settlers rates or round trip Home-seekers' excursions through the American cities. No change of cars. Secure tickets and berth reservations from any Grand Trunk agent, or write A. E. Duff, District Passenger Agent, Union Station, Toronto.

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If you expect to continue farming and raise a paying crop every good year, you must arrange to return to the soil the plant food taken from it by growing crops. Neglect is bound to decrease the productivity of your farm, and, in the end, to run it. When a farm is once run down it takes years of slow, careful upbuilding to bring it back to its original fertility.

If you attempt to fertilize by spreading manure with a fork, you fertilize unevenly and waste fully half the manure. When you use an IHC manure spreader properly, the fertility of your soil remains at a constant standard, while your physical condition improves from year to year, assuring bumper crops in good years, and the best possible stand when weather conditions are unfavorable.

IHC Manure Spreaders Corn King and Cloverleaf

will spread manure as it should be spread, in an even coat all over the field, light or heavy as may be needed, and pulverized so that the plant food elements in it combine with the soil.

An IHC spreader has many mechanical advantages. The apron moves on steel rollers running on steel tracks. This construction reduces draft and prevents the apron from stopping under the load. The apron feed mechanism and beater gears are provided with shields which protect them from sleet, snow, and manure. A strong durable feed moves the apron steadily toward the beater manure spreading whether the spreader is going up hill or down.

Compare the IHC apron feed mechanism with that of any other manure spreader and see how much stronger and more positive it is. IHC spreaders are so constructed in every detail that they do their work positively, with the least effort on the part of driver or horses.

IHC spreaders are made in different styles and sizes, for use in orchards, vineyards and gardens, on small and large farms. The IHC local agent will show you the machine best adapted to your needs. See him for catalogue and full information, or, write nearest branch house.

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AND RURAL HOME

Published by The Rural Publishing Company, Limited.



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FARM AND DAIRY

PETERBORO, ONT.

FERTILITY AND LAND VALUES

In the greater part of rural Ontario and in fact all over Eastern Canada farm values on the average are decreasing. This decrease in value is partly due to economic reasons, such as indirect taxation and the great increase in land values in our cities. But in many cases a factor of almost equal importance in lowering farm values is the decreased fertility of the soil and reduced crop producing power due to poor methods of farming.

This problem of conserving soil fertility is one of the greatest which we in Canada have to face. Millions upon millions of dollars worth of fertility are wasted each year through the selling of our products from the farm, through the improper care of manure and through poor methods of soil management. The system of farming that many of us have been following is not farming at all,—it is mining. We have been taking much from the soil and replacing lit-

tle or nothing. The new lands of the west will offer for a time a Mecca to those of us who wish to mine rather than farm, but in time even those new lands will wear out.

Conservation commissions appointed by the government will do much good in recommending legislation that will lead to the protecting of many of our natural resources, such as forests, fisheries and minerals. We farmers, however, must solve the problem of the conservation of fertility, the greatest of all national assets. Live stock farming, short rotations and the wise use of fertilizers are factors in soil building that we must give more and more attention to if we would conserve the fertility of our farms and check the decreases in land values that come as a consequence of poor farming.

A MISTAKEN IDEA

The sympathy that our farmers have for the working people of our cities is a sentiment that seekers after tariff favors are inclined to play upon in order to get our support for their tariff schemes. We are told that were it not for the protective tariff the toiling masses of the city would be out of work, with all the consequent suffering that that involves. One would almost think to hear protectionists talk that the very life of the working man depended on the existence of the protective tariff. Their argument sounds well in theory, but it does not work out in practice.

The woollen industry of the United States is one of the most highly protected organizations of that country, and yet employees of one of the largest concerns in Lawrence, Mass., were recently obliged to hold a great strike, entailing for them all kinds of hardship and suffering in order to get—not big wages, but enough to keep soul and body together. While the woollen operators were calling on the people of the United States to uphold the enormously high tariff that they enjoy, they were at the same time oppressing their employees to such an extent that wages in many cases were actually below what were required for the barest kind of necessities.

We do not have to go to the United States for instances of this nature. Some years ago the employees of the Dominion Textile Company, at Valleyfield, Que., went on strike. The company admitted the justice of the claims of their working men, but explained that the tariff was so low, and hence profits, that they could not afford to pay more. The Government's investigation revealed the fact that the stockholders of that concern were getting fifty per cent. dividends on all the money that they had actually paid into the company.

The wages of labor are not determined by the protective tariff. Wages are determined by supply and demand. And we have free trade in labor. The manufacturers actually maintain an employment agency in the Old Country to bring over more labor to further reduce the wages that they will have to pay to their employ-

ees. And at the same time they are asking the people of Canada, we farmers and the laboring men of the cities, to maintain a tariff that enables them to sell in a closed market, while the laboring man must sell his labor in the free and open market.

We farmers, when through our organizations we demand a reduction of the protective tariff, are not selfishly ignoring the interests of our brethren in the cities. They, like us, are selling their product in the unprotected market and buying the necessities of life in a protected one. Both of us stand to benefit by freer trade.

MIX FERTILIZERS AT HOME

So widely do the requirements of different soils vary in their fertilizer requirements, that we farmers must mix our own fertilizers if we would get the best and most profitable results from their use. And yet there is no other department of farm work that we are so inclined to leave to the other fellow as the mixing of our fertilizers. We usually tell the fertilizer agent what crop we intend to use the fertilizer on and allow him to select the fertilizer and set the price.

Did we experiment with the needs of our soils for various crops, we would be in a position to buy the pure chemical fertilizers and ourselves mix them to good advantage. We would save money in that we would buy only the fertilizer actually needed by the crop and we would save money in the mixing. The increased profit would be more than enough to repay us for studying the fertilizer problem well enough to mix fertilizers intelligently at home.

COOPERATION IN BREEDING

Our breeders of pure bred dairy cattle are coming to realize that through the adoption of cooperative community breeding and selling they will get more satisfactory returns than from the old competitive, every man for himself system. The success of the Belleville District Breeders' Holstein Club affords splendid proof of the wisdom of this cooperative policy. Other breeders are falling into line, and we now have the Menzie District Ayrshire breeders, Oxford Holstein breeders, and Southern Ontario Ayrshire breeders, uniting themselves into breeding clubs. All of this is along the line of twentieth century progress.

In Canada so far community breeding has been confined to our pure bred stock men. In the older countries of Europe cooperative effort has more generally been directed to the improvement of the ordinary grade stock of the country.

It is in this latter field that cooperative effort can be most beneficially applied in Canada. Two factors have stood in the way of the larger use of pure bred sires in our grade herds,—the first cost of the pure bred animal, and then the necessity of changing him at intervals of one or two years without an opportunity to sell the old one to advantage. Cooperation would overcome this difficulty. Let 30 farmers in a section form a breeding as-

sociation. These 30 farmers could probably find use for three pure bred sires. The cost of the three sires divided over the whole 30 members would make the expense to each individual farmer small; within the reach of the poorest of us. Instead of each cherishing the sire at the end of one or two years to avoid inbreeding, we would simply change around within the association. This plan is simple, and it has worked most successfully in the great dairy sections of Europe. We would do well to try it in Canada. Its success is assured.

Now is a good time to use the plow log drag. Smooth down the ridges and fill the ruts.

Those of our farmers who have not yet ordered their seed for spring seeding, particularly the small seeds, clover, timothy, and alfalfa, will be wise to do so at once. The supply in all these lines is exceedingly limited. The best grades are being rapidly sold out, and later orders, if filled at all, will be met with a very inferior grade of seed. The supply of home grown seed this year is much short of normal. Many farmers who have always grown their own seed in previous years will this season be added to the list of buyers.

