

Issued Each Week—Only One Dollar a Year

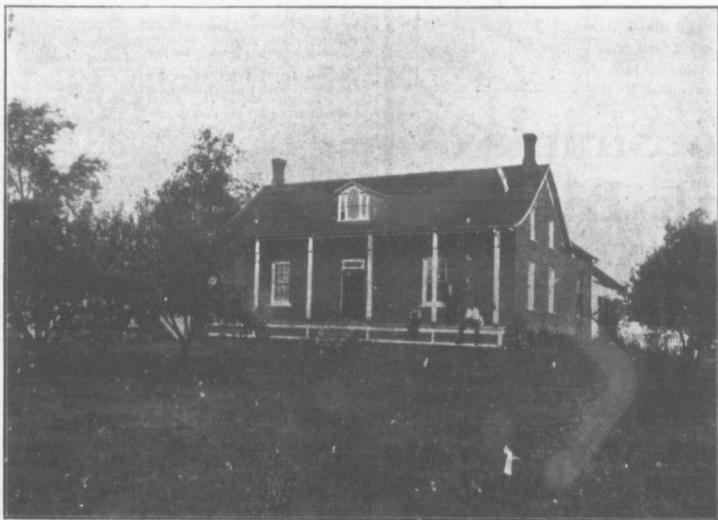
VOLUME XXVII

NUMBER 25

The CANADIAN DAIRYMAN AND FARMING WORLD

PETERBORO, ONT.

JULY 8, 1908



"STOCKWOOD" THE HOME OF D. M. WATT, ST. LOUIS STATION, QUEBEC

The Province of Quebec is noted, among other things, for her Ayrshire cattle, some of the best of which are to be found on "Stockwood Farm." Mr. Watt is a noted breeder of this famous dairy breed.

His farm won the Silver Medal in the Provincial Farms Competition in 1906.

DEVOTED TO
BETTER FARMING AND
CANADIAN COUNTRY LIFE

THERE IS A DIFFERENCE IN Cream Separators

SOME farmers have an idea that all cream separators are alike. Because the machine they are using is not a success they conclude that there is not a better machine and that they will "just make it do for a while."

There are many kinds of cream separators, some are almost useless, some "pretty good," but there is only one make that will give entire satisfaction no matter how difficult the test. The "only" machine is



The Simplex Link-Blade

This is because it is the only machine having the LINK-BLADE separating device and the SELF-CENTERING-BOWL. These two features alone make the machine superior in construction to any other machine. But! there are other points of excellence about the machine that are just as important with the result that the SIMPLEX is a machine of lifetime lasting, value. Our new booklet is bimful of separator facts and this free for the asking.

Send to-day for our "Try Before You Buy" offer

D. Derbyshire & Company

Head Office and Works: BROCKVILLE, ONT.

Branches: PETERBOROUGH, ONT.

MONTREAL and QUEBEC.



SEND FOR
CATALOGUE.



ICE TOOLS
COAL AND ICE
HANDLING MACHINERY

Gifford Wood Co.

HUDSON, N.Y. CHICAGO, ILL. ARLINGTON, MASS.

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

Taxing Farm Property

Ed. The Dairyman and Farming World,—I notice your item in last issue on above subject, and since you ask "What do our readers think about this?" I take the trouble of expressing myself. It is not necessary for others of your readers to agree with my statements, but my object in writing is, to get them a-thinking on this matter, and, after they have thought carefully, I shall be satisfied with the decision they arrive at.

No more important subject can possibly engage the attention of your readers. If farmers are ever to better their condition they must clearly understand what "Taxation" means, and how it is done. Yet, I venture to assert, that not one out of a hundred readers has ever given it any consideration. And yet it is the sword that is everywhere sticking farmers between the ribs, draining them of their heart's blood. That statement may seem strange, but after five years of hard study on it, I can earnestly make the assertion. I know what I am talking about, and I am more than surprised at the conspiracy of silence on this subject maintained by farm papers and agricultural colleges, and other so-called agencies for promoting the interests of the farming class.

The Dairyman and Farming World deserves the hearty thanks of every reader for inviting opinions on this matter.

That word, "land tax" does not mean a tax on the land, so much per acre, as it is rated—not at all. A five dollar bill is no bigger than a one-dollar bill, but one is five times as valuable as the other. Similarly, the title-deed to one spot of earth may be much more valuable than the deed to another spot of the same size. The land tax is a tax on the value of the land, exclusive of all improvements.

SITE GIVES VALUE

Now, what gives land its value? Is it not its situation? A farm one mile from town is worth a hundred dollars more than a farm a mile more distant. A farm with a school on its corner is worth more than the same farm would be a mile from school. A farm beside a good road is more valuable than a farm a mile back from such a road. A hundred acres in the heart of a town, village or city, is as valuable as how many acres of farm land situated so as to be useful for nothing else than farming? Farm land grows not in value practically speaking but does town site land ever cease to grow in value? Is the enormous and growing value of town sites not due to the industry of the farmers round about? If the farmers around Peterboro were to take wings and fly away, leaving everything behind, what would the town site be worth?

Again, land is not a commodity, not wealth, not riches—no, it is not consumed, or worn, or eaten up, or destroyed by fire—it is eternal, everlasting. Again, the value of land is not the creation of any one person's labor. No one man made the town site of Peterboro valuable. No, but it was made valuable by hundreds and thousands in and around. That value is common property, produced by all, belonging to all, and, in the divine economy of things, intended for all. Again, land is not wealth, but the mother of wealth, the source from which is produced by labor, our food, clothes, everything.

The value of land is not wealth. But it is power in the hands of its owner to "toll" the labor of all who use it. Thousands must use a town site, hence its owner is always rich as the result of his power to levy "toll" off all who use it.

Now, Mr. Editor, with the foregoing facts in mind, I want to say

that taxing improvements is not fair, it discourages industry, it encourages people not to improve, it is an injustice, and a fraud. It lifts the burden off the man who holds land idle, who holds land for the purpose of "tolling" the labor of some one who wants to use it. Manitoba has not tax improvements on farms for over 20 years, and the value of property is entirely exempt too. The improvements, paint, lumber, labor, etc., have paid a heavy customs tax into the Federal treasury, then is it fair to tax them again year by year? Is it fair to assess the man who improves his farm, patronizes the stores, the factories, gives employment, etc., more than the man who holds his place idle, and does none of these things? Is there any sense in killing the goose that lays the golden eggs? If we, as a people, can't get honest and just taxation right at home from our councils, need we expect the powers at Toronto and Ottawa to do it fair?

Isn't it high time for the farmers to speak to their M. Ps., and demand that improvements be free from local taxation at the very first session, and the farms be assessed at their value, less cost of improvements. This little matter of "local taxation" means millions to farmers, if they only think carefully.

This letter is already too long but I trust that it will be freely criticized by your readers.

Just Taxation.

To Encourage Grades

The Holstein-Friesian Association has given a cup for the champion grade dairy cow, at the Calgary Exhibition, provided she be a Holstein, a pure-bred Holstein sire. This is the first move of any breed society to encourage the breeding up of grade stock. The Holstein Society has realized that while it is desirable to encourage the pure-bred, the great field is the improvement of the grades by crossing with pure-bred sires. In this way, the production of milk and butter fat may easily be increased 100 per cent. Besides, the method is within reach of all farmers.

The cup donated at the Calgary exhibition, was the first one to be sent out. Each large exhibition, however, throughout Canada will be given one for a similar competition by the Holstein-Friesian Association of Canada. It is hoped these trophies will encourage competition along this line, in which all farmers can compete profitably.

Mr. A. P. Ketchen, B.S.A., Deputy Minister of Agriculture for Saskatchewan, died suddenly at Creelman, on Friday night, June 26, as a result of sunstroke. Mr. Ketchen had been addressing a gathering at the plowing match there during the excessive heat on Friday. He was one of the best known agricultural authorities in Canada, and was formerly editor of The Northwest Farmer, Winnipeg. Before going to the Stock Commission for the Dominion, under F. W. Hodson.

During the electrical storm that occurred during the latter part of June, a considerable number of barns in Halton county were damaged by lightning. One of the storms occurred on the farm of Mr. George B. Long, near Burlington, Ont. Five men were milking the lightning struck the barn. All the men and all the cows were knocked down, being partly stunned. Not a man or animal was injured. It is believed that the lightning passed over the barn and struck the ground, and that the shock was so great that it had the effect mentioned.

Issued
Each Week



The CANADIAN DAIRYMAN AND FARMING WORLD



Only \$1.00
a Year

AGRICULTURE, THE KEystone OF CANADIAN PROSPERITY

Vol. XXVIII.

FOR WEEK ENDING JULY 8, 1908

No. 25

THE NEW MOVEMENT IN AGRICULTURE IN ONTARIO

The Work Being Carried on by the Branch Offices of the Ontario Department of Agriculture Has Become Popular and New Branches are to be Established.

IF THE experiment now being tried in several counties in Ontario by the Ontario Department of Agriculture proves successful—and the indications are that it will—the time is not far distant when the department will have a representative stationed at some central point in every county of the province. These representatives will be expected to devote all their time to studying the needs and advancing the interests of the farmers in their respective districts. They will be the means by which the farmers of the province will be brought into closer touch with the officials of the Department of Agriculture and with the Agricultural College at Guelph. At the same time they will make the Department and the College of greater value to the farmer.

As was announced in The Canadian Dairyman and Farming World at the time, the Department of Agriculture, at the suggestion of the capable deputy minister, Mr. C. C. James, made a start in this new line of work about a year ago. Six graduates of the Guelph College were sent out to represent the Department at Morrisburg, Perth, Lindsay, Collingwood, Galt and Essex. They were instructed to feel their way carefully the first year and to let the work develop itself. It was understood that, as part of their work, they would do what they could to introduce the teaching of agriculture in the high schools.

Almost from the outset the experiment has proved a decided success. Already these branch offices have become recognized as centers where the farmers of the locality are able to obtain expert information on almost any conceivable subject relating to agriculture. If the experts in charge are unable to give the information desired they know where and how it can be obtained and they secure it as speedily as possible.

THE OFFICE AT LINDSAY

Recently a representative of The Canadian Dairyman and Farming World called at the office of F. H. Reed, B.S.A., the representative of the Department stationed at Lindsay. The office consisted of two rooms. One contained a large table and numerous chairs. It was at the disposal of the officers of the local agricultural society, farmers institute or any other agricultural organization that might desire to make use of it. The other room was used by Mr. Reed as his private office and contained his library of books relating to agricultural subjects. Copies of the

leading agricultural papers and the bulletins issued by the various departments of agriculture and agricultural experiment stations were on file and available for use by any farmer who might visit the office.

While we were there a farmer called at the office and arranged to have Mr. Reed visit his place that day to give him some advice as to how a portion of his farm should be cultivated to obtain certain results. On the following day Mr. Reed was to visit a section near Lindsay to show several farmers how parts of their farms could



R. S. HAMER, B.S.A.



A. MCKENNEY, B.S.A.

Two of the men representing the Ontario Department of Agriculture in the High Schools.

be drained to the best advantage. Not long before our visit Mr. Reed had been consulted by another farmer as to how his orchard should be pruned.

Last winter Mr. Reed arranged some short courses in agriculture, lasting several days, that were attended by several hundred farmers and that proved extremely successful. When we left him he was about to hurry off to the high school to look after some experimental plots he had there under cultivation as object lessons for the school children.

One of the results of the work at Lindsay has been the organization of a club composed of the breeders of pure bred stock who live in that section.

The foregoing will give some idea of the nature of the work that is carried on by these branch offices of the department of agriculture and serves to show how valuable they may become to the farmers near where they are located. As veterinary surgeons are consulted by farmers whenever their live stock becomes sick it is desired

that these representatives of the department shall be consulted by farmers whenever they desire expert information relating to any branch of agriculture but with this important difference: there is no charge for their services.

WHAT HAS BEEN DONE

Desiring to find what has been accomplished up to date in the various centers where the stations are located, The Canadian Dairyman and Farming World wrote recently to those in charge of them, asking for information. Among the replies that have been received is the following from Lanark County. Mention of the work conducted at the other stations will be made in later issues.

R. S. Hamer, B.S.A., of Perth, who is in charge of the work in Lanark county, has written us as follows:

"The recognition of the value of the results of the new agricultural education propaganda inaugurated in Lanark County last June, is now so widespread that steady progress and future enlargement of the idea is assured. Perth, as a business center, depends almost entirely upon the agricultural resources of the surrounding country and when it was learned that the local Board of Education had succeeded in securing for the Collegiate Institute one of the six agriculturists appointed by the Government, and for the town, a Branch Office of the Provincial Department of Agriculture, the business men of the town were quite ready to support the move. Throughout the county there was naturally at first much skepticism regarding the practical value of the two new institutions but among the more enterprising farmers more general support was given to the

idea than might at first have been expected. With the development of the work and the gradual dissemination of more definite information regarding the aim and purpose of both the Agricultural Office and the school course the support of the farming community has become not only general but cordial.