Hence the shortage in the seed supply.

Canada will give \$30,000,000 in subsidies to railway lines that are privately owned, this coming year. One would think from the government assistance that our railways secure but railroading did not pay in Canada. And yet all lines are over-capitalized and some of them are paying large dividends on heavily watered stock. Isn't it time to call a halt on such an insane expenditure of the public revenue.

Prime Values in Breeding

Breeders' Gazette

To develop and maintain the few absolutely essential values in modern breeds of stock does not require the use of expensive buildings or the lavishing of feed and attention upon them. It is imperative need for more discretion in the feeding and management. Instead of two or three bushels there should be six or eight on which to draw in compounding rations. Steers, hams and sheds should be kept cleaner and better ventilated. Sires and dams should be selected with special reference to constitution and vitality, fecundity as indicated by heredity, and general adherence to types which, without offsetting those values, commend themselves to the block or other economic use.

If animal breeding is to be a permanent and profitable industry, the values which nature inexorably demands rather than those which capricious markets sometimes seem to favor, should be constantly sought. Accepting markets as their exclusive guides, breeders might in time "improve" some of the most valuable breeds out of existence. Serious mistakes have been made by breeding for personal ideals of form which run counter to the wise ways of nature.

That is what we do at all times in the breeding and raising of pedigree stock is the lively personal interest of stockmen with common sense and patience.

Population and L

The natural reproductive rate of the population of ninety million is more than sufficient to maintain the year round of efficient hands in number. It follows, therefore, that the labor force is ever willing, hands are available, and human nature is ever wholly contented. Idle labor is a loss; that of the laborer means of subsistence and that of the consumer power by the value of the product which he might have produced if employed.

The advocates of a contented population contemplate "a surplus" as a desideratum for the industrial enterprises of the world. They are selfish and whatever conditions may result from a surplus property of the consumer will run their industries well to profit, for the time being, the existence of such labor, with its attendant wages.

POPULATION BRINGS American rural life to a standstill. It is the American rural life that has the best economic advantages so long as it is upon transient or nomadic carrying on of the land during the critical season, and habitually recurrent population whose lands double or quadruple the land. The denial of ho-

XXVI

"To us it seems a money to place an ad in a paper simply to state and sell certain line of our prices are lower, goods are better, than yours, etc., etc."

"We very rarely say about our competitors 'LET HIM PAY FOR ADVERTISING'; we are going to give him any, etc."

"The idea we practicing is to just keep going at it; make our correspondents welcome good any and all promote, therefore,—then success come our way."

"When business is we give the most attention advertising."

These words of wisdom testimony of a Farm Company, at Norton, I. What think you of it, thy?

It is a winning prospect real sales talk into vertisements rather statements, which may be disputed; it's well to advertise your competitor sure is well to do things they mention, at BUSINESS IS MOST GIVE THE MOST ATTENTION TO YOUR ADVERTISING.

Do these things and prosper

You will, of course, the proper media, at the prosperous dairy farmer want to reach you will paper, Farm and Dairy "A Paper Farmers S

Population and Labor Supply

The natural requirements of a population of ninety millions of people are more than sufficient to afford employment, the year round, for every pair of efficient hands included in the number. It follows, then, that wherever willing hands are compulsorily idle, some human requirement remains either wholly or partially unsatisfied. Idle labor involves a double loss: that of the laborer himself, whose means of subsistence are shortened, and that of the community, which is poorer by the value of what the laborer might have produced if kept steadily employed.

The advocates of a system which contemplates "a surplus of labor" as a desideratum for the prosperity of industrial enterprises are as foolish as they are selfish and inhuman. For whatever conditions mark the general prosperity of the State must in the long run react against that of particular industries which seemingly profit, for the time being, through the existence of such a surplus of labor, with its attendant low scale of wages.

POPULATION BRINGS PROSPERITY
American rural life will never attain its best economic and social development so long as farmers depend upon transient or nomadic labor for the carrying on of their operations during the critical seasons of the year, and habitually repel the permanent population whose coming would double or quadruple the value of their lands. The denial of homes and steady

employment to the agricultural laborer, and the general refusal to employ married men unless they will agree to leave their families elsewhere attack the very sources of a wholesome development.

The only natural and healthy labor system, in an agricultural region, presupposes the occupation of the land by those who till as well as by those who own it. Attach the laborer to the land by the tie of ownership, no matter of how small an area so that it suffices for a home, and the foundation is at once laid for such a system. The average American farm of 160 acres may profitably afford homes, with four or five acres attached, for a dozen families beside that of the present owner. In France and Germany, 30 or 40 families find on such an area the means of livelihood, for educating the children, and for saving up something for investment.

HEARTLESSNESS
The essential heartlessness of a large portion of the "deals" between farmers and laborers is illustrated by a plan commended in Farm, Stock and Home as used by "one of the most successful farmers and handlers of men in the North-West." It is outlined as follows:

"When hiring a man he engages him for the entire season, say for eight months, at a total of \$240. Assuming the time of beginning work to be April 1st, the hired man is credited for April and May with \$15 a month. In June a credit of \$20 is placed to his account. July he receives a credit of \$22. During August this amount is raised to \$30, and in September, when harvest wages begin to appeal to the man hired on the ordinary flat schedule, his month's credit is \$35. There remains due him for the entire period \$30, which is distributed over the remaining two months."

NOT AS GOOD AS IT LOOKS

In its commendation of this plan as securing the farmer against loss by the hands quitting without warning, and as being also "to the advantage of the man who hires out," the paper quoted entirely ignores the fact that at the end of the engagement the man is rewarded for his faithful services by being thrown out of work, with a dubious chance of finding other employment for the remaining one-third of the year. Spreading the \$240 he gets over the additional four months, his wages in reality amount to only \$20 a month.

If the "successful farmer" who shrewdly contrived this scheme should address himself to the problem of finding year-round employment for as many men as he at any time needs on his farm, and tying their fortunes to his by allotments of small parcels of land, he everywhere attended with marked increase in the value of land; and the substitution of a settled for a nomadic laboring population means a large increase in the general prosperity.—C. R. Barns, Extension Division, Minn. College of Agriculture.

Dairy Notes

The way the cow fills the pail is a good indication of the liberality of the owner at the feeding end.

There are money makers in every breed. Likewise there are star boarders. The secret of successful dairy farming is to cull out the latter and improve the former.

Enthusiasm is as necessary in dairying as in preaching. To work up the proper enthusiasm we must have the breed we like.

SEE AND TRY A DE LAVAL CREAM SEPARATOR

We cannot believe that there is a sensible man living who would purchase any other than a DE LAVAL Cream Separator for his own use if he would but see and try an improved DE LAVAL machine before buying.

It is a fact that 99% of all separator buyers who do SEE and TRY a DE LAVAL machine before buying purchase the DE LAVAL and will have no other. The 1% who do not buy the DE LAVAL are those who allow themselves to be influenced by something else than real genuine separator merit.

Every responsible person who wishes it may have the Free Trial of a DE LAVAL machine at his own home without advance payment or any obligation whatsoever. Simply ask the DE LAVAL agent in your nearest town or write direct to the nearest DE LAVAL office.

DE LAVAL DAIRY SUPPLY CO., LIMITED
173 WILLIAM ST., MONTREAL 14 PRINCESS ST., WINNIPEG



XXVI

"To us it seems a waste of money to place an advertisement in a paper simply stating that we sell a certain line of goods, that our prices are lower, that our goods are better, than our competitors, etc., etc."

"We very rarely say one word about our competitors. We say, 'LET HIM PAY FOR HIS OWN ADVERTISING'; we are not going to give him any, that is sure."