THE OFFICE APPRECIATED

"As appears to have been the case at the other points selected, a connection has been formed much more rapidly through the office than through the school. The office has gradually become the center for everything pertaining to agriculture in the district. In the first place it has been able to fulfil its purpose as a bureau of information through which a man may put himself in touch with any source of information he desires. The number of questions which are handled in this way in the course of a week would be a matter of surprise to anyone accustomed to regard the farmer as too independent to seek information regarding matters pertaining

to his business. As people have come to understand the use which may be made of the office they have taken advantage of it very freely, to such an extent, in fact, that it has become necessary to have someone in charge all the time. In addition, the office has become the meeting place of the directors of various organizations—the Farmers' Institute, the Agricultural Society, Farmers' Club, etc., and also of agricultural gatherings of different kinds. Last winter the newly organized Farmers' Club met in the outer office every two weeks and the attendance of nearly 150 at some of the meetings indicates the interest taken in the subjects discussed. Special questions pertaining to, crops feeding and farm methods and practices were discussed as well as some of the problems which affected the interests of the farming community as a whole. In February, a special Poultry Institute of five sessions was put in which greatly interested the ladies and townspeople as well as the farmers themselves. The attendance at some of these meetings taxed the accommodation to the limit.

GOES THROUGH THE COUNTRY

"My work as representative of the Department of Agriculture takes me into all parts of the county. Last fall considerable time was spent getting in touch with conditions, in inquiring into various phases of general farm operations here and in getting facts and figures pertaining to different branches of the industry. Information acquired in this way has been found very useful in addressing farmers' institutes and other gatherings from a local standpoint. This year special attention is being given to the accumulation of definite and even statistical information bearing on many features of the agriculture of the county.

"Considerable outside work is being done, also, in the way of rendering assistance to farmers in such matters as laying out drainage systems, etc. The reclamation of immense areas of practically unproductive swamp land is receiving special attention. At several points throughout the county experiments with commercial fertilizers are being tried on different crops with a view to finding the cost of rendering this kind of soil profitably productive. Special work is being undertaken in connection with the different Departments at Guelph, with the dairy commissioner's office in Ottawa and with the Canadian Seed Growers' Association. The work which has been undertaken for this season is more than can be performed by one man and recognizing this fact the Department in Toronto has assigned an assistant to this branch who is associated with me in different duties connected with the office.

THE SCHOOL WORK

"In organizing a class in the school, I received a great deal of assistance from rural school teachers and from the public school inspector. Our class from the first consisted of eight pupils. This number was very small in increase owing to limited accommodation in the first year class room. Four mornings of every week are devoted to agricultural subjects. For the remainder of the time these boys constitute a part of the general first form class and take with them the work in grammar, literature, composition, reading, writing, arithmetic and a part of the science.

"The work in agriculture is modelled upon the first year work at the Ontario Agricultural College. Most of the first year subjects are included in the course but we are not endeavoring to confine ourselves to first year college work. In fact, in some branches we have already touched upon a great deal of second year work. While we hope that after two years' in our class a boy will have no difficulty in entering the O. A. C. in the second year class if he later decides to do so, our aim is, nevertheless, to make our course here as self-contained as possible. For this reason, the practical side of every branch of the work is being

emphasized, and the course is adapted as far as possible, to conditions and requirements of this particular district. Purely scientific principles in Physics, Chemistry, Bacteriology, Botany and Entomology are dwelt upon only in connection with their practical application.

"Attention has been devoted chiefly to the study of live stock, stock judging, feeding and general animal husbandry; field crops—seed judging and experimental results; soils—their nature, requirements and improvements from a physical and chemical standpoint; systems of tillage and rotation, drainage and engineering and surveying in connection therewith; plant life, growth, structure and habit from a botanical standpoint; and last and perhaps of greatest importance in this district, the subject of dairying in all its aspects.

THE BOYS ARE INTERESTED

"In their classroom work the boys are full of intelligent questions and are continually bringing in questions from their neighbors. Their interest in the work is further indicated by the way in which they attend farmers' institute meetings, farmers' club meetings and other agricultural gatherings, without special solicitation.

"In addition to the work with the boys of the general course, we ran during three months of the winter, a short course in agriculture. By special arrangement with the business college here a course was put on which allowed boys to take agriculture at the collegiate during the morning and in the afternoon to take a special course in business. This proved to be a very popular course and the advantage taken of it indicated that if continued next winter it can be made a very valuable feature of the work.

"While it is likely that the development of the school side of the work will be more gradual than the progress made in connection with the office there is every reason to believe, judging by the experience of the first year, that the agriculture option in the Collegiate Course can and will be made a permanent feature of the educational system."

WORK BEING EXTENDED

Readers of The Canadian Dairyman and Farming World will be able to gain a good idea from the foregoing letter of the nature of the work that is being carried on by these branches of the Ontario Department of Agriculture. Already their value is becoming recognized in other sections. Several counties have made application to the Department this year for the establishment of similar offices in their sections. Three new offices, we are informed, will be opened this year, one being at Picton, in Prince Edward county. Thus, already the work is spreading. Where it will end no one can foretell.

To Get Rid of Twitch Grass

T. F. Raynor, B.S.A., Seed Branch, Ottawa.

Twitch grass is particularly hard to get out of the land as it gets into the fence corners and around stumps. It has one redeeming feature, though, it can be used for pasture. If allowed to mature for hay, there is danger of the seed being spread. The best crop to grow where twitch grass is troublesome is buckwheat.

To fight twitch grass successfully, a campaign must be carried on in the dry time of the year. The only thing to do in a wet season is to keep the top down. In the dry time, the best practice is to plow the ground after the twitch grass is nearly in head. After plowing and working up the soil, the roots should be raked to the surface with the cultivator and harrow. The roots of twitch grass are particularly rich in plant food, hence it is advisable to kill them in the ground if possible. If we burn them, we lose a valuable plant food.

The frost of winter can be turned to good ad-

vantage in fighting twitch grass. By practising after-harvest cultivation and ribbing up the soil just before the frost comes, this peat can be dealt a fatal blow. The frost apparently freezes the moisture out of the roots as well as helping the condition of the soil. If such a field is followed with a head crop, the twitch grass will be pretty well licked.

Where Does the Cow Get the Milk?

Geo. Rice, Oxford Co., Ont.

Various explanations have been given as to how the cow elaborates her milk. These are mere theories and the inside machinery of the cow is still a mystery. Cows have been fed food containing no fat elements, yet the cow goes on producing milk of the same quality as before. Then again some have fed food rich in fat to increase the percentage of fat in the milk and no increase in fat production has followed.

Nature has given the cow a little "system" of her own; and, after all we are not much concerned as to how the milk comes as to the fact that it does come. Therefore, we will say the milk comes by the cow devoting her "energy" to working this little "system" that nature has implanted in her. A better understanding of the great amount of energy a cow devotes to the production of milk and the great tax it must be upon her system should give the dairyman more light upon the importance of the care and feeding of the cow.

COW REQUIRES MARVELLOUS AMOUNT OF ENERGY

We have become so used to the cow producing milk that we take it as a matter of course. We do not stop to consider what a wonderful, great producer of food the milk cow is, and what a marvellous amount of energy she devotes for the benefit of mankind. We have begun to call a cow that produces only 3,000 lb. of milk yearly a "robber cow." Judging her in comparison with others her production seems low. But why is it low? Simply because she may have no more energy to devote to the production of milk. A cow must have energy as well as ability to devote that energy to milk production. Do we stop to consider how much it taxes a cow's system to produce even 3,000 lbs. yearly? No; we figure that if the milk is worth \$1.00 per 100 lbs., and her feed will cost that, to say nothing of the labor, etc., then there is no profit. But, suppose we don't ask her to work in a "sweat shop" but figure her milk at \$2.00 a cwt., then she shows a good profit. But you say \$2.00 a cwt. is too much for her milk, the producer cannot get that price.

A QUART OF MILK IS EQUAL TO A LB. OF BEEF

Why should the cow not be credited with the food value of her milk? Scientists tell us that a quart of milk is of equal food value to a pound of beef. Then, if beef is worth 6c a lb. or the quarter, surely milk should be valued at 6c a quart.

Granting that milk weighs 10 pounds to the gallon, which is sufficiently close for our purpose in this article, a cow giving 3,000 lbs. milk yearly, or 1,200 quarts, produces as much food as a fat ox that produces 1,200 lbs. of beef; and she would do it on a great deal less feed. It will be seen that if we allow the 3,000 lbs. a year cow the true value for the food she produces, she is no longer a "robber cow." Or, to put it another way, she is being robbed by the public, made to work in a sweat shop as it were. Such cows need a labor union to go on strike and get a living wage for what they produce.

MILK PRODUCTION GREAT TAX ON COW

It is far from our purpose in this article to defend the 3,000 lb. a year cow, but to try to show

what a great tax a milk cow really has to put upon her system, and what a great amount of energy she must have to devote to the work. If we want cows to do greater work, then we must supply more energy. This will be shown more clearly by considering the work of the largest milk producers. Cows have produced 100 lbs. of milk a day, or 40 quarts. It would be a mighty good steer that could produce 40 lbs. of beef a day. A cow has produced over 27,000 lbs. milk in one year, 2,700 gal/ons or 10,800 quarts. Think of a steer producing 10,800 lbs. of beef yearly.

Do we stop to realize what we are taking from the cow? 7,000 lbs. of milk yearly, 2,800 quarts of milk of equal food value to 2,800 lbs. of beef? Just realize what an unselfish, hard working animal the modern milk cow is. Do not such figures show clearly the importance of giving her the very best feed?

FEED DURING LACTATION NOT SUFFICIENT

Under no possible conditions could we feed her anything like the amount of food she produces for mankind. She takes a small quantity of coarse food and turns it into a finer quality of food, suitable for the stomach of the most delicate child. Why the man who says he has discovered the secret of turning the baser metals into gold is not in it in comparison with the humble, unassuming cow, who chews her cud placidly, whilst food that goes into her mouth is turning and turning, revolving and twisting, furnishing herself with sustenance and finally giving up to the dairyman or dairymaid (or calf) the very finest of food.

MILK FROM ENERGY STORED UP IN COW

We talk of feeding a cow for milk, but when we consider what a great increase in value the milk is over the food consumed we must look further for an explanation of the large milk flow. Could we expect a cow to turn the food she eats daily into milk when the cow is producing say, 80 lbs. of milk a day, 32 quarts, equal in food value to 32 lbs. of beef, or into 12 or 15 times the same units of food as the beef animal could produce from about the same feed? Even granted that the cow is a more economical producer of food for the human race, we must look a little further and deeper for the reason why a cow is able to produce so greatly.

It would be more correct, therefore, to say that the milk is derived from the energy possessed by the cow, and from her ability to devote her energy to milk production. We might say it is the feed she is given that produces this energy. But the feed a cow is given at the time the milk is taken has very little more influence upon her production than the feed she is given

a considerable time previous. A cow would go on producing milk after freshening, or, even while milking if we fed her nothing at all for some days. This is made possible owing to the motherly instinct implanted in her which induces her to give milk for her young whilst life lasts.

Farming on a Prize-Winning Farm

Having been asked to give us a description of his system and practice in farming for the benefit of our readers, Mr. Geo. W. McKenzie, of Thornhill, Ont., who won the first prize in the dairy farms competition carried on by The Canadian Dairyman and Farming World last year, has kindly furnished the following information:

"I grow a large quantity of mixed grains, such as oats, with barley and wheat. This mixture I find yields well and makes good feed. This past season I sowed all my barley and purchased bran, shorts and oil cake meal. These, with a few roots and ensilage, make a good ration for my dairy cows. I feed meal twice a day, with clover hay at noon.

"We grow a considerable acreage of corn each year. When possible, we choose a clover sod and manure it well for this crop. The manure is hauled out every day during the winter as it is made and spread off of the wagon or the sleigh, as the case may be. This manure is plowed in as soon as the ordinary seeding operations are over. We work this ground with a disc and harrow, making a good seed bed. We endeavor to have our corn planted about the 20th of May. We prefer to sow the corn a little thick and as soon as it is up a little, we harrow it. By having it somewhat thick, it will stand considerable harrowing without making the stand too thin. This early cultivation helps the corn and at the same time destroys a lot of weeds.