"The idea we practice in advertising is to just keep everlasting at it; make our callers or correspondents welcome; make good any and all promises we advertise, —then success is bound to come our way."

"When business is most quiet, we give the most attention to our advertising."

"These words of wisdom are the testimony of a Farm Implement Company, at Norton, Kansas."

"What think you of this philosophy?"

It is a winning proposition to put real sales talk into your advertisements rather than mere statements, which may or may not be disputed; it's well not to advertise your competitors; and it sure is well to do those other things they mention, and "WHEN BUSINESS IS MOST QUIET GIVE THE MOST ATTENTION TO YOUR ADVERTISING."

Do these things and you will prosper.

You will, of course, first select the proper media, and when it is the prosperous dairy farmers you want to reach you will be in this paper, Farm and Dairy—

"A Paper Farmers Swear By"

NEXT SPECIAL

will be our 4th Annual Farm Improvement Number of Farm and Dairy, out May 2nd. Plan now to be in this great issue. Get your copy in early, and the best of our service will be yours.



"You Bet It's Fine"

You can use this razor with safety and comfort.

Once you use it you will never do without it.

"Say friend! Ever use a Safety Razor?" "No, I never felt I could afford \$5.00 for one."

"I never could afford to give that much for one either, but I noticed recently that I could get one free from Farm and Dairy. I sent for one, first getting them two new subscriptions to their weekly farmers' paper, and I tell you it's great."

"It's a Gem Junior Safety Razor" and is highly polished. It shaves so easy I could hardly believe myself that it was taking off the whiskers."

"And it has seven genuine Damasked Gem Junior Blades and a combination stropping and shaving handle, so I can keep them sharp and in use for shaving indefinitely."

Brother Farmer! We have a Gem Safety Razor outfit for you, just as described, and we'll send it to you in a substantial velvet lined box, just as shown; it will be sent to you postage paid and absolutely free in return for getting us only two new subscriptions to Farm and Dairy at only \$1.00 each.

This is a most useful, satisfying article and will prove a delight to any man who shaves.

We're glad to be able to offer it to you this way. We know you'll like it and tell your friends about it.

See right away about getting two of your friends to subscribe to Farm and Dairy, and then write us for your Safety Razor.

Farm and Dairy

Peterboro, Ont.



START READY FOR STROPPING. RAZOR READY FOR SHAVING.

A Gift for you



THE FENCE MAN
HE PAYS FREIGHT

Write direct to buyers at factory prices. Iron and Wire Lawns and Farm Fences, all styles; Gates; Barbed Coiled and Plain Wire; Staples; Fence Hooks; Tools. Special prices on orders.

I save you big money, give you best looking and quick service. Here are sample prices:

All No. 9 Fence, 9 strands 75c
12 strands 25c
7 strands 22c

Send for my illustrated catalogue of fence business. My printed matter explains my methods. Get it. Write to-day.

EDDY ER. THE FENCE MAN
"FENCE" TORONTO
Ask for Folder "L."

Annapolis Valley Fruit Farm

225 acres; the most wonderful bargain in this celebrated Nova Scotia Valley; good 8-room house; 60-ft. barn, room for 2000 hay, cellar under all; 40 acres rich farm machine-worked fields; young apple orchard, 200 trees; wood and timber will make a man independent; pasture for 25 head, spring watered and wire fenced near neighbors and advantages; the sacrifice price for quick sale is only \$15,000, part cash; act quickly or you will lose this. For all details and travelling instructions to this and another with 15 acres in orchard, see page 62, "Strout's New Mansmuth Farm Catalogue, No. 35," just out copy free; profusely illustrated and filled with a wonderful assortment of money-making farms throughout many rich farming sections; stock and machinery included with many at big sacrifices to settle the affairs quickly. We Pay Buyer's R. R. Fare. Station 2471, E. A. Strout Farm Agency, 294 Washington St., Boston, Mass.

Hay Tools, Litter and Feed Carriers Stanchions, Etc.

Get Our Prices Before Buying

R. DILLON & SON
SOUTH OSHAWA, ONT.

WANTED

WANTED—A good Farm Hand (married man preferred), must be sober and have a knowledge of farm work. Mention skill and salary wanted. Apply to P. O. Box 24, Atholstan, Pro. Que.

\$25 Buys a Sureshuttle File Machine

either 3 inch or 4 inch size, order early and make your own cement tile for spring use. Capacity depends on size of the operator, ranging from 300 to 500 tile per day. Send for literature.

WILLIAM JOY, Box 175, Nepesee, Ont.

The "Perfect" Steel Cheese Vat

Our "Perfect" Steel Cheese Vat has several unique merits. Being all steel it is durable, having no cracks or granules for mold to lodge in and decompose. It is sanitary, having levers and gears for lowering and raising.

ing inch by inch, it is handy. Also it is so built that it drops runs out; that is, it is an ideal drainer.

Write for our special catalogue of dairy machinery.

SPECIAL PRICE FOR CASH

Steel Trough & Machine Co., Ltd.
TWEED, ONT.

Cheese Department

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

Conditions in Glangary County

A. McDonell, Glangary Co., Ont.

There are still a large number of farmers who follow the old system of airing the milk and not cooling it with ice or cold water immediately after milking. The result is that we have the usual amount of over-ripe milk, acid cheese, and a larger average loss of milk during the hot weather. In my opinion the cheese makers

A. McDonell has made more of an effort to improve the quality of the cheese in this section of Ontario than the farmers have. This is seen in a number of instances during the summer when you see a fairly good article produced from milk that is not fit to be taken to a factory.

There are a large number (and I am glad to say the number is increasing rapidly) who make an honest article, who take the best care of their milk. These patrons have good milk-stands situated where the milk will not become contaminated from unclean surroundings. They use clean utensils and have ice or cold water to cool the milk immediately after milking; hence the maker has a chance to make a sound clean article.

E. O. D. A. Executive Meet

A meeting of the executive committee of the Eastern Ontario Dairy-men's Association was held in Smith's falls on April 18. Great regret was felt over the announcement that the president, Mr. J. H. Singleton, of Smith's falls, who is one of the best known dairymen in the province, was dangerously ill in a Montreal hospital. Mr. Singleton has been sick some 10 weeks.

The resignation of Mr. Street as one of the official prosecutors was accepted and Messrs Glendenning, Thompson and Puhlow were appointed a committee to make arrangements for the appointment of an official prosecutor or prosecutors for the coming season. Mr. Street's resignation was tendered in order that he might take up cow-testing work. A report submitted by the treasurer showed that the association has a considerable balance on hand.

Resolutions were passed expressing the regret of the association concerning the sickness of President Singleton, and the recent death of Mr. M. K. Everetts, of Smith's falls, a former president of the association.

Jottings

I believe that cheese is a better paying proposition than butter unless over-excessive value is put on the skim-milk.

— R. W. Ward, Dairy Instructor, Peterboro Co., Ont.

Cooling milk is not a cure-all but it will go a mighty long way towards placing our dairy business on a better basis.—Chief Dairy Instructor G. G. Puhlow, Kingston, Ont.

If we would follow cheese up each year, we would find that it is the cheese with the flavor that holds that the buyers are after each year. They do not stick on one-fourth of a cent to get such cheese. They go after the same factories each year.—D. Derbyshire, Leeds Co., Ont.

You are going to buy

a Cream Separator this year. You have your choice of a number of standard makes, including the famous

EMPIRE
Cream Separators

which will do some things others won't—because Empires have some patented features that have never been successfully imitated, although competitors would gladly copy them if they were not for Empire Patents. Just what these features are, is fully explained in the Empire booklet.