USES A CULTIVATOR

"The main part of the cultivation in our corn is done by means of a two horse cultivator. This implement does excellent work, at the same time being easy upon the man, the driver riding and guiding the cultivator with his feet. This cultivator can be used with the best of results until the corn attains a height of three feet or more. We are sowing more corn this year than usual as it comes in very handy for fall feeding to cut green when the pastures are short.

"Every farmer should have a silo. With the silo, one can get a great quantity ready for use at one operation. When building silos, it is better to build two small ones than one large one, for by so doing, you can have one for winter feeding while the other can be used during the summer. Two silos 14 by 28 feet, when built

closely together, are easily braced to the barn or stable and will give the best of satisfaction.

"The most of our grain crops are seeded with clover. In a good season this clover makes a lot of fall pasture. We grow some four acres of mangels of the improved varieties. These mangels make a lot of winter feed and are a good supplement to our silage and other fodders."

Storing the Hay Crop

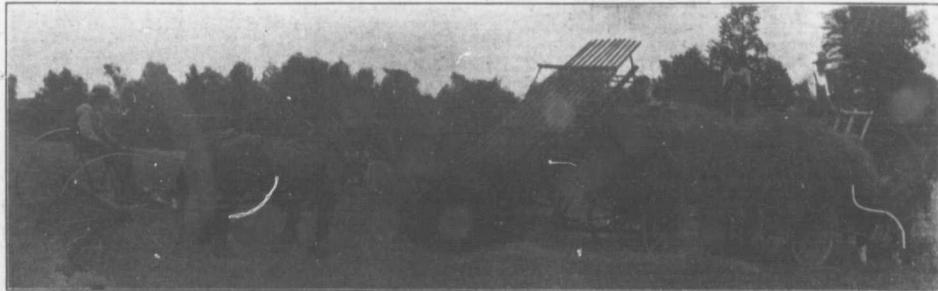
N. C. Campbell, Brant County, Ont.

Hay that is put into the barn in so dry a condition that it will not peck well, will not make fodder of first quality. Hay should be taken to the barn with just that amount of moisture which will allow it to settle compactly when treaded down. Such a condition can scarcely be described but is well known to all of us who have had years of experience in making hay. This desirable condition will be approached more accurately where the hay has been cocked and allowed to sweat over night. When taken from a windrow or from the swarth either by hand or by means of a hay loader, it is difficult to tell just what amount of moisture it contains or what condition it really is in. After being cocked for a time and then exposed to the air in flakes, any superfluous moisture which the hay contains is soon diffused in the air and the hay becomes in an ideal condition for hauling.

A quality that is little reckoned with by the casual observer is the aroma of hay. The aroma, though an unweighable quantity, is of real value in rendering hay more palatable. All are agreed that green colored, sweet smelling hay is much to be preferred to the bleached, straw-like product which is too often made. The aroma is best preserved in hay by getting it into the barn as quickly as possible and preserving it from exposure, to dew and rain.

Personally, I always prefer to salt the hay when drawn to the barn, though some of our best authorities upon hay making talk against this practice. It has been my experience that salt renders the hay more palatable and should the hay be stored in an unfavorable condition, it tends to prevent the formation of moulds and mildews, and checks fermentation.

If it is necessary to feed new mown hay, it should be fed with caution. The stock are particularly fond of it and are inclined to eat too much. The new made hay is laxative and therefore should not be fed to hard working horses as their flesh will become soft through its use. Not until the sweating process has been completed in the mow and the whole mass cooled off can new hay safely be fed.



THE HAY LOADER AT WORK ON THE FARM OF MR. D. DUNCAN, OF THE DON.

Mr. Duncan has been using a hay-loader on his farm for many years and probably was one of the first farmers in Ontario to use one of these implements. Some of his hay fields are very uneven but he is able to use the loader in them all. Mr. Duncan may be seen on the hay racks. (Photograph taken specially for The Canadian Dairyman and Farming World.)

Talks With Farmers

Ed. The Dairyman and Farming World.—This week I visited the farmers in the north-western portions of Smith township, Peterborough County, and found hayling (both clover and timothy) well under way, with promise of a good crop generally. "I think that the examination of milk houses and utensils by Government officials," said Mr. E. Mahood, "is only right. It goes to ensue the milk reaching the factories and creameries in a much sweeter condition, and helps to do away with the kicking about the quality of the milk arriving at the factories. Cleanliness

in hand "ing milk," said Mr. Mahood, "is one of the most important things in dairying. The milk houses and utensils, therefore, should be sharply looked after, both by cheesemakers and the buyers." *

THE TAXATION QUESTION

Mr. Mahood strongly advocates a drastic change in the assessment system at present in force. "I don't think it is right," said Mr. Mahood, "for a farmer, when he rents a farm, upon which there are poor buildings, to be assessed nearly double the original assessment, just because he happens to build a new barn, or make other improvements. I think the original assessment should stand so that the farmer who is not quite as well off as his neighbor, will be on an equal footing with him as regards taxes."

"I am having troubles of my own," said Mr. R. J. Waller, a neighbor of Mr. Mahood's, "with the sow thistle. I have tried all kinds of methods of eradicating them, and am now trying another way. I have about seven acres which I plowed before I commenced the regular spring work, and let it lie till it was nearly through. By that time the thistle had just begun to show. I then cultivated the land twice, with a few days interval between. After it had lain for two or three weeks, I again plow-

ed, pretty deeply, cultivated it twice more again, and finished up by harrowing both ways. I find that by so doing I am slowly getting the thistle to the top, and by the harrowing I get the soil from the plants. They thus have no nourishment and so dry out. I think this way answers just as well or better than smothering them, as advocated in some agricultural papers." Mr. Waller, in conclusion, said, "If there was an act passed (as in the States) to compel the farmer to cut the thistles before coming to a herd, the pest would be soon got rid of, as pest it is, and it gets tired worse than mustard was at one time."

THE INSTITUTE MEETINGS

"I should like to know why Institute meetings are overlooked to take place," said Mr. Alex. Thompson, (salesman of the Lakehurst cheese factory,) "if the speakers, who are paid by the Government, fail to show up when there are so many waiting to hear them. There were two meetings advertised for Hall's Bridge on Saturday, June 27, at 2 and 7 p.m., and at both times there were no speakers, but it is to conduct the meetings. Again, two meetings were to take place here (Lakehurst) at 2 and 7 p.m., but at only one meeting did the speakers address the gathering, although between 20 and 40 farmers and others interested in farming, attended to hear them. It makes it bad for the chances of getting a good crowd when there are any meetings advertised in the future."

Denmark has nearly 200,000 farms and farm gardens of ten acres or less, and about 100,000 farms of between ten and fifteen acres. There are less than 1,000 farms in the entire kingdom of 500 acres or over, the aggregate of these last named being less than a million acres.

What Breeding Will Do

Ed. The Dairyman and Farming World.—The following is a tabulated statement of what my Holsteins cows have done for the first five months of this year. It shows what breeding will do.

Quite a few of the cows are in the record of performance. Owing to moving last year, my cows this year have not come to the proper times. We are weeding out the grades. I never breed any cows that do not give at least 40 lbs. with their first calf, that is when reaching full flow. We have 41 head in the herd, and young ones are now rapidly coming in.

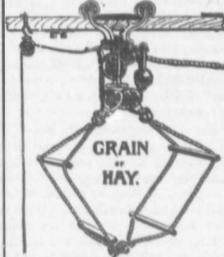
F. E. Came, Laval Co., Que.

All Eyes are on this Invention

Tolton's Fork and Sling Carriers

The Favorites of Them All

Unequaled for Simplicity, Durability, and Efficiency.



Thousands now in use, giving the best of satisfaction.

All kinds of Slings, Forks and Carriers, suitable for wood, rod or steel track. Send for descriptive circular, or see our local agent.

TOLTON BROS., LTD. GUELPH, CAN.

Dates of Fairs for 1908

Dominion Exhibition, Calgary, Alberta—June 20th to July 6th.
 Winnipeg Industrial Exhibition—July 14th to 17th.

Brandon—July 13th to 17th.
 Highland Society Show, at Aberdeen—July 21st to 24th.

Regina—July 21st to 24th.
 Canadian National Exhibition—Aug 29th to September 14th.

Halifax, N.S., Sept. 2d to 10th.
 Western Fair, London, Ont.—September 14th to 19th.

St. John's, N.B., Sept. 12th to 19th.
 Central Fair, Ottawa, Ont.—September 16th to 26th.

St. Thomas Horse Show, St. Thomas, Ont.—September 22nd and 23rd.
 New Westminster, B.C., September 29th to October 3rd.

International Live Stock Exhibition, Chicago—Nov. 28th to December 5th.

AYRSHIRES

SPRINGHILL AYRSHIRES

Imported and Lome bred stock of all ages for sale. See our stock at the leading show this fall. Write for prices. Robt. Hunter & Sons, Maxwell, Ont.

Long distance phone. E-6-23-09

Ayrshires on Sts. Marguerite Farm

Have been selected from the best milking strains in Scotland, are large shaggy animals, with great milking ability. A number of young bulls for sale ranging from 2 years to several months. Also Tamworth pigs and Shropshire Sheep. Write for prices. P. A. Gouin, Proprietor, Three Rivers, Que. E-13-24-08

HUM FARM AYRSHIRES

Our 1908 importations has landed, consisting in females of 3 year old, 2 year old, yearlings and calves. In bulls, yearlings and calves, we record up to 1,100 gals. milk in Scotland. We also have calves from our own record of Merit cows and others. Females, any desired age, either (imp. or home-bred) come as per our list. Photo in residence, 2000 St. Station, G.T.R. E-10-28-09

ALEX HUME & CO., Montic P.O.

NEIDPATH AYRSHIRES

Bull calves dropped this spring. By imported Bull, first Toronto, Ontario and Halifax. Long distance Phone. W. B. ALLANTINE, Stratford, Ont. E-4-09

SPRINGBROOK AYRSHIRES

are noted for being large producers of milk, testing high in butter fat. Young stock of all ages for sale. A few choice bull calves of 1908 now ready to ship. Prices right. Write or call on W. F. Piepho, Hamilton, Que. E-13-26-08

STONEGROVE STOCK FARM

Harold M. Morgan, prop. St. Anne de Bellevue. Choice young Ayrshire Bulls and Heifers for sale. Yorkshire pigs from imported sires and Dams, February and March litters. Largest selection. Highest quality. Write for prices. E-6-09 E. W. Bjorkland, Md.

THE SUNNY SIDE HEREFORDS

FOR SALE.—A choice herd of 10 heifers and 8 bulls, from 10 to 24 months old, at bargain prices. Also a few cows with milk by side, and bred grain, can be spared. E-9-25

M. E. O'NEIL, Southgate P.O.

THE HOMESTEAD HERD OF ABERDEEN ANGUS CATTLE

Freeborn offspring, 18 months old bull, sire a Toronto champion, also cows and heifers of the choicest breeding. Must be sold to make room, at prices that will surprise you. WM. ISCHE, Proprietor, Sibiryville, Ont. E-6-09

THE

Salem Herd of ShortHORNS

is headed by the champion Gilt Victor (Imp.) Cattle of all ages for sale.

J. A. WATT E-6-15

ELORA STA., G.T.R. & C.P.R. SALEM P.O.

A Few Good Clydesdales and Hackneys

A very choice lot of Imported Clydesdale Stallions and Sires, bred by noted gentry as Buchanan, Maclellan, and Maclellan. In Hackneys I have to offer two big trappy handsome Stallions and two mares priced at an unusually low price. Also three or four yearlings of all ages. All show high straight action and combine the choicest breedings. In Fillies I have a number of prize winners at Canada's leading shows, as well as a number of coming show ringers to offer. Prices will be right for the goods and suitable terms can be arranged. Come and see them.

W. E. BUTLER, - - - - - Ingersoll, Ont.

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

HOLSTEINS

We must sell at least 25 cows and heifer calves to make up for the natural increase of our herd. This is a chance of a lifetime to get a good bargain; we also have a few young and Poulet Herms, Imp. son of Hensveldt DeKok, world's greatest sire, head of herd. Come and see them.

H. E. GEORGE

Putnam Stn., 15 miles C.P.R. E-41

SUNNADALE HOLSTEINS

Bull calves from 2 to 4 months old, sired by Dui-dahl-Sig Hengervill Maple Crest, he is imported from the celebrated Fields herd, champion herd of the world, sired by Pietje Hengervill Couss DeKok, champion bull of the world. It is the only sire that has two daughters that made over 25 lbs. butter in 7 days officially. Price reasonable. Write for blood record. E-6-21-09

HOLSTEINS

I have only three sons of Brightest Canada to offer for sale. Speak quick if you want one. Gordon H. Macnair, Leeds Co., Manhard P.O., Ont. E-6-4-09

EVERGREEN STOCK FARM

Holstein cattle and Tamworth swine. Bull calves for sale, with good official records behind them; also Tamworth spring pigs. For particulars write Thos. Davidson, Spring Valley P. O. Brockville Stn. E-6-24-09

NEIL SANGSTER

ORMBTOWN, QUE.

Breeders of Holstein-Friesian cattle of high-class merit. Young stock of both sexes for sale. Write for prices. E-6-28-09

SPRING BROOK HOLSTEIN AND TAMWORTH—3 young sons in farrow to sell

"Knowie King David," 2 boys ready for service. Bred sired by two cows. Offerings in Holsteins: 1 bull, 12 months old, "Quality," a few females. "My Motto," "Quality," a few females. E-6-24-09

E-6-15-09 A. C. HALLMAN, Breslau.

HOLSTEIN BULL FOR SALE, 1 year old, two cows and two yearling bulls. One Tamworth sow. Write for particulars

SAUCHEL LARSON, London, Ont. E-6-09

Canadian Farm Milk Record, 1908

No.	Name of Cow	Age	Milk in milk June	Jan.	Feb.	Mar.	April	May	Average per day May
1	Arvis Clothide	14	1	126			2001	1490	50.0
5	Chamcock Queen	12	23	700	650	690	714	715	25.1
7	" "	11	740	720	615	705	708	720	22.9
9	Kirald Holstein	5	7	918	785	833	832	844	27.2
19	" "	7	12	154	402	410	423	117	50.0
20	" "	7	1000	971	859	875	949	81.4	"
21	"Durham	7	7	811	656	660	685	638	20.5
22	"Holstein	6	7	1021	832	811	764	801	27.5
23	" "	6	7	225	812	832	793	710	24.0
14	" "	10	8	412	79			329	41.0
15	"Ayerbire	10	29	86	735	1070	1070	1070	34.6
30	DeKok Burke's Orphan	10	29	86	735	1070	1070	1070	34.6
30	Holland Beauty	11	11	301	23	402	309	1873	28.0
42	Chamcock Clothide	6	6	23	402	1273	1443	1443	31.6
43	" "	6	6	23	402	1273	1443	1443	31.6
49	Currie May	6	5	1315	1377	1430	1392	1450	40.6
57	King Chamcock Arggie	6	15	857	700	776	828	1189	29.1
61	Hessie Sylvia	5	6	5	6	5	6	5	29.1
71	Chamcock Arggie Queen	3	10	4				2081	20.8
31	"Mavis	6	6	250					"
		Total Pounds		9435	7084	9011	12380	16487	
		Average per day per cow		23.4	30.0	28.5	31.9	30.9	

* Last calf

* Last calf

Those marked * are Home Bred. No. 37 with first calf gave 9070 lbs. in 12 months and in the 15th month averaged 29.3 lbs. a day. No. 5, twenty-three months in milk, averaged 31.1 lbs. a day for the last month. No. 49, thirteen 4/5 months, average for the last month, 40.6 lbs. daily.

Haying at Annandale
Geo. Rice, Oxford Co., Ont.

There are many ways of making good hay. Perhaps no one is the best. One has got to be guided by his circumstances. There are also many ways of making poor hay, and some go to more work in making poor hay than others do in making good hay.

Hay is put in the barn now much greener than was thought possible a few years ago. When put in right it comes out in better shape, is more palatable and more digestible. The real thing in making good hay is to have it all dried enough, but none of it too dry. Some dry hay till the leaves turn up, while others bunch it almost as green as when cut. Good hay can not be made from either of these practices. Therefore we want to get it evenly dried, and in order to do so, I believe in the free use of the tedder.

We take off about 40 or 50 acres of hay a year. It is quite an item to have all the implements that are so much to take off we can also afford to have a full set of implements.

A person having a small quantity of hay to take off would find it nearly as cheap to buy the hay as to buy the implements. With only a small quantity of hay to take off, I would not advise a man to buy all the haying implements that might be profitable had he a large quantity to handle.

We have a six foot mower and a two-horse hay tedder that will ted up two swaths of the mower. When the grass has become wilted somewhat the tedder is started the opposite way from which the mower ran. It will then ted the hay up better, standing it on its ends, so that the sun and air can get at all parts of it.

GET HAY EVENLY DRIED

If the grass is very heavy, or the weather slow for hay making, we often go over the field twice with the tedder, the second tedding shortly after the first time to keep it well stirred up so that all parts will get evenly dried, but none too dry. After we think it is sufficiently dried, that is before any leaves will break off, we start to draw.

We have a hay loader, but do not use the side delivery rake. The hay-

loader takes it up out of the swath in a moderate crop of hay, quite as fast as two men can load it on the wagon, and that is fast enough. The hay loader also takes it up clean, if care is taken to have it pass the miss spots. Often we take off a large field and never have a rake in the field.

When it comes up, I prefer to have the hay spread out; then we can start the tedder when it has partly dried off, and shake it up. This gets the water out of it and allows it to dry quite as much as the air, as by the sun, besides the side of the grass that has been exposed to the rain is not further bleached by the action of the sun, for any length of time. There will be a slight injury to the color of the hay once it has been rained upon, but not much—not enough to make it feeding valueless.

UNLOADING HAY BY STEAM POWER

The hay is put into our barn by the horse fork. As our barn is so large, and we use so much rope, it would be a difficult matter for a man to get the hay onto hay forks. As we have an engine in the barn (steam power) we have arrangements made so that the hay is drawn up by means of the engine. The big rope runs around one shaft, which is put in motion by pressing a lever. Then, after tripping the lift another wheel is put in motion which by the aid of another shaft, which is attached to the hind end of the car, pulls the car back.

We have put in over one hundred tons in all places, and all of it is put in pretty green. If we have no trouble from it unduly heating. Care, however, must be taken not to have any moisture, such as dew or rain, on the hay when it is put into the barn. The moisture or juice of the grass that is not dried out, is inside the stems and evenly distributed. This will not be so in hay made in the mow it can usually be traced to dew or rain, or green bunches that have not been dried at all.

the other a chance to start again, which better results will be obtained. If you grow hogs, do not think that any labor, spent in providing green feed for them, will be wasted. Such feed will not only cause your pigs to enjoy better health, but will go a long way towards the economical production of pork. Feeders who raise the grain which they feed, can appreciate the full force of these statements.

What Dairy Records Show

The great value of the cow testing associations to the advancement of dairying, is strongly shown up in a recent circular sent out by C. F. Whitley, who has charge of the dairy records. Forty cows in the Pine Grove, Ont., association, for the 30 days ending May 17th, had a total production of 28,502 lbs. of milk. During the same period 46 cows in the North Oxford, Ont., association, gave a total yield of 40,385 lbs. of milk. Had the Pine Grove cows produced as well as the North Oxford cows, they would have given an additional 6,618 lbs. of milk, equivalent to an extra eight cheese, each weighing 80 lbs.

At Sheffield, Ont., during the same 30 days, 54 cows gave 34,541 lbs. of milk, or an average of only 639 lbs. per cow. Had they yielded in the same proportion as the North Oxford cows, they would have given 12,870 lbs. additional more than they did, or an additional sum of \$115 to their owners in the 30 days. What farmers can do in one district, those in another should do equally as well. Apparently it is up to us to make our cows earn more money.

Dog taxes would do away with many dogs. If dog owners were compelled to pay \$1 a head as a tax, there would be few instances of two or three dogs being kept by one owner, who cannot keep himself.—F. Birdsall, Peterboro Co.

Breeders' Directory

CARDS under this head inserted at the rate of \$5.00 a line a year. No card accepted under two lines, use for less than six months.

SHEEP

JNO. COUSINS & SONS, Harrison, Ont., C.P.S. and G.T.H., Oxford Down Sheep, Short Horn Cattle, Yorkshire Swine. 0-8-15

GEO. B. ARMSTRONG, Howhill Stock Farm, Teaswater, Ont., Leicester breeding. 0-8-15

PETER ARKELL & SONS, Teaswater, P.O. C.P.S. and G.T.H., Midway, G.T.H., Oxford Down Sheep, show-ring and breeding stock, Improved and home-bred. 0-8-15

THOS. ARKELL, Teaswater, Ont., via C.P.S. & G.T.H., Chioten breeding stock, Oxford Down Sheep. 0-8-15

JNO. AYER & SON, "Belmont Farm," Rosemount, Ont., Breeders of Southdowns Stock for sale. 0-8-15

SAMUEL CUDMORE, "Pondale, Ont., Importer and breeder of Dorsets. E-10-15

SWINE

F. O. COLLINS, Hawesville, Ont., breeder of Yorkshire Swine. Good young stock for sale. 0-8-15

CRAS CURRIE, Morrison, Ont., breeder of choice Tamworth Swine. Stock for sale. E-11-09

JOS. FEATHERSTONE & SON, Streetsville, Ont., Large Yorkshire hogs for sale. 0-8-15

LORNE FOSTER, "Glenholme Stock Farm," Myrie, G.T.H. and C.P.R., breeder of Yorkshire Swine. Young stock for sale. E-11-09

D. DOUGLAS & SONS, Mitchell, Ont., breeders of Tamworth Swine, B. Turkeys, Toulouse Geese, Pekin Ducks and S. C. W. Leghorns. Correspondence invited. E-11-09

KELLY BROS., Hagersville, Ont., breeders of Improved Yorkshire Swine. Stock of all ages for sale. Write for particulars. 0-8-15

A. A. COLWELL, Newcastle, Ont., importer to Colwell Bros., Short Horns and Tamworth Swine. Choice young stock for sale. 0-8-15

S. SNOWDEN, Bowmanville, Ont., Box 39, breeder of Large English Berkshire, B. Rocks Light Brahma and Red Leghorns. Brown Ducks, W. Holland Turkeys. 0-11-15

STONE HOUSE STOCK

Stock of all ages raised with individualistic satisfaction guaranteed. Hector Gordon.

SPRINGHURST FARM BERKSHIRES—Pigs of all ages from Imported stock of the choicest blood and of the highest excellence. Satisfaction guaranteed.

JOHN ELLENTON & SON, Milton Stn., G.T.R. and C.P.R. 0-10-23

Advertise your farms in our For Sale column.

CATTLE

CHAS. GROOT, Brooklin, Ont., breeder of Clydesdales and Short Horns, Glasgow, Mead, outwager families. 0-8-15

A. J. WATSON, Castlegore, Ont., breeder of Scotch Short Horns. 8 young bulls for sale. 0-8-15

A. P. POLLARD, Shadeland Stock Farm, Canton, Ont., breeder of Short Horns and Berkshire Swine. Young stock always for sale. Rural phone. 0-10-1

BERTRAM HOSKIN, Mt. Pleasant Farm, The Bull, Ont., Breeder of Holstein Cattle, Tamworth Swine, High-class young stock for sale. Long distance phone. 0-11-1

A. E. MEADOWS, Port Hope, Ont., Short Horns, Matamoras, Lakeland, Queens, Lady Ann families. Choice young stock for sale. 0-8-15

JAS. ROBERTSON & SONS, Willow Bank Farm, Milton, Ont., breeders of Short Horn Cattle, Dorset Sheep and Berkshire Swine. 0-10-15

GEO. B. ARMSTRONG, Howhill Stock Farm, Teaswater, Ont., imported and Homebred Short Horns for sale. 0-8-15

JOHN GARDHOUSE & SONS, Highfield, Ont. See large ad.

MISCELLANEOUS

J. T. GIBSON, Denfield, Ont., Station G.T.R. Imported and Home bred Scotch, Short Horns, Choice breeding stock in Lincoln Shire. 0-8-15

H. BARTLETT, Kimbo P.O., Ont., Lincoln Co., Riverview Stock Farm. Short Horns and Dorset Sheep. 0-8-1

JAS. BOWMAN, "Elm Park," Onkash, Ont., breeder of the Dwarfs, Essex variety, Clydesdales, Horses and Buffalo. Stock on hand invited. 0-8-15

M. Importer and breeder of Clydesdale horse and Ayrshire cattle and Equines promptly answered and supplied. 0-8-23

Shires, Short Horns and Lincolns

A grand consignment of Imp. Mare, Stallions and Fillies. Received from R. Moore & Sons. Now for sale at right prices. Also a choice lot of Short Horns and Lincolns.

John Gardhouse & Sons, Highfield, Ont., Station G.T.R. Phone G.T.R. & C.P.R.