Get a copy—Learn the facts

If they interest you deeply, as we believe such facts will, go to our agent in your locality (we will furnish you his name) and tell him to deliver an Empire to you for Free Trial, without obligation on your part to buy, unless it is proven to you that the Empire fulfills our claims. We are willing to let the Empire demonstrate its efficiency to you. It's your ultimate choice—the machine you'll buy sooner or later. Just hasten that day by writing to us by first mail.

The Empire Cream Separator Company of Canada, Limited

32
WINNIPEG, TORONTO, MONTREAL, SUSSSEX.

Agents everywhere in Canada—Look for the Empire Sign.

Mr. Dairyman—
Have you tried **Caldwell's Molasses Meal** for your Cows?

"You are a loser if not a user!"

If not, Now is the time to get the very best results from its use.

Cows that come through the winter in a thin condition are not in shape to do their best at the milk pail.

When turned on grass it takes a month or two before they are back to normal condition.

Can you afford to lose the time, when one bag of Caldwell's Molasses Meal fed to each cow from now until the pasture is ready will insure perfect condition and profitable returns?

Caldwell's Molasses Meal contains no spices or drugs, is manufactured in the largest and most modern feed mill in Canada under expert supervision. No Beet molasses enters into its composition. It is dry to the touch, of a pleasant odor, palatable, highly nutritious, and best of all, gives results.

And please remember that it costs you nothing extra to use as it takes the place of an equal quantity of ordinary chaps.

Mail the Coupon and we will send you booklet and all particulars as to cost, etc., together with current copy of our magazine.

"FARM AND DAIRY"

Please send me booklet and full particulars as to cost, etc., of Molasses Meal.

The Caldwell Feed Co.
Limited
Dundas, Ont.

Write for this Booklet

Name.....
Post Office.....
County.....
Province.....

OUR FARM HOMES

BE noble, and the nobleness that lies in other men, sleeping, but never dead, will rise in majesty to meet thy own.—Lowell.

The Second Chance

(Copyrighted)

NELLIE L. McCLUNG

Author of "Sowing Seeds in Danny"
(Continued from last week)

Pearl, the eldest daughter of John Watson, a C. P. E. section man in Millford, Mass., receives a sum of money and starts in to educate herself and the rest of the family. She proves a clever scholar but seeing that her small brothers are getting into bad habits in town, suggests moving the family on to a farm. We are next introduced to the children at a country school. Mrs. Steadman, a bulky, is threatened by Bud Perkins for striking Libby Ann Carter. The Watsons again take up their abode in a new place. The Watsons again take up their abode in a new place. The Watsons again take up their abode in a new place. The Watsons again take up their abode in a new place.

"I HAVE known men to marry uneducated women, and be very fond of them, too," said Mr. Donald thoughtfully. "Some of the Hudson's Bay factors married squaws."

"I know," Pearl agreed. "Old Louie Baker, the surveyor's guide, told Pa about his squaw, Rosie. He liked Rosie fine and thought she was real pretty when there wasn't a white woman in sight, but when the white women began to come into the country he got ashamed of her. Rosie, and every day she seemed to get dirtier and greasier, and her toes turned in more; and, anyway, Mr. Donald, it's hard for a woman to feel that she isn't just up to the mark. Getting married ain't all there is to it, you see. It's only in books that they say people get married, and leave it like that, for that's when the real hard times begin—keepin' it up and makin' it turn out well. That's the hard part."

Mr. Donald looked at her in wonder. "You have wisdom beyond your years, Pearl," he said gravely.

"All Martha needs is more education, and there's lots of it lyin' around loose—it's stickin' out of everything—it's in the air and in the ground, and all over, and it seems too bad if Martha can't grab hold of some of it, and her so anxious for it."

"The well is deep, and she has nothing to draw with," the schoolmaster quoted absently.

Pearl recognized the words, and quickly answered: "Do you mind that the woman was wrong about that when she said there was nothing to draw with? Well, now, I believe Martha has something to draw with, too—she has you and me, and she has. You have the education that Martha needs. I'm gettin' it every day. Can't you and I pass it on to Martha?"

"How, Pearl?" he asked.

"I don't know just yet. I haven't got it thought out that far. But there's some way, there's always some way to help people."

It was time to go to school then, and no more was said until the next day. When Mr. Donald said to Pearl: "I believe events are coming our way. Mrs. Steadman told me last night that she was going to Ontario for three months, and I am to go elsewhere to board. I wonder would Mrs.

understood something of the springs of the heart, understood.

"I can't help being happy," Martha went on. "I tell myself that it's wicked for me to feel so glad. That's gone, when he's so miserable over it. But she wouldn't ever have suited him, would she, Pearl? She'd have made him miserable before long, and herself, too; but that's not all the reason that I'm glad she's gone," she added, truthfully.

Martha's face was hidden on Pearl's shoulder as she said so. "I know about it," Pearl said. "I found it all out that day when you were showing me the room, and I'm just as pleased as you are, or prettier. Of course, it would never have done for him to marry Thursa, and the way it all turned out would convince any one that Providence ain't feelin' above takin' a hand in our affairs. She was nice and pretty, and all that, but she's the kind that could always have sour bread, and you bet, sour bread cuts love; she'd be just like David Elder's wife, but she's dreadful to sweep the floor; it tires her can go to three dances a week, and then she lies on the lounge all day and says her nerves are bad. But Martha, you do risk a good deal, never wrong to be happy. God made everything to have a good time. Look at the coppers and birds, and even the mice—they have a bang-up time while it lasts. We got to be happy every chance we get. When ever you see it passin' by take a grab at it. I mind, when I was a wee little thing, I had a piece of bright blue silk that I had found, and it was just lovely; it put me through a whole winter takin' a look at it now and then. I had to stay at home while Ma was washing, and it was white-cold in the house sometimes, but the blue silk kept me heartened up. It's just like a piece on Arthur's phonograph—here and there in it there's a little tinklin' song, so sweet and liltin' it just cuts into yer heart; but, mind you, you don't get much o' that at a time. There's all kinds of clatter—crash, smash, and jabber on both sides of it, cuttin' in on yer ears of it, and just when yer gettin' tired of rough house, in she sails again sweeter than ever, just puttin' yer heart crossways with the sweetness of it. It keeps ringin' in my ears all the time, that dear little ripplin', tinklin' tune, and perhaps it needed all that gusty burzin' and rip-roarin' to drive the sweetness clean into you. That's the way it is always, Martha; we've got to listen for the little song whenever we can hear it."

"I'm listening to it all the while," Pearl said softly. "It may not be meant for me at all, but it is hearing it, can I Pearl?"

Pearl kissed her friend warmly and whispered words of hope, and then, fearing that this might be faith without works, he had spelled a page of words from Bud's old speller.

CHAPTER XXIX.

MARTHA'S STRONG ARGUMENTS

"How does love speak?"

The next week Mr. Donald moved over to the Perkins home. His trunk had been sent to the morning, and after school he walked home. Pearl, Mr. Donald had seen Martha at the services in the schoolhouse, but had not spoken to her. Pearl now brought him in triumphantly and introduced him to Mrs. Perkins as Martha.

The cleanliness and comfort of the big square kitchen, with its windows filled with blooming plants, its window-sill a nest of yellow birds, its hanging canary, the well-blended reds with its cheerful glasses of firelight, the bubbling tea-kettle, all seemed to promise rest and comfort. Martha, neatly dressed in a dark blue dress, with dainty white collar and apron, greeted him hospitably, and told him she hoped he would be comfortable with them. There was only a shy reserve that seemed to veil his head, steady grey eyes and gentle voice. Pearl was distinguished of Martha.