Provide Pasture for Hogs

H. C. Friedrich, Victoria Co., Ont.

If one would meet with the greatest success in hog raising, he must supply plenty of good pasture. Grain rations are too expensive to feed alone, especially through the winter period of a hog's growth. By providing a suitable pasture in a run near by the hog pen, pork can be produced at a much lower cost than where the pigs are confined, and fed wholly upon a grain ration throughout their growing days.

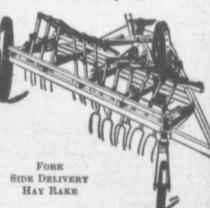
The pasture should have been provided before this, but it is not too late to make provision for a hog pasture that will be of service during the later months of summer and throughout the fall. If any special preparations for a hog pasture should begin a year before it is needed, especially if one is to have a clover pasture for them to run on. In many instances, it may be possible to fence off a corner of some pasture field for the pigs, or if this is not possible, one can approach the same results by feeding the hogs in their close yard, green clover, oats or peas, or other such plants of a succulent nature in the same way as one would feed cattle. This green feed has a healthy action upon the digestive organs of the pigs and seems to make the grain ration go much farther.

Rape of the Dwarf Essex variety, sown now at the rate of five or six pounds to the acre, will furnish a large amount of pasture ere fall if the season be favorable. It is not advisable to turn hogs into rape until it is ten or twelve inches high. If one can divide the field with a low, movable fence, in such a way that the hogs can be turned on to a part of the plot at a time, thereby giving

FARMERS! LOOK!



We are the oldest makers of Loaders and Side Rakes in Canada. If we have no agent in your neighbourhood write us direct for prices.



Can also supply Rake Side Delivery Hay Rake, equipped with 1 adjustable wheel. Write To-Day

Elmira Agricultural Works Co., Ltd.
ELMIRA, ONTARIO

HORTICULTURE

Cover Crops in Orchards

Frank T. Shutt, M.A.,

Chemist, Dominion Experimental Farms.

The development of the fruit growing industry in Canada during the past fifteen years, has been marked by, or I might say, has in a large measure, been the outcome of, certain advances in the rational treatment of our orchards. We all recognize that much has been accomplished through the adoption of improved methods of picking, sorting and packing, by better storage, and transportation of the fruit; but, this acknowledged, we must realize that the more recently introduced methods of soil treatment in the orchard, and the keeping in check of insect and fungus pests by spraying, have had very much to do in the production, both as to quantity and quality, of our marketable fruit.

In these matters of soil management and spraying, fruit growers are much indebted to scientific researches, and, speaking generally, we have not been slow to put into practice the methods indicated by the results of investigations carried on in America—I use the term in its geographical sense—agricultural institutions. Very much good has been done in the experimental stations of the United States, but we have also in Canada contrived our part towards that knowledge that we now possess regarding the rational growing of fruit. The Canadian agricultural institutions, both Federal and Provincial, have recognized that our conditions necessitated in many instances modifications of the general plan, that our problems called for special solution, and as a result they have believed, and I believe useful work towards putting fruit growing on a paying basis.

It must not, however, be lost sight of that it is necessary each one of himself to do a certain amount of experimental work. The principles can be established from the researches of the trained expert, who has all the necessary apparatus at hand to assist him, but in the application of these principles, if we would obtain the best results, there must be brought to bear the intelligent study by the individual, for there are many soils, and many climates, in our fruit-growing districts. I am careful to emphasize this aspect before mentioning the data of our experiments, lest any should suppose we are laying down a hard and fast plan of procedure suitable to all alike.

It is my purpose in this brief form certain of the chemical data we have obtained on the Dominion Experimental Farms, relative to the enrichment of the orchard soil and the control of its moisture, through

FARM HELP

and any kind of help, supplied free of charge by the Labor Information Office for Canada, 109 Fayette Street, New York 198 Franklin, New York City. Free application blank. E. Z. L.

PICTORIAL PRACTICAL GARDENING

BY WATER. The object of this useful manual for all classes of horticulturists is to present in concise and clear-cut introduction to practical gardening, and to compress such information as possible into the space at command. It gives detailed directions for the culture and selection of the leading flowers, fruits and vegetables, each subject being made clear by appropriate illustrations accompanying the text. Other valuable features of this work is "A Pictorial Garden Calendar," giving hints and illustrations for every month of the year. Illustrated, 5x7 inches, 157 pages. Cloth, \$0.75. The Canadian Dairyman and Farming World, Peterboro, Ont. Complete catalog of books sent free on request.

the use of cover crops. In the main I shall let the facts speak for themselves, indicating merely the deductions that may be made therefrom, and the broad principles they support.

The term "cover crop," was, I believe first used by Professor Bailey of Cornell University in 1902, who was then advocating the breaking away from the old plan of keeping orchards in sod. His suggestion was to grow a crop in the summer and autumn, which would afford a winter protection to the roots of the trees, and, at the same time, enrich the soil. Such a crop he designated a "cover crop." Prior to that time, the general practice, no doubt was to utilize the soil of the young orchard for some vegetable or farm crop, so that the trees had no longer possible, or profitable, the orchard was allowed to grow a sod, the grass being pastured or cut and cured, according to the wishes of the owner. Occasionally the orchard received a dressing of barn yard manure, but this, unfortunately, was the exception rather than the rule, it being scarcely realized that our orchard trees required to be fed, as other farm crops. There are, no doubt, to-day, many good orchards in sod, but the number steadily decreasing; we find the majority of advanced orchardists abandoning the old method, and employing some modification of the cover crop system.

DISADVANTAGES OF SOD

There are several reasons against a permanent sod in the orchard. One is that the grass is robbing the trees of that moisture and plant food necessary for their legitimate growth, and the reduction of fruit. I shall show you later from our experiment that sod, and, especially an old established sod, very rapidly exhausts a soil of its moisture. The loss takes place partly by transpiration through the leaves of the grass, and partly through capillarity and surface evaporation. In consequence of this the trees suffer in seasons of insufficient rainfall. In an orchard covered with sod, it is true that the tree roots are nearer the surface than in a cultivated orchard, but, nevertheless, it is an unusual happening when the grass and the grass, with the result that the moisture is entrapped and used by the grass, and this, as a rule, just at that time when the trees are needing it most, viz. from May to July. As to the extraction of the elements of fertility from the soil by the grass, I have only to point out that a yearly yield of orchard timothy hay per acre will remove in ten years about 600 lbs. of nitrogen, 400 lbs. of phosphoric acid, and 400 lbs. of potash. In the case of sod soils so well supplied with moisture, and so rich in plant food, that the newer method of which we are speaking is not necessary—but such soils, we are assured, are by no means common.

As you are well aware, by this system the land is part of the year under a crop, and part under cultivation. We seek thereby to (1) enrich the soil in humus and nitrogen; (2) to regulate or control the soil moisture; (3) to furnish protection to the tree roots during the ensuing winter; and, (4), to arrest the loss through the leaching of nitrates in the autumn. It is only with respect to this the first named feature that this paper deals. The data have been obtained in the orchard and laboratory during the past ten years, and in all this work I have had the kind advice and co-operation of my colleague, Mr. W. T. Macoun, Horticulturist of the Experimental Farm, Ottawa, whose interest in these investigations has throughout been enthusiastic.

(To be continued.)

Nova Scotia Fruit Crops

Walter E. Eaton, Kings Co., N. S.

In apples, Kings have set a very heavy crop; Gravensteins and Baldwins, fair; Blenheims and Ribstones, light; all other varieties, fair. All appear quite free of black spot.

Canker worms have done a lot of damage, being worse than for many years. They have ruined many orchards, not a leaf being left.

July Canadian Horticulturist

Among the many fruit topics discussed in the July issue of The Canadian Horticulturist, are the following: "Peach Culture, Thinning and Marketing," "Growing Cherries," "Root Pruning for Fruit," "Fertilizing Orchards," "Canadian Pears," "Irrigation," "Marketing Currants," "Spraying Mixtures, and several others. There are editorial expressions of opinion on "Our Fruit Trade in South Africa," "Spraying in Cities, Towns and Villages," "Buying Apples Barrels," and other topics. A score of letters from correspondents in all parts of Canada, give the fruit news of the provinces. The fruit crop prospects in all our fruit districts, are pointed out by reports from men who know. An excellent letter by Mr. D. Johnson, of Forest, on co-operation in Ontario, should be read by all farmers who want to make the most out of their fruit.

For those who grow vegetables, there are articles on "Commercial Fertilizers," "Growing Squashes," "Sweet Potatoes," "Selecting for the Protection of Cabbage Seed Beds." The ornamental phase of gardening receives attention in excellent articles on "Flowering Shrubs and Their Care," "Hints for Flower Lovers," "Lawn Mowing and Management," "Care of Azaleas," "The Worth of Gardening," and about fifty other topics that can be done this month.

Altogether the issue is a creditable one. It maintains the standard of excellence that The Canadian Horticulturist is noted for. Readers of the Dairyman and Farming World, when renewing their subscriptions, will be sent the Canadian Horticulturist for a year, the regular subscription price of which is 60 cents, if they will enclose 30 cents extra with their renewal subscription.

Marketing Muskmelons

A bulletin has been issued by the Agricultural Experiment Station, of Illinois, on "Marketing the Muskmelon." The following is a summary:

The leading type of muskmelon grown in Illinois for the general market is the Nettle Gem, and the matter presented in the bulletin has special reference to the marketing of this type.

Illinois Gem melons intended for shipment to the Chicago market should, as a rule, be picked as soon as the fruit will part readily from the stem, but not before.

Well graded melons will sell better than ungraded stock.

The quality of a melon is the primary factor which determines its grade. The relation between the netting of a melon and its quality, makes it possible to grade melons with extreme accuracy as to quality, on the basis of netting.

The full benefit of grading cannot be secured unless methods of packing are employed which will enable the melons to present an attractive appearance upon the market.

Different styles of pack should be adopted for melons of different sizes. A convenient packing shed facilitates proper grading and packing.

To handle the melon crop properly, the working force must be thoroughly organized, and each person trained for his particular duty.

The most satisfactory way of supplying melons to the smaller cities, is to ship directly to one high-class retailer in each city.

The safest plan to follow in shipping melons to a large city market is for the grower to make arrangements with some trustworthy commission firm to handle his entire product.

If you have had experience in growing strawberries, raspberries, blackberries, currants or gooseberries, kindly tell our readers about it. Send a letter for publication, and so on. A photograph of your plantation will also be most acceptable.



The LOU DILLON TANDEM GARDEN CULTIVATOR

It can be set to stir the soil any depth desired and to cultivate rows, one-third quicker than any other garden cultivator. Easier to push than a lawn mower. No gears can afford to be without one. Write for descriptive catalogue.

ONTARIO SEED CO.
100 Dundas Street
Waterloo, Ont.

WINDMILLS



Towers fitted every five feet apart and double braced

Grain Grinders
Pumps
Tanks
Gas and Gasoline Engines
Concrete Mixers

WRITE FOR CATALOGUES!
GOOLD, SHATLEY & MUIR CO., LIMITED
BRANTFORD, CANADA

One Pruning Shears GIVEN FREE

In return for one new subscription to The Canadian Dairyman and Farming World at \$1.00 a year. These shears have flat steel spring.

8 1/2 INCH
BOW HANDLES

CANADIAN DAIRYMAN & FARMING WORLD
PETERBORO, ONTARIO

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

The Canadian Dairyman AND Farming World

Published by The Rural Publishing Company, Limited.



1. THE CANADIAN DAIRYMAN AND FARMING WORLD is published every Wednesday. It is the official organ of the British Columbia, Manitoba, Eastern and Western Ontario and Bedford District Quebec Dairymen's Associations, and of the Canadian Holstein, Ayrshire, and Jersey Cattle Breeders' Associations.

2. SUBSCRIPTION PRICE, \$1.00 a year, strictly in advance. Great Britain, \$1.25 a year. For all countries, except Canada and Great Britain, add \$6 for postage. A year's subscription free for a club of two new subscribers.

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

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

5. ADVERTISING RATES quoted on application. Copy received up to the Friday preceding the following Saturday.

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

CIRCULATION STATEMENT

The paid-in-advance subscriptions to The Canadian Dairyman and Farming World exceed 10,000. The actual circulation of each issue, including copies of the paper sent subscribers who are but slightly in arrears, and sample copies, varies from 11,000 copies (never being less than that) to 15,000 copies. Subscriptions unless renewed are discontinued as they expire. No subscriptions are accepted at less than the full subscription price. Thus our mailing lists do not contain any dead circulation.

Swears detailed statements of the circulation of the paper, showing its distribution by counties in the provinces, will be mailed free on request.

OUR PROTECTIVE POLICY

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

THE CANADIAN DAIRYMAN AND FARMING WORLD

PETERBORO, ONT.