When Mr. Donald went up to the room he looked around him in pleasant surprise. It was only a small room, but she hoped he would be comfortable with them. There was only a shy reserve that seemed to veil his head, steady grey eyes and gentle voice. Pearl was distinguished of Martha.

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(Continued next week)



Evergreens Make an Effective Setting for the Farm House
The home of Mr. Weaver, Brant Co., Ont., is here illustrated in its setting of spruce. Evergreens, spruce, pine, etc., have an advantage in the winter months in that they give the farm home an attractive setting even in the winter months.

—Photo by an editor of Farm and Dairy.

The Upward

Lessons from t

The terrible disaster Titanic, with the apparatus struck a chill to the civilized people and hearts to go out in sympathy to the bereaved, well as to those who again on earth will as they have lost. Their minds have conceived vessel and its happy shattered and overturned after ship, though the night with all spirit, and of only the few and children, who vent in small boats and of ing saved, has caused a safe in our home bank God to us here from such an experience hearts have gone out

Have You M Will

If Not, Your Fa protect

No Lawyer sary

For thirty-five cents you will and be absolutely perfectly legal in every it cannot be broken by

Delay in making your ties to those whom you care of. The courts are where, by legal technical also includes the property are almost that the deceased would want

So if you wish to assure nearest and dearest to all that you wish them to enjoy \$5.00 to \$10.00 30 cents for a Box Letter also includes the instruction. Fill it out and sure that it will stand and cannot be broken or

Why not send today, on your mind to The B Room 775 College St.

GRAND TOUR

NOMESEEKERS' AN EXCURSION

TO WESTERN CANADA

April 16th, 23rd

And every Second Tuesday Regt. 274. Inclusive. SPECIAL TRAIN WILL AT 10.30 P. M. ON WEDNESDAY AND FRIDAY AND BASKATHEWAN, St. Paul, carrying through Pullman Tourist sleeping

NO CHANGE O

Full particulars from Agent, E. R. McVernon, Western Agent, Palmerston, N. B. THE MOST POPULAR TRAIL, BUFFALO, NEW YORK DISTRICT Grand Trunk, the only

DOUBLE TRUCK

STEAMSHIP TICKETS OF LINE

For Tickets and all to any Grand Trunk Ag

There is no purer happiness than the love of work, the results of which are manifest in the welfare of others.

The Upward Look

Lessons from the Titanic

The terrible destruction of the Titanic, with its appalling loss of life, has struck a chill to the hearts of all civilized people and has caused our hearts to go out in the deepest sympathy to the bereaved survivors as well as to those at home who never again on earth will see the loved ones they have lost.

The picture our minds have conceived of the stately vessel and its happy throng being shattered an ever-holmwood ere an altar ship, though it sped through the night with all speed, could reach it, and of only the few, mostly women and children, who ventured their lives in small boats and on frail rafts being saved, has caused those of us who are safe in our homes at the time to thank God that we have been spared from such an experience. And so our hearts have gone out in love and sor-

row for those who have died, as well as to those who have been left to mourn, we have been brought to realize how wonderfully akin we all are. It matters not that among those who have been stricken were people of other nations, and, in some cases, of other tongues, or that some were rich while others were poor, our hearts have bled for them all alike. And so they should, for has not God made of one blood all nations of men to dwell on all the face of the earth? (Acts 17, 26.)

It is hard at such times as these to understand why our loving Heavenly Father should permit such events to happen, and yet we positively know that He doeth all things well. Just as the tender heart of Jesus was torn until He wept in sympathy with the sorrow of Mary and Martha over the death of their brother Lazarus (St. John 11, 35), so we may know that the infinitely tender Creator is grieved and stricken in spirit on occasions of this kind. It is when we think of God's great love for us—a love so great that He gave His only son to die for our sakes—that we are led to see that the saddest feature of this great disaster was not the loss of life but the fact that among those who died there may have been those who were not ready to answer God's summons when it came. For those who love God and who strive to live in communion with Him day by day, death, as St. Paul said, is but gain. It matters but little to them how suddenly it may come, or where it may find them, for they know that their Heavenly Father will be with them in death as in life, and they look for a glorious resurrection. But to those who have neglected God's warnings for eternity, how terrible must be the unexpected call when it comes! Is this not the great lesson this terrible incident should teach us, that at all times we should be prepared to meet our God? And we may learn that death is no respecter of persons. Those on the Titanic whose wealth was counted by the scores of millions were as powerless to postpone the dread moment when it came, calling them to depart to stand before the judgment throne of God (Romans 14, 10) as were the poorest.

And then, also, we should remember that we have all been warned to be prepared for death when it comes. Christ warned us when He said, "Watch, therefore, for ye know not what hour your Lord doth come" (St. Matthew 24, 42). The apostle Paul warned us when he wrote to the Thessalonians, "But of the times and the seasons brethren, ye have no need that I write unto you. For yourselves know perfectly that the day of the Lord so cometh as a thief in the night. For when they shall say, Peace and safety; then sudden destruction cometh upon them, as travail upon a woman with child; and they shall not escape." (1 Thessalonians 5, 1-3). If, therefore, those of us who are in the world now pay heed and follow ever more earnestly St. Paul's advice that he gave at the same time we will "watch and sober," we will put on "the breastplate of faith and love, and for a helmet, the hope of salvation" and we will remember his glorious assurance that "God hath not appointed us to wrath, but to obtain salvation by our Lord Jesus Christ, Who died for us, that whether we wake or sleep, we should live together with Him." (1 Thessalonians 5, 8-11). —J. H. N.

The Farmer

If things were managed here quite fair
The workers all would get their share
And bring contentment to the home
Of many a one who has to roam.

Instead of that the wires are pulled
And workers all are greatly fooled
They are piled up with extra cars
To make a few more millionaires.

But when the farmer goes to sell
The shares they all set up a yell
And try to cheapen all a yell
To satisfy the bulls and bears.

Then when the farmer goes to buy
He finds the prices all up high
To satisfy a few men's greed
And leave the many sore in need.

Commission men they work a bluff
Some cheat all round in selling stuff
And those great rogues are not a few
Who live in style the winter through.

Another set they take first rank
In getting up a farmers' bank
But then when justice blows her horn
Some run like rats among the corn.

For rogues may come and rogues may go
And as they wander and do fro,
Back to the entry oft they track
As farmers are their shining mark.

The politicians are so slick,
They listen oft and seldom kick,
You fondly think you've gained the day,
But find it goes the other way.

For wealthy men they have the pull
And other men they have to fool,
Politicians talk both loud and long,
But justice; why that is just a song.

Let workers all shake off the yoke
And hoist the men who grab the spoils
Let justice then be done to all
And punish rogues both great and small.

—A. Wallace Mason, 659 Spadina Ave., Toronto.

The family needs fresh air in cold, just as much as in hot weather. It is a mistake to so fasten storm-windows that they cannot be opened. Better no storm windows at all. For more disease comes from poor ventilation than from insufficient warmth. Storm windows save coal; but, unless so put up that they do not prevent ventilation, they multiply doctors' bills.



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—out where the light can fall on it—and see the brilliant, diamond-like sparkle the pure white color, of every grain.

That's the way to test any sugar—that's the way we hope you will test

St. Lawrence
Sugar

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with any other sugar—compare its pure, white sparkle—its even grain—its matchless sweetness.

Better still, get a 30 pound or 100 pound bag at your grocer's and test "St. Lawrence Sugar" in your home.

THE ST. LAWRENCE SUGAR REFINING CO., LIMITED, MONTREAL.