TORONTO OFFICE:

Room 308 Manning Chambers, 72 Queen St. West, Toronto.

A WISE APPOINTMENT NEEDED

Hon. Nelson Monteith, having decided definitely to retire as Minister of Agriculture for Ontario, Hon. Mr. Whitney must soon select a new colleague to fill that important position. The selection is one that will have to be made with great care. Hon. Mr. Whitney realizes this. During the recent Provincial elections, no criticism against the present government was made more frequently than that the agricultural interests had not been given the consideration, during the past four years, that their importance deserved.

Great pressure will be brought to bear on Hon. Mr. Whitney, by the friends of different members of the Legislature, to ensure their appoint-

ment to fill the vacancy in the Cabinet.

Fortunately, Hon. Mr. Whitney has shown repeatedly his ability to withstand pressure of this sort both from within, as well as from without, his party. It is imperative that he shall take such a stand at this time. Services that have been rendered to the party, or the geographical location of constituencies, are questions that should not be taken into consideration in the selection of a Minister of Agriculture.

Dairying is the chief agricultural industry of Ontario. It is rapidly growing in importance. The new Minister of Agriculture should have a thorough knowledge of the dairy industry. In addition, he should be actively engaged in agricultural work, and have an open mind, and the executive ability, that will enable him to grasp, and deal effectively with the thousand and one questions pertaining to agriculture that confront the Minister of Agriculture. He must, also, be a man of progressive ideas, capable of initiating and carrying through the important measures relating to agriculture that must be dealt with by the government during the next few years.

No member of the Legislature is as well qualified to fill the position as Mr. J. R. Dargavel, the member for Leeds county. Mr. Dargavel owns and operates a 250-acre dairy farm, on which he keeps a large herd of pure-bred and grade Ayrshire cows. He is the president of the Eastern Ontario Dairymen's Association, and has been a director of that association for many years, during which period he has rendered much valuable service for the cause of agriculture. It is generally known that Mr. Dargavel was largely instrumental in drafting and having passed the sanitary legislation relating to the dairy industry that is proving so beneficial. Mr. Dargavel is better known throughout the province in agricultural circles than any other member of the Legislature. His appointment as Minister of Agriculture would be popular and would add a strong member to Hon. Mr. Whitney's Cabinet.

A LONG AND SUCCESSFUL CAREER CLOSED

The late Hon. Thomas Ballantyne, who passed away in Stratford last week, was one of the most enterprising, unselfish and far-seeing public men Canada has known. The dairy industry, now our most important branch of agriculture, owes more to the late Mr. Ballantyne than to any other man. Our older dairymen are familiar with the manner in which he strove year after year, to interest Ontario farmers in dairying, at a time when few had a good word to say for the industry. Our younger dairymen may well hear the story re-told, if only in brief, that they may see what one determined, progressive, public-spirited man can accomplish.

In co-operative dairying Mr. Ballantyne fought the battle alone for many years. In 1867 he built the

Black Creek cheese factory, which has long been recognized as a model, but for years his work was tedious. About 1870 he felt that he would have to forego the work. He had expended from his private funds all that he could afford. He appealed to Hon. John Carling, then Minister of Agriculture, and received \$800 per annum. This gave him new hope, and in 1872 he brought to Perth county the gold medal for the best cheese made on the American continent. During 1867 he attended the first dairy convention and was elected director, and was subsequently elected nine times president, being also first Honorary President. At one time he attended and addressed meetings in all parts of the country, and at his own expense, in order that he might create a greater interest in dairying.

It was Mr. Ballantyne who suggested the principle of employing instructors to improve the quality of dairy products, and upon one occasion when the association was unwilling to retain the services of Prof. Arnold, then instructor, he retained him at his own expense for a year. Largely through his efforts he has seen the cheese factories of Canada increase in number to several thousand, and nearly all of which are managed by farmers themselves. He has seen also the system of dairy instruction extended until it covers not only Ontario, but several other provinces as well, and the industry has grown until Canada has become one of the greatest dairy countries in the world.

Co-operative dairying has been introduced in Scotland, and for this Mr. Ballantyne was directly responsible. In the south of Scotland he visited farms, and interested the Scottish farmers in the movement.

Those who heard Mr. Ballantyne address the members of the Western Ontario Dairymen's Association at their convention in Stratford three years ago, will long remember the fire and energy the grand old man put into his words, and the inspiration he gave to those who were present to fight the good fight for improvement in agriculture.

Much could be said about the splendid work Mr. Ballantyne accomplished in the commercial, municipal and political world, and particularly of his work in the Ontario Legislature, of which he was a member for almost twenty years. During that period he was a foremost champion of the agricultural interests. After all, however, the late Mr. Ballantyne's chief pride was his splendid family of seven sons and one daughter. All of his sons have made honored and even distinguished names for themselves in their respective lines of effort. Two of them, Robert Ballantyne, of Montreal, now senior Canadian partner of Lovell & Christmas, one of Canada's greatest exporters of butter and cheese, and Thomas Ballantyne, Jr., of Stratford, to their father's delight, have on different occasions, been chosen by their brother dairymen, in Western Ontario, to act as president of the dairymen's association. A third son,

M. W. W. Ballantyne, of Stratford, is well known, by name at least, to our readers, as a successful farmer and breeder of Ayrshire cattle.

Upon such a life of unselfish effort, the fellow Canadians of the late Hon. Mr. Ballantyne can repeat only the scriptural verdict, "Well done, thou good and faithful servant; enter thou into the joy of thy Lord."

HONOR BEFORE SELF

We recently spent a few hours at the home of a farmer who does not dress as stylishly as many farmers do, or as is customary among city people, but who has a heart that beats true, and a sense of honor that would put many men of greater pretensions to shame. Our friend some ten years ago, invested all his earnings in real estate. At that time there was a boom. Suddenly the boom collapsed. He found himself not only penniless, but in debt some thousands of dollars. Unfortunately the firms who held his notes failed, as a result, in part, at least, of the same boom. Had it not been for this, he might have been able to have paid the interest, and later saved considerable of his property. As it was, he lost everything.

He was getting up in years. Many men would have gone into liquidation and left their creditors to realize what they could. Instead of doing this, our friend set to work resolutely to pay off his indebtedness. His only method of doing this, was by means of his dairy farm. He keeps a herd of Jersey cattle. For ten years he has been paying off his indebtedness. Some years he has paid off as much as two hundred dollars a month.

During this period he has not been able to put on much style. He has not wanted to. It is possible that some people, who have not known his circumstances, judging by his appearance, may have concluded that he was an unsuccessful farmer, and pitied him. How mistaken they would have been! This man has had a success of his life. He has put honor ahead of riches, and saved his good name. Now, he has his indebtedness almost all paid off, he is not ashamed to look any man in the face. All honor to him.

LOW STALLION FEES ARE COSTLY

Nothing has done more damage to the horse breeding industry than the fact that stallions of low breeding, a large percentage of which are unsound, are offered for service at low rates. In many cases the low service fee is almost their only recommendation. Those of our farmers who cannot see beyond the cost of the service fee find this low fee wonderfully attractive. It serves as a snare to lure them from the paths that years of experience have shown to be the only safe ones to follow in horse breeding.

There are certain facts that bear almost endless repetition and one of these is that it is folly to pass by a good pure bred stallion to use a grade, no matter how fine a look-

ing animal he may be, simply because the service fee in one case is a few dollars lower than in the other. The cost of raising a high grade, as compared with a scrub colt is the same. When the time comes to sell both, however, the colt from the pure bred stallion, almost invariably commands a price in the market that repays the extra cost of the service fee many times over. The reverse is true of the scrub colt. He is seldom in demand for anything more than a cheap worker and the price he realizes, as a rule, does not much more than defray the service fee and the cost of raising. The sales that take place every week on our leading horse markets prove over and over again the truth of these statements. They demonstrate conclusively that a cheap stallion is dear at any price. It is time that something more was done than has been hitherto to point out to our farmers the need for the adoption of better methods of breeding.

Doubtful About Rural Delivery

Ed., Dairyman and Farming World:—Free rural delivery would undoubtedly take well with the farmer, if he were not taxed too heavily for the service. It would be a very fine thing for the farmers generally if such a service could be obtained, and if those living a long distance from a post office could agree, as to the way and time the mail was to be distributed, with those people living at a similar distance from the post office.

It seems to me, however, the expense would be too great to deliver mail to those scattered farmers in the back country. A majority of the people, though, I believe would be in favor of rural delivery, as they would like a daily mail. Others again, of less business standing, would be quite careless and disinterested about the whole matter.—Robert Leitch, Jr., Renfrew Co., Ont.

We Must Agitate It

Ed., Dairyman and Farming World:—The farmers of this country should have rural free delivery, and we must keep agitating it till we get it. The government should set a standard of so many families to a route, then when localities can comply with requirements of this standard, whether they are settled or whether they should be given free rural mail delivery. Such a standard would settle the question of the great area to be covered, that at present seems to scare our post office authorities.

Last fall I had occasion to visit in Clinton Co., Michigan. There they have free rural delivery, and their residences are no closer together than their lands are not as valuable as they are in this country, taking it on the average. Yet they have this great boon of free delivery. After returning home and driving three miles after my mail, it was forcibly brought home to me that we were a slow step in this one thing, that we are not agitating more for rural free mail delivery. I was more than pleased when The Canadian Dairyman and Farming World took up this great question, and I wish you every success.—E. C. Thompson, Wentworth Co., Ont.

The Time is Ripe

Ed., Dairyman and Farming World:—It is with considerable interest as you that I have been trying to get a series of articles in your paper, as

well as reading the pros and cons of the farmers on free rural mail delivery. If one should ask, "Am I in favor of it?" my answer would be, "Well, rather." I think free rural delivery is just what the farmers need, and is what they can justly demand. It seems to me that the Government would be justified in giving us free rural mail delivery, and certainly are not justified in withholding it from us.

In the first place, there is no one thing that is of greater value to the farming community in general, than "mail," and a great deal of the value of our mail lies in the promptness with which it is received. Papers, such as The Canadian Dairyman and Farming World, with timely articles, as well as business and social letters, may mean many dollars to a farmer when they are received on time. When received late they might be of considerable less value; and, on the average, I'll venture to say the majority of farmers do not receive their mail more than once or twice a week.

The farmer is the source of all food supplies, and is the country sustains. When the farmer enjoys good times, the country in general is prosperous, and vice versa. Were the farmers as quick to demand their rights as are the people in some other trades and professions, we might have had free rural mail delivery ere this. The time is certainly ripe for it now.—M. E. Maybe, Prince Edward Co., Ont.

Opportunity for All

"I am very proud of my pig. He is growing fine, and I am not sorry that I sold the papers for it. I wish your paper would succeed."—J. J. McDonald, Glengarry, Ont. This pig was won by Mr. McDonald as a prize for obtaining only seven new subscriptions for The Canadian Dairyman and Farming World, at \$1 a year.

Mr. McDonald is not the only one who has received a pure bred pig as a premium on obtaining new subscribers. Many others of our readers have won such prizes, and all have been perfectly satisfied with them. If you would prefer other pure-bred stock to pigs, you can earn such by making use of your spare time, and speaking a good word for The Canadian Dairyman and Farming World when talking to your friends and neighbors. Take a look at our new offer of live stock on the back cover of this issue, and see what you think of it.

HAVE YOU A SAVINGS BANK ACCOUNT?

Have you a savings bank account? If not, why not? Your every day necessities may absorb your present income. Why not consider some of the offers which we make in return for your subscriptions? We point with pride to some of the expressions of satisfaction and praise which we receive every day for our paper. Mr. John A. Chisholm of Antigonish Co., N. S., wrote recently: "Kindly send me immediately sample copies and full particulars concerning the sale of papers to The Canadian Dairyman and Farming World. I am already a subscriber, and must say that I like the paper very much, and I wish to compete for the cash prizes."

"We find both The Canadian Dairyman and Farming World, and The Canadian Horticulturist very interesting, and the former of considerable service to us in our business."—Herbertson & Hamilton, Glasgow, Scotland.

"We think a great deal of your paper, and cannot do without it."—Mr. Albert G. Wright, Lambton Co., Ont.

"Your combined paper is of real value to the farmer and the dairyman. I prize it very much, much



DeLaval Cream Separators

Are exclusively used in Creameries and Model Dairies throughout the length and breadth of two Continents. Sometimes the original purchase bore the name of one or other of inferior makes extensively advertised, but always practical folk, dairying for profit, replaced this with the De Laval—the universally accepted standard of Separator Values.