Vincent's Health Hints

Just Let Nature Do It

A few days ago a sister of Mrs. Vincent came to be with us for some time. At the breakfast table she said, "I like your way of living, anyway. No pie or cake. I mean, and just good plain food." And we talked it over. Among other things I said, "And we believe in breathing at our house, too." Mrs. Vincent added that she had breathed out pain a good many times, just by filling her lungs full and

sending the life-force right down where the pain was. "It'll cure your asthma, too. If you will just breathe and live right." And it can be done, too. For many years this sister has suffered a great deal from asthma. She thought not to have had it at all, life, where she sits on the farm all her food can be had in plenty; but she has almost died a number of times from this terrible disease.

But if she would just hold her appetite in check, quit strong tea and coffee, live simply, breathe deeply and stop worrying, it would not be long before she would be well again. The secret of it?

Well, nature is the greatest and grandest physician in all the world. So faithful and so patient, too! Fight her for years and just the minute she gets a chance, she will come right back and help you out of the tight place.

Why is it that we get well when we call the doctor? Stop and think about it a minute. Now, I have no quarrel with the doctors. Most of them are a blessing to society. But what do they do? Just help nature a bit. All they can possibly do is to put her hand under the arms of nature and lift a little at the right time. If they know this. When you can get at your hearts, they will tell you so, too. And what they do is to put us to bed where we will rest, take away the hearty food we have been eating, give us something to clear out the dead waste that is clogging our bodies and wait for nature to do the rest, and she does it, if she has a bit of chance. We lie still and rest. We take only the lightest of food, and little of that.

We hold still for the sewers of our bodies to be flushed out clean and unless we have transgressed too long and too much, we get well. That is the story, and we may all prove it to be true if we will.

Try This Just Once

By J. H. Haynes

Praise your wife. Give her a little encouragement. It will do her good and yet not cost you much. She has made your home pleasant and comfortable, your hearth bright and shining, your food agreeable. For goodness sake! tell her you thank her for these efforts to make you happy, if you do nothing more! Of course, she does not expect this. Surprise her for once. It will make her smiles brighter than they have been for years, and it will do her good and you, too.

There are many women to-day thirsting for a word of praise, the language of encouragement. Is your wife among this number? Through your summer heat and winter cold these wives have drugged uncomplainingly; and so used to their monotonous labors have their husbands become that they look upon them as they do the daily rising and setting of the sun. Are you one of this kind of husbands?

HOMELINESS GLORIFIED

Homely, every-day life may be made beautiful by an appreciation of its homeliness. You know that if the floor is clean, her labor made it so. You know that when you take from the drawer a clean shirt whenever you wish to, that somebody's fingers have slogged in the toil of washing it. Were they your wife's? Everything that pleases the eye and the senses has been produced by constant labor, much thought and untiring efforts both bodily and mentally. It is not that men do not appreciate these things and feel a glow of gratitude for the numberless attentions bestowed upon them in sickness and in health, but are so selfish and thoughtless that they do not acknowledge it.

They do not come out with a hearty

greeting: "Why, how pleasant you make these things look, Wife, or "I am truly thankful to you for taking so much interest in me." They thank them. They thank for giving them "fits" gives them a seat. They greet the young lady in the concert-room with kindly recognition. In short, they thank everybody and everything out of doors, because it is a custom. They come home, tip their chairs back and with their heels up, pull out a newspaper, grumble if their wives ask them to care for the baby, and so on. If the fire is out, they grumble if the fire is just right, they keep their mouths shut in apparent satisfaction, but never say, "Wife, I thank you." Are you one of that kind?

TREAT THEM LIKE THE REST

We say to you, husbands, if you show but an ordinary civility toward those common articles of householding, your wives, if you would give them only a hundredth part of the compliments you bestowed upon them before you were married, if you cease to speak of their faults before others, if your wives would seek other sources of happiness than your "60-60" affection.

Praise your wife, then, for all her good qualities; give her a word of encouragement, now and then, and you may rest assured that her deficiencies are fully counterbalanced by your own.—Farm and Fireside.

Burden Bearing

An aged, weary looking woman, with a heavy basket upon her arm, entered the train at one of the way stations. Carrying her burden with some difficulty down the aisle, she found an empty seat, which she took for her own. Instead of placing her burden upon the floor or upon the seat beside her, she continued to hold it, shifting it as it weighed now and then from one knee to the other. A working man across the aisle watched her for some time in silence, but at last when he could stand it no longer he reached over and touched the woman upon the arm. "Madam," he said, "if you will set your basket down, the train will carry both it and you."

How much of human nature there is in this little incident. Some people never try to "ease their burden" which circumstance has carried itself to be theirs. They insist on dragging it even when they might temporarily lay it down and ease their breaking backs.

"I believe God intends we shall forget our troubles once in a while," said her husband, who had had more than his share of heartache, but whose face always wore a cheerful smile. "It's the only way I can get along. I simply must forget my worries even if it's only for a little while." Solomon had no greater wisdom than this.

Rest your burden once in a while. When you pick it up again you will find that you can carry it easier. It may not be any lighter, but it will seem so.

Valuable Homely Hints

A half-teaspoonful or so of vinegar put in the pan while stewing meat will make the toughest meat tender.

An alarm clock "set" to the minute when a joint, etc., placed in the oven will be cooked faster the cook a lot of worry.

A little vinegar put in the frying pan and then boiled up on the stove removes the odor of fish or onions from the utensil.

Hand-knitted stockings and socks will last longer if a strand of silk is knitted into the toes and heels along with the wool.

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THIS is a fine...



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CLEAN and SHINE NO chance of using the WY... Dye. FREE Color Card The Johnson-Mechanisms

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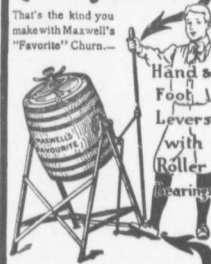
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Second class tickets from Ontario stations to principal destination points at

LOW ROUND-TRIP RATES
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 through to Edmonton via Saskatoon, also to Winnipeg via large tea-room and dining powder. Comfortable berths, fully equipped with bedding, can be secured at moderate rates through local agents.

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Apply to nearest C.P.R. Agent or
M. C. MURPHY, Dist. Pass. Agt., Toronto.

ONLY DIRECT LINE NO CHANGE OF CARDS

Reducing House Cleaning Toil

By Grace Dutcher

At this season, the spring night-mare looms before the house-maker. I refer to house cleaning. The following conversation took place between two ladies:

"Don't you dread the awful house cleaning coming?"

"No," replied the other, "not nearly so much as I used to. You see as my carpets were out we painted our floors, or put down hard wood floors and have a rug in the centre, and house cleaning is not half the work it used to be. When we had to take out tacks, roll up dusty carpets, spread them on the lines and prop them up with a stick every time the wind blew them down, and then clean and then get them on both knees and tack and stretch them into place. Then with the rugs or squares, we put one out on the line to let the wind blow through it every month, and it keeps our house fairly clean all the year round."

A King's Look

A courtier, it is said, once approached William of Orange with a mischievous tale concerning a common acquaintance, but it was an experiment which he never repeated. The great king neither spoke nor smiled.

"And he gave me such a look," the man declared afterwards, "as was like to make the story go straight down my throat again."

That was a truly royal way to treat a tale-leaver. One who seeks to attract attention to himself by trifling with the reputation of another is the most cowardly kind of a thief, and should find no market for his stolen goods. He needs no encouragement, and deserves no countenance—but a stern and forbidding one. By showing plainly that we neither sympathize with, nor enjoy, his story, we give so much the less currency to what may do uncalculated harm. And if the tale goes the way it came, "down the throat again," as the courtier expressed it, the chances are that it will not attempt the journey out a second time.