Experience of others points the moral:
**DE LAVAL SEPARATORS SATISFY
Get One!**

THE DE LAVAL SEPARATOR CO.
MONTREAL WINNIPEG VANCOUVER

DON'T STOP to ask your neighbors. Lift the load yourself with **THE BURR SELF-LOCKING TACKLE BLOCK.**

Can be used in any position and lock securely. The lawyer's trial, the lighter it locks. Never destroys the rope in locking. For butchering, straddling wire fences, lifting wagon-boxes, sick or injured animals, etc., it is indispensable to farmers. Saves labor of two or three men. 500, 550 pounds capacity. **VOKES NDW CO., Toronto, Can.**

deed.—Mr. William Bate, Richmond Co., Que.

"I like the combined paper very much better than The Farming World, published in 1907. If you will please send me some sample copies, I will try and get some new subscriptions."—Mr. P. Stewart Reesor, York Co., Ont.

"I have been a reader of your paper for some time and am well pleased with it. I am going to get a few subscribers. Please send me some sample copies, as I want to keep my copies all together."—Mr. Walter Bromby, Brombe Co., Que.

What Cow Testing is Doing

Eden Bank, B. C., association, for May, had the record for 241 cows of an average production of 917 lbs. of milk, 3.7 test, 34.4 lb. fat. In each of the 20 herds some individual cows gave over 1,000 lbs. milk, while the three best single yields were 1650 lbs., testing 3.2, 1750 lbs. testing 3.50, and 1760 lbs. milk in the 30 days. The best herd average was from lot of 20 cows yielding 1284 lbs. of milk, 3.4 test, 44 lbs. fat. Such animals must be a pleasure to handle, a source of pride and satisfaction, as well as of good cash profit.

A good Ontario record for the same period is at the Central Smith association, where a herd of 20 cows averaged 1096 lbs. milk, 3.3 test, 35

lb. fat. The best cow in that herd gave 1465 lbs. milk, testing 4.0, and the lowest yield in the same herd was 400 lbs., testing 3.2.

A contrast to the above is at St. Antoine, Que., for the same period, where 60 cows averaged only 654 lbs. milk, 3.3 test, 21.0 lb. fat. The 60 cows gave a total yield of 39,244 lbs. milk, 1317 lbs. fat. If they had milked as well as the cows at Eden Bank, B. C., they would have given an additional weight of actually sixteen thousand pounds of milk, and over seven hundred pounds of butter fat during the one month!

Are there not some places where there are still some poor cows left? The poor cows are quickest detected by systematic weighing and testing. — C. F. W.

In a well-bred hog that is growing and feeding right there is no time when it will make more pork for the food consumed than from ten weeks to six months of age.

Many farmers are thinking just now of locating on a farm of their own next year, and are on the look out for a good farm. If you have one for sale let these people know it by advertising it in The Canadian Dairyman and Farming World. Look at the head of our "Farms for Sale" column, where full particulars are given regarding this kind of advertising.

Creamery Department

Butter Makers are invited to send contributions to this department, to ask questions of matters relating to creamery work, to suggest subjects for discussion. Address your letters to the Creamery Department.

The Overrun in Butter

The overrun fad has not taken the hold on Canadian butter-makers that it has in the United States. In some of the big butter States, a year or two ago, butter-makers were vying with each other to such an extent as to who could obtain the biggest overrun and thus increase the profits of the manufacturer, that the quality deteriorated very much. Since then the fad has lost its glamour somewhat and makers are getting down to a more common sense basis on this question. The overrun, however, is an important part of butter-making, it has considerable to do with the quality as well as the quantity of butter to be made from cream.

In Canada it is illegal for butter to contain more than 16 per cent. of moisture. This standard is fixed to conform with the law in England where our surplus butter is shipped. This standard is slightly higher than the amount recommended by the best authorities for making the finest quality of butter. From 14 to 16 per cent. will give a very fine quality and better than a lower percentage of moisture. If the butter is well made and good in other ways a 16 per cent. moisture content should not injure it very much.

BASED ON BUTTER FAT

The relation of the moisture content to the overrun is sometimes bothersome. Butter with 16 per cent. moisture would have an overrun of 25 per cent. and not 20 per cent. as some imagine. To the moisture content must be added 4 per cent. for salt and curd. 100 pounds of butter would thus contain 80 pounds of butter fat, 16 pounds of water and 4 pounds of curd and other substances, approximately. The percentage of overrun is based on the butter fat and not on the total amount of butter. To produce 100 lbs. of butter fat, and 20 lbs. of other matter would increase this butter fat by one-quarter of its original weight or 25 per cent. This is the largest percentage the law will allow.

The moisture in butter varies a great deal. In the farm dairy it is very hard to control. The skilled butter-maker, handling a uniform quality of cream and churning it always at the same temperature, is able to control the moisture content of his product within certain limits. In dairy butter the amount of moisture may vary as much as four or five per cent. and yet by its outward appearance one would not be able to tell which sample had the most or which had the least moisture.

OVERRUN INCREASES PROFITS

Where the butter manufacturer pays a fixed price to his patrons for cream or butter fat, his profits are greatly increased by incorporating moisture in the butter. In Canada, creameries are run on the cooperative plan and the proceeds, after the expenses of making, etc., are deducted, are divided among the patrons. The moisture content, therefore, directly affects the cream producer and it is the makers duty to incorporate as much moisture in the butter as is consistent with the finest quality. Too little moisture is almost as injurious as too much moisture. From 14 to 15 per cent. will be about right. Do not try to increase moisture at the expense of quality. The increased

quantity obtained by incorporating more moisture will be more than counteracted by the inferior quality of the butter. At the same time it is not advisable to incorporate too little moisture. There is a happy medium which it is every butter-maker's business to find out. If butter containing 14 to 15 per cent. moisture can be made of the finest quality, then it is the maker's duty to make that kind rather than a brand containing only 10 per cent. of moisture. When butter sells at 20c to 25c a lb. the difference in the few pounds in the weight of butter will make quite a difference in the producers' profits. It is the patrons' right that as much butter should be made out of his cream as is consistent with choice quality and the maker should aim to do this.

Prof. McKay Leaves Ames

Many Canadians will be interested in learning that Prof. G. L. McKay of the Iowa Agricultural College, Ames, Iowa, has severed his connection with that institution. He has accepted a position with the National Creamery Butter Manufacturing Association, a new organization recently formed to control a large number of creameries in the United States. His official position is that of secretary, but his work will be that of developing the dairy industry, and instructing makers to produce a better quality of butter in the creameries controlled by the association.

Prof. McKay is a Canadian, who has made a name for himself in the United States. He is recognized today as one of the best authorities on butter and butter making on the continent. He learned cheese making many years ago with Dr. W. Robertson, now at the head of the Macdonald College, Ste. Anne de Bellevue, Que. After managing an Ontario cheese factory for several years, he went to Iowa, and took up creamery work. His success in this branch soon attracted attention, and he was selected as Professor of Dairying at Ames, a position which he occupied with distinction for many years. He will have ample opportunity in his new position to put his practical and theoretical knowledge to the test.

St. Hyacinthe Dairy School

A summary of the work accomplished in the St. Hyacinthe Dairy School during the past winter is as follows:

December course, 1907: 4 cheese makers diplomas; 4 expert milk testers certificates; 7 certificates of assiduity; 1 has taken only part of the course.

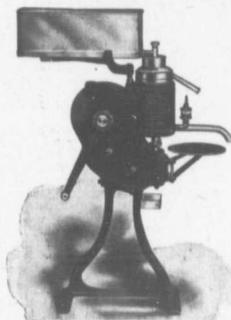
January course, 1908: 10 inspectors permits; 22 makers diplomas; 26 expert milk testers certificates; 34 certificates of assiduity; four having taken part of the course.

February and March course, 1908: 18 makers diplomas; 23 expert milk testers certificates; 42 certificates of assiduity; 33 students having taken part of a course, making a total of 226.—J. A. Plamondon. ..

In summing up the advantages of the co-operative creamery, E. K. Slater, Dairy and Food Commissioner of Minnesota, where there are 700 of these institutions, says:

1. It insures every cent of profit to the farmer.
2. It encourages better quality in the output.
3. It encourages better methods on the farm.
4. It encourages the building up of home industries.
5. It teaches the farmers that we are business men.
6. It secures a better locality in which to live.

A Successful Manufacturing Career



Improved 1908 U.S. Cream Separator.

In the past few days we were instituted, established in the minds of dairymen the reliability of their goods. For the past sixteen years the popularity of the United States Cream Separator has been evidenced around the world by the thousands of satisfied users. It will readily be seen by examining one of their separators that this particular make of machine is very thoroughly built, so that it stands up for years under the most severe tests. Every part that goes to make up the U. S. Separator, large and small, is subjected to the most severe tests before leaving the factory, thereby en-

sure every machine to be of perfect construction. It would be a very interesting and convincing experience, if every reader of this article, could only see the whole process of making the U. S. Cream Separator, starting where the castings first come from the foundry, and watching its progress through the different departments until it leaves the paint shop, epic and span, without a blemish. Then, if you could only see their immense, modern machine shops, with the many rows of auto-

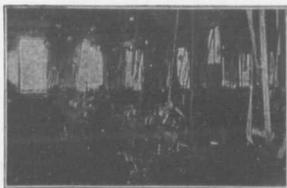


Main Factory and Office.



One of the several Lath Departments in the big Machine Shop.

matic, labor-saving machines, making many of the more intricate parts to less than the thousandth part of an inch. This great accuracy of the running parts makes the Separator just what it has always been, the easiest running machine on the market. And this is a very essential point to be considered, when one has to separate twice a day, and, perhaps, it takes twenty to thirty minutes each time. If it required the strength necessary for the turning of most separators, this would be a very laborious task. The peerless United States Separator has always been



Automatic Grinding and Polishing Machines that finish the parts with extreme accuracy.



Longest line of B. S. Automatic Gear Cutting Machines in the United States.

(Continued on page 19.)

very popular, but the improved 1908 machine is truly the acme of perfection in separator construction. It has to be seen to be fully appreciated. That almost perfect bowl which, in fifty consecutive runs, so unerringly beat everything else under the name of cream separators, at the Pan-American Exposition, has been even further improved by its weight being materially reduced, making it run much lighter, less cumberly, and has, in fact, been simplified to a minimum. It will supply can support which supply can support held in place by being bolted to the side of the frame,

Cheese Department

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

Look After the Milk

During June there has been more rain than usual for this month, and patrons have found it a little more difficult to keep milk. But it is during July and August that the greatest care needs to be taken. The dairyman, who has neglected to cool his milk, will find it difficult to cool his milk to the proper temperature. A good spring or well will help things out some. In any case the patron must give some attention to cooling the milk as soon as it is aerated. In fact the aerating and cooling should go on at the same time.

A few years ago aeration was all that was considered necessary in caring for milk for cheese making, except during the hot weather. But that thing has been exploded, and the best authorities recommend cooling the milk to at least to degrees, and keeping it at that temperature as nearly as possible. It will be found difficult to do this unless ice is available, or cold spring water. But most farmers have either the one or the other. If they have no spring water, they have well water that can be utilized for the purpose. Where there is running water the best way would be to get the milk in to place the cans in a box, into which a continuous stream of water is running. Where the well is to be depended on, the labor is needed, as the water to cool the milk will have to be pumped. But by renewing the water frequently around the cans, a low temperature can be maintained.

There are those who claim that the aeration of milk is unnecessary, and is in fact harmful. But this is doubtful. Aeration has been brought into disrepute by the careless manner in which it has been done. The aeration of milk should only take place where the atmosphere is pure and free from bad odors. A barnyard or a stable is no place in which to aerate milk. The less the milk is exposed under such conditions, the better. The aerating process should not be prolonged. A few minutes dipping or stirring when the milk is placed in the cans to cool, is all that is necessary. As soon as the milk reaches the temperature of the surrounding atmosphere, the less stirring it receives the better.

It is never safe to say anything about the care of milk without emphasizing the need of cleanliness. It is a common error to suppose that milk might rise up and say that cleanliness was not considered necessary by the writer. But it is necessary at

all times and places in connection with the handling of milk. If the milk is not clean, it is lost in the milking, in the straining of milk, and in the care of the milking utensils, the keeping of milk would not be such a responsibility for a large share of the bad milk received at cheese factories. Many patrons years ago, when some of the things advocated to-day were not considered so much important, got into a way of doing their work, and it is difficult to effect a change. A beginner is better material to work on than some of these old stagers, who imagine that the cheesemaker of to-day is a degenerate, as compared with the maker of fifteen or twenty years ago, because he cannot make cheese out of the same kind of milk. He can, however, and for that matter can make better cheese out of bad milk than his predecessor could. But his best efforts in this direction will not enable him to make a cheese out of bad milk that will command a high price. The market conditions have changed. The market demands a better quality than it did even ten years ago, and the factory or maker who cannot supply it must take second place. To get this better quality the maker must have better milk. Hence the supreme effort to be made by instructors, makers and everyone else to secure better milk. It is not a needless task they are imposing on the patrons when they ask them to take the best possible care of the milk they supply their factory with. It is a work of necessity that must be done if Canada's reputation for her high class cheese is to be maintained.—J. W. W.