In advising the use of hot water a medical writer says the advantage of it is that when taken a half-hour before meals it draws the blood to the stomach and stirs it to activity. With many people it seems to work like a charm. It is good for the inactive and the dyspeptic.

THE COOK'S CORNER

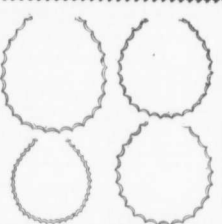
Recipes for publication are requested. Inquiries regarding cooking, recipes, etc., gladly answered upon request to the Household Editor, Farm and Dairy, Peterboro, Ont.

Mock Mince Pie.—One cup each of bread crumbs, hot water, chopped raisins, sugar and molasses; half a cup, each, of vinegar and boiled cider; a tablespoonful of butter and one teaspoonful each of cinnamon and cloves. Seal together and bake with two crusts.

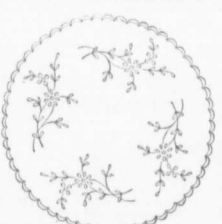
WHITE FRUIT CAKE
 1 cup butter, 1 1/2 cups white sugar, 1 cup sweet milk, 2 1/2 cups flour, 2 large teaspoonsful of baking powder, whites of 7 eggs, 1 lb. raisins, 1 lb. figs, 1 lb. dates, 1 lb. blanched almonds, 1/2 lb. citron peel. Cream the butter and sugar together, add milk gradually, then flour and baking powder. Fold in whites of eggs (beaten stiff), and the fruit. Bake in a moderate oven.—R. L.

SPECIAL PATTERN SERVICE

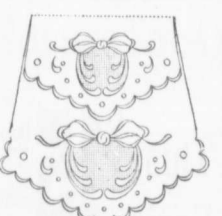
We realize the great interest that all of our readers take in the new spring styles, and have therefore made arrangements whereby we will be able to give many more patterns in Farm and Dairy than usual during the next few weeks. These will illustrate many of the attractive styles. Should you wish patterns other than you see in Farm and Dairy from week to week write us and we'll do our best to get them for you. When ordering patterns kindly be sure to give name and address, size and number of pattern desired. Address Pattern Dept., Farm and Dairy, Peterboro, Ont.



647 Design for Sculpting the Necks of Girls' and Children's Dresses.



648 Design for Embroidering Doyies twelve inches in diameter. Two transfers are given.



649 Design for Embroidering a Wrist Bag, including Outline of Bag.



642 Design for Embroidering a Blouse and Sleeves in Bulgarian Style.



BOY'S SUIT, 7390

The boy's blouse suit is a becoming, comfortable boys' smart one so that it has every condition to commend it. This one is made with knee trousers and can be finished with either a round or standing collar at the neck edge.

For the 8 year size will be required 4 yards of material 27, 3 3/4 yards 36, 2 3/4 yards 44 inches wide.

This pattern is cut in sizes for boys of 6, 8, 10 and 12 years of age.



BLOUSE OR SHIRT WAIST, 7379

The blouse that gives what is known as the bosom effect, is one of the very newest. The model is an exceedingly smart one, absolutely new, and is adapted to many uses.

For the medium size will be required 2 3/4 yards of material 27, 2 3/4 yards 36, 1 3/4 yards 44 inches wide with 1 1/4 yards for stock collar and under sleeve, 3/4 yards of lace edging.

This pattern is cut in sizes from 34 to 42 inches bust.



SIX GORED SKIRT, 7387

The six-gored skirt is one of the best liked of the season, and this one can be treated in two quite different ways. In the large view it is shown with the front and back goreds stitched to give a box plait effect, and in the small view the edges at front and back are simply joined. Both effects are correct and both are much used.

For the medium size will be required 6 1/2 yards of material 27, 5 1/4 yards 36 or 44 inches wide when material has figure or nap, 5 1/4 yards 37, 4 yards 36, 3 yards 44 inches wide when it has neither figure nor nap; width of skirt at lower edge 2 3/8

This pattern is cut in sizes 22, 24, 26, 28 and 30 inch waist measure.



SEMI-PRINCESS GOWN, 7388

Such a semi-princess gown as this one can be made from linen, taffeta, museline, foulard, pique, Scotch gauze and the like with equal success. The lines are essentially smart and the gown is in every way attractive.

For the medium size will be required 7 1/2 yards of material 27, 5 yards 36, 4 2/4 yards 44 inches wide with 1 yard 18 for the yoke and under sleeve. The width of the skirt at the lower edge is 2 1/4 yards.

This pattern is cut in sizes 34, 36, 38, 40 and 42 inches bust measure.

OUR FARMERS' CLUB

PRINCE EDWARD ISLAND.
LORNE MONTAGUE, April 8-8 April has brought the first appearance of spring...

VICTORIA CO. ONT.
BOGAVATION, April 15-The snow has disappeared. Feed is scarce and very dear...

HALIBURTON CO. ONT.
KIMMORN, April 15-The warm rain and thunderstorm of the 14th freshened things up starting the grass. A few days will see plowing general...

WELLINGTON CO. ONT.
FERGUS, April 15-We have had very backward weather until the last few days. The snow has gone, but the roads are in...

MIDDLESEX CO. ONT.
TEMPO, April 15-The snow has all disappeared. We had a great quantity last winter. Feed is holding out well...

LAMBTON CO. ONT.
WYOMING, April 15-Feed is very scarce. Farmers are offering those who have a little hay \$2 a ton...

NEW WESTMINSTER DIST., B.C.
CHILLIWACK, April 11-Most farmers are nearly through ploughing. Some have done considerable seeding...

ONTARIO CROP REPORT

Agricultural conditions in Ontario are summarized as follows from a bulletin by the Ontario Department of Agriculture:
Fall Wheat and Clover: These crops have been protected by a heavy covering of snow...

Live Stock: Notwithstanding trying conditions, the general condition of farm animals may be summarized as on the lean side but healthy. Horses are in good condition. Other lines of cattle are scarce but in fair shape.

Methods: The bulletin will give in detail quotations from practical farmers as to how they met the difficult situation of the very short feed season...

MR. H. F. PATERSON'S HOLSTEINS

Young men and would-be breeders of Holstein cattle are afforded much in the way of information by the following report of Mr. H. F. Paterson, of Alford, Brant Co., Ont. Three years ago Mr. Paterson purchased an old one...

Last week one of the editors of Farm and Dairy, while in Brant county, called to see Mr. Paterson and his stock and came away with a herd...

Mr. Paterson's stables are not so convenient, or showy, as are to be found in many places, but the best of them and utilizes his space to good advantage. Everything about the stable is clean and neat, and being used the floors and feed alleys are kept clean and neat.

Although Mr. Paterson has been with Holsteins only three years he has some splendid individuals and a herd that is fairly uniform. Holstein breeders and many others will remember Mr. Paterson's name as the maker of the first Winter Fair Dairy Test a year ago and again last winter. Some of his better cows are: Blanche Kay, having a seven-day record of 23 1/2 lbs. butter, and a private record of 18.000 lbs. milk in one year.

(Continued next week)

INTERNATIONAL STOCK FOOD

WE POSITIVELY GUARANTEE that a 25-pound pail of INTERNATIONAL STOCK FOOD will save you \$7.00 worth of Corn or Oats. Because it promotes digestion and assimilation and enables you to cut down the grain ration 15% to 25% and still get better results.

It will not cost you a cent if you are not satisfied. See your dealer in your town or write us for particulars. Mention this paper and the stock you own and we will send you a litho, size 16 x 22, of our three champion stallions. INTERNATIONAL STOCK FOOD CO., Limited - - - TORONTO

NEVERMIFUGE Anything to Sell

The best and most effective remedy for Boss and other worms in horses. Guaranteed by the Farmers' Horse Remedy Co. under the Pure Food and Drug Act, June 30, 1906. Serial No. 31571. It is guaranteed to kill and bring from the body dead in from 15 to 24 hours all pin worms and bots.

It is absolutely harmless and can be given to mares in foal before the eighth month. Practical horse owners have written us: Nevermifuge has removed between 500 and 800 bots and worms from a single horse. An animal whose stomach is full of worms cannot get corn or help being obtained. Send your order today. Boxes of 100 capsules, \$2.00; 500 capsules, \$1.25; 1000 capsules, \$1.00. Farmers' Horse Remedy Co., Dept. A.A. 392 - 7th St., Milwaukee, Wisconsin.

IHC Engines Furnish Plenty of Power

WELL as you know your ordinary farm power needs, you can never tell just where you are going to need extra power, and it need it badly. An engine with ten to twenty per cent of reserve power will often save enough to pay for itself, just by its capacity for carrying you safely through emergencies.

IHC Gasoline Engines

are large for their rated power—they are designed to run as slowly as possible because that increases their durability. They are equipped with a speed changing mechanism which enables you to vary the speed at will. By changing the speed they can be made to develop from ten to twenty per cent over their rated power with little detriment to the engine, and at a cost for extra fuel so slight that it will never be noticed on the bills for gasoline. As soon as the need for extra power is gone, the engine should be slowed to normal speed. When you buy a gasoline engine, buy one you can depend upon; one that has plenty of power, one that is built to operate at lowest cost for fuel and maintenance. Buy an IHC engine—1 to 50 H.P., vertical or horizontal, water-cooled or air-cooled, stationary, portable, or mounted on skids, built to operate on gas, gasoline, kerosene, distillate, or alcohol. Kerosene-gasoline tractors in all styles from 12 to 45 H.P. Saving, pumping, spraying, grinding, etc. See the IHC local agent and get catalogues and information from him, or, drop a line to the nearest branch office.

CANADIAN BRANCH HOUSES: INTERNATIONAL HARVESTER COMPANY OF AMERICA (Incorporated)

At Brandon, Calgary, Edmonton, Hamilton, Leithbridge, London, Montreal, N. York, Ottawa, Quebec, Regina, Saskatoon, St. John, Vancouver, Winnipeg, Yorkville. IHC Service Bureau: The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy inquiries concerning soils, crops, land drainage, irrigation, fertilizer, etc., make your inquiries specific and send them to IHC Service Bureau, Harvester Building, Chicago, U.S.A.



PEERLESS PERFECTION



The first cost should be the last cost.

You should put up a fence that will give you real fence service first, last and all the time. The cheapest is always the most expensive in the long run on account of repairs necessary.

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because it is the poultry fence that never needs repairs. Peerless poultry fencing is made of the best steel fence wire—tough, elastic and appropriate or quick atmospheric changes. Our method of galvanizing positively prevents rust and will also hold many years the life of a fence. The joints are specially held with the "Peerless Lock" which will withstand all grades Peerless Poultry Fences can be erected on the sloping or knick.

The heavy stay wires we use make Peerless poultry fencing rapid and unspinning. It prevents sagging and stands fully about half the cost of our poultry fence compared with some necessary in order to keep normal. It stands solid and shows enough to insure the smallest fowl in. Many of our customers are using this style as a general purpose fence with entire satisfaction.

Peerless Poultry Fences when once put up is always in and will look better, wear better and serve you better than any other fence built. **Our Catalogs are all Free to You** Write us for literature and names of nearest agent. We also manufacture a complete line of general fencing, farm gates, wire and fencing material. Agents almost everywhere. **Manwaring-Wire Fence Co., Ltd.** Hamilton, Ont. Hamilton, Ont.

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My Roofs 'Make Good' for 100 Years. I Want to Tell You Why.

"My New Metal Has Made Me a Proud Man. It Permits a 100-Year Roof at Low Cost."

"Sir, I tell you, I am a proud man. I have at last got the best roof ever made at a low price. My roof will last you for a whole century. You can put it on a wood framing. You can get it at about what you pay for wood roof. You can lay it. It will keep rain, lightning, fire, ice, snow and wind from harming your building. If you want a roof, I have the right roof."

"I Think Every Man Can See How a Roof Is the Big Point in a Barn."

"I worked 50 years to make a cleanly, strong, sure roof at a low cost. I had barns mostly in mind. When I started, bush fires were common. Cedar shingles went up like houses from a single spark. Lightning burnt barns again and again. Leaky roofs rotted hay and produce by the ton—they let water rot the barn framework. Oshawa shingles stop this."

"Thus, I became one of the first metal shingle men in the world. I aimed to make a roof that would save twenty times its cost by saving a barn frame and foundation, as well as the stuff put into the barn, which represented thousands and thousands of dollars risked over a period of years under a poor roof."

"It Took Years for Me to Get the Design of My Metal Shingle Right."

"I thought it was easy. It was hard. It was a big contract. I didn't dream of what my roof has to stand. I thought about all a roof did was to let rain run off it, and keep in place the rest of the time. I found I had about twenty-five problems to answer at once in a single design."

My roof had to have 'give' in it, so it would stretch in the hot sun and shrink in zow weather. It had to be ice proof, or lodged thaw-water would gouge seams apart. It had to be smooth, or lodged dirt would rust it. It had to cover its own nails, or the roof would leak. My roof had to be layable by anyone.

"My work was, I had to design a shingle that couldn't be laid face-down, or sideways, or upside down, or crooked, or be marred in the laying, or be smashed on the road between my factory and the place where the roof was. I found my shingle needed venting places in it that would let air out but wouldn't let water in. It had to be wind proof. Yes, sir,

these things were all worked out by me in 50 years.

"I started to make a spark-proof and lightning-proof roof. I ended by getting one of the best roof shingle designs ever made. My roof has more experience and skill and years behind its design than any roof you can get in metal."

"I Had to Wait Fifty Years for My Last Big Point. This Was It."

"My business was world-wide by this time. My shingles were selling in Australia, Japan, South Africa. Governments specified them for roofs."

"All this time I was getting my design right little by little. But, do what I could, I had been troubled by the metal in it. It seemed impossible to get a metal which might not rust. I had to take the best metal I could get. I needed a strong, light, absolutely non-rusting metal."

I followed up this metal. At last I devised a non-rusting 100-year metal, which was non-corrosive. The moment I put this metal into my shingle design, I got at one step a 100-year roof. This is the roof you can get from me at a low price."

"Why Do You Pay Me a Low Price? You Have My Big Sales to Help You."

"My metal shingle is not trash. You can get trashy stuff at a cheaper price. (It will cost you thousands of dollars in produce.) Yet you can buy my shingle at a low price. Its quality is kept high and its price is kept low by big, steady sales all over the world. If you do not look into my 100-year shingle, you are not treating your building right. Get a 100-year Oshawa roof for your building. It will save you thousands of dollars in produce you worked hard to grow and harvest."

"Get My Book about This 100-Year Roof. It Has Building Hints for You FREE."

"I have helped you and all other builders with a roof. I am proud of—a roof I know is right. I want to tell you more. I made my book 'ROOFING RIGHT' for those who do not take my roof. But I made it worth while for those who do not take my roof."

"It shows the best buildings in the country—the best barn arrangements. I will send you this book for a post-card, whether you take my roof or not. I want you to take my roof, if it stands your closest examination. Send for my book to-day.

J. H. Pedlar

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