Dairying in New Zealand

During the past few weeks New Zealand has been receiving a little attention in Canadian dairying circles, chiefly in regard to its possibilities as a cheese producing country. Mr. John Tait of that country, who is at present in Canada, has some information on the subject that is of interest. When asked by the Canadian Dairyman and Farming World, if New Zealand was likely to become a strong competitor of Canada in the cheese trade, he stated that Canadians need have little to fear from that quarter. The country is small, the population is not large and her resources limited. Though she has a large output of milk, her production her output would have comparatively little effect on the market. Nevertheless, the cheese trade in New Zealand is growing considerably the past year or two, and is likely to grow still more.

At the beginning of the cheese season in 1907 there were many creameries put in equipments at considerable expense, and changed from butter-making to cheese-making, owing to the high cash returns. These concerns did not look far enough ahead, and found it difficult to get competent cheese-makers to manage their factories. Consequently the cheese turned out was not of the best quality. But, as a lot of money has been expended in changing over they are likely to stay with the game for a while. If the restrictive cash returns from the creamery and the cheese factory continue as they have been, more dairymen are likely to take to cheesemaking, and the workers become more proficient in their work, the quality will improve. A dairy school will shortly be established in the direction of the very much. Last season 1,000 tons of cheese received from 11c to 15c a lb. for cheese. The ruling price for butter was 21c a lb.

FACTORIES HAVE NO SALESMEN

There are no cheese markets in

New Zealand, and the plan of selling is quite different from what it is here. The factories employ no salesmen. The selling is done by the directors of the company. The season's make is practically all sold before it is made. The directors receive offers from the buyers. They meet and decide which one they will accept for the season's make. The price is for the best grade, so much for first grade, so much for second, and so on. For butter, the difference in the price between first and second grade is about 2 cents a lb. Sometimes the buyer would offer a little extra for No. 2 to land the business. The bids for No. 1 grade are usually pretty uniform. The buyer's price is usually f.o.b. at the nearest grading station.

There are seven shipping ports at which grading stations are established. There are cold storage warehouses at these points, where the product is stored and the grading done. The factories send in their products subject to the order of the buyer. It often happens that the buyer will often ask for more cheese to be shipped than is covered by the factory's make for the month; cheese of the following month is put in to make up the quantity. This frequently is not sufficiently cured to ship, but the onus is on the buyer, who owns the cheese for the season, and can do as he likes with it. But this is not carried on to a large extent. All factories are registered and have a number, and often their own brand, which is also registered. The grading system has been very effective in improving the quality. Mr. Tait says that the quality has been more improved than by grading, but by instruction at the factories. During 1906 only 2 per cent of the butter graded second quality, which is a very good record. Often a standard calls for a dry butter. Other choice butter will be put in second grade because of having a little more moisture. This standard is likely to be modified somewhat in the near future, as the trade is demanding a butter with more moisture in it.

DAIRY FARM INSPECTION

New Zealand is entering upon an elaborate system of dairy farm inspection, for which an appropriation of \$60,000 a year has been made. The inspectors will look after the sanitary condition of dairy farms and the health of the cattle. There has been a system of factory inspection for some years, but it has not been large enough, the results from it have not been as effective as they otherwise might have been. Inspectors have been sent to nearly most parts to factories where the grading showed that their services were needed.

Some of the laws in New Zealand affecting dairymen, would appear very drastic in Canada. There is a 16-hour day act in force in connection with factory help. In a cheese factory, if it requires more than 10 hours to do the day's work, the helper gets extra pay. There is a tendency, therefore, to rush things through, without regard to quality. Then no company can accept milk from anyone but a shareholder. To supply milk to a factory, a farmer needs to have some shares in the company. This tends to keep patrons tied up to their own factories and the maker has better control over the milk supply. Mr. Tait gives a good instance of how this law works out. A company not well versed in the law, recently accepted milk from a non-shareholder. At the end of the season, when the bonus for the business was given out, this party did not get any. The milk was not a shareholder. As he was a large patron, his share amounted to about \$100. He immediately sued

for it, and as the company had broken the law by accepting the milk, it had to liquidate, and reorganize.

Dairying is having the same effect in increasing the value of lands as in Australia. As high as \$250 an acre has been paid for good dairy farms without a building of any kind on them. There is no winter feeding. It is only because of this fact that the business can be made to pay. But the buyer usually makes good, and has been making money of late years.

Restricting Bacterial Development in Milk

If the cows are kept thoroughly clean, if the stable is well lighted, well ventilated, and kept in a sanitary condition, if the milkers wear clean clothes, have clean hands and milk into clean pails, it is not difficult to obtain fresh milk which contains, relatively, only a few germs. At ordinary temperatures, however, these increase with wonderful rapidity. Milk may contain from 2,000 to 20,000 million more germs at the end of 24 hours than it did at the beginning. In order to prevent this rapid growth it is advised that milk producers and dealers resort to cooling milk to a low temperature. In handling milk commercially for direct consumption, an effort is made to cool it as soon as practicable, and to retain it at a low temperature until it reaches the consumer.

However, there is danger in keeping milk too long, even though it be held at a low temperature. Milk more than a week or ten days old should be viewed with suspicion, even though apparently in good condition. Milk that does not deteriorate so wholesome because it is sweet, especially if it has been kept at a low temperature. At the temperature of an ice chest, milk may remain good for a long time, and yet contain enormous number of bacteria, among which are species more likely to be unwholesome than those that develop at 68 degrees F. From this standpoint the suggestion arises that instances of ice cream poisoning are perhaps due to the preservation of cream for several days at a low temperature, such treatment keeping the milk sweet, but favoring the development of species of bacteria that are, at higher temperatures, choked by the lactic organisms.—The Professor at the Milking Station.

Give the whey butter business a wide berth until more is known about it.

CANADIAN NATIONAL EXHIBITION

TORONTO, ONT.

Aug. 29 to Sept. 14, 1908

\$50,000.00

In Prizes and Premiums

ENTRIES CLOSE:

Live Stock	Wednesday, Aug. 5
Men's and Women's Exhibits	" " " 5
Children's Work	" " " 5
Natural History	" " " 5
Agricultural Products	" " " 12
Historical	" " " 12
Floral	" " " 12
Decorative	" " " 12

For Price Lists, Entry Blank, and all Information, Address:

J. O. ORR, Manager

CITY HALL, TORONTO

GRAND MUSICAL TREAT

Band of Royal Artillery, Welsh, England

Twice Daily

Cheap Excursions and Reduced Rates from everywhere

FOR SALE AND WANT ADVERTISING

TWO CENTS A WORD, CASH WITH ORDER

FOR SALE, \$1,500—Brick cheese factory, 1000 lbs. capacity, 1000 lbs. daily. Everything up-to-date, \$1.10 per hundred for making.—J. L. Thomson, Hawkesbury, Ont.

OWNERS OF CHEESE FACTORIES AND CREAMERIES desiring to make direct sales to the public will have an opportunity of meeting a large British importer in July. Further particulars will be obtained by writing to The Canadian Dairyman and Farming World, B. F.

GLEBA MILK—By G. D. Belcher, M.D. In this book, the author sets forth practical methods for the exclusion of bacteria from milk, and how to prevent contamination of milk from the stable to the consumer. Illustrated, 37 illustrations. Cloth 25c. The Canadian Dairyman and Farming World. Our complete catalog of dairy books sent free on request.



THE best help is not to bear the trouble of others for them, but to inspire them with courage and energy to bear their burdens for themselves and meet the difficulties of life bravely.—Lubbock.

Backward, O Time!

By Horace Hazeltine

THE narrowness of the street was an unpleasant surprise to Carden. In his mental pictures it had not been wide, but for this contracted, almost lane-like thoroughfare, he was unprepared. The red, brick houses were lower, too, and more tiny than he had fancied, though he had never imagined them very grand or imposing. But, low and diminutive as they were, they seemed to crowd, one row on the other, across this narrow ribbon of a highway, with its disproportionately broad track. In vain he looked for the maple trees protected by slatted green-painted boxes, which were among the memories of his early childhood. The street was quite bare of trees. In their places were grim iron trolley poles, upholding stretched wires, which in turn supported the long, live, burnished copper wire supplying the electric power to the great juggernaut-like cars which at intervals thundered past, with hoarse metallic rumble of wheels, sharp, nerve-racking rattle of windows, and discordant clang of gong.

Midway of the block he halted, and stood close to the curb, his gaze fixed on the house opposite, which his searching eyes had picked out from the corner as the third beyond the alley. There was little otherwise to distinguish this dwelling from its neighbors. It was of dingy brick, three stories in height, and, in the meagre width of its door and windows, and the low three white marble steps which afforded approach to its entrance, it gave evidence of an architectural vogue once popular, no doubt, but long ago discarded.

If there was something of disappointment in Carden's expression, he made optical survey of the modest, old-time structure, there was also something of veneration. He noted with a pang that it was not altogether as he had remembered it, yet it undoubtedly was, structurally, if not in all its embellishments, the house in which he had been born. The old, white-painted door had given place to one of dark hardwood, in the upper panel of which was a pane of bevelled plate glass, guarded by a grill of wrought iron. In his infancy the windows of the ground floor had been protected by white painted board shutters, and the upper windows of outside green blinds; but now all these had disappeared. The ground floor showed inside shutters of walnut, and he presumed there were the same on the other floors, though only dainty white curtains were visible.

This effort to adorn the old dwelling with modern novelties distressed

Carden, and he resented it. He was thankful, nevertheless, that they had not painted the old bricks a purple red and imitated the mortar lines with geometrically accurate rulings of white paint. The bricks, at least, were the same honest bricks, weather-worn and squalid though they were.

He must have been standing there longer than he knew, watching the houses across the way, for suddenly he observed that he had become an object of interest to three urchins who, encouraged probably by his passive pose and rapt distant gaze, had drawn closer and closer, watch-



He became the object of interest to three small urchins.

ing with keen, eager, childish interest, this tall, elderly, well-dressed gentleman, who seemed for all the world like a wax figure, so still and quiet he stood. As he turned upon them it was with such disconcerting abruptness, that for the moment they were undecided whether to flee or to offer excuse for their rudeness. The largest of the three was the boy, pallid checked, but with big, bright intelligent brown eyes; the other two were girls, in all-enveloping blue-and-white check aprons.

Carden smiled as he looked at them, and his smile dispersed their alarm. For a little minute, however, he did not speak, and the children were likewise silent. Then he took some small change from his rousers pocket, and held out a dime to the lad, who shyly retreated a step with head on side, but with eyes fixed upon the lure.

"How old are you, my boy?" Carden asked. His voice was pleasantly

soft and his manner most kindly. "I'm ten, going on eleven," answered the child.

The man extended his arm a trifle, the dime further outstretched.

"Here is a cent for each of your years" he insisted; "and the little girls shall have a cent for each year, too."

But still the boy seemed reluctant. "I'm not allowed," he explained.

Carden laughed, lightly, good-humoredly, and ceased insisting. To the elder girl he said:

"And you, miss? How hold may you be?"

She cast down her small, bead-like eyes, which were set too close together.

"I'm 'most ten," she answered, and took the proffered dime, before the giver had time to make his proffering speech.

"And baby?" asked Carden, bending down to the pretty child with golden curls.

The little one stuck her thumb into her mouth, and said nothing.

"She's five," volunteered the other girl. "She's my little sister."

Carden pressed a nickel into the little one's chubby fingers.

"There, now," he said, graciously, "run along, all of you. I'm sorry, my little man," he added, "that you aren't allowed. But I congratulate you on your obedience."

And as the trio, with heads together, went slowly off up the street, turning at intervals to look back at their generous chance acquaintance, Carden resumed his contemplation of the little old brick house across the way, and continued his interrupted reverie.

"I must have been much like the lad, wonder, when I last came through the door," he mused, as his gaze dwelt lovingly on the narrow portal;

snowy marble which served as doorstep, and with uncertain fingers, grasped the nickled bell-pull. It was as though he stood at the entrance to a shrine, and across his thought-flashed remembrance of the Median custom of removing shoes before entering a mosque. He smiled at the incongruity of the fleeting position, and glanced to find an old, household of freckled visage and ruddy wealth of hair.

"I should like to look over the house," he said simply.

The woman, having wiped her hands on her apron, proceeded with the same attitude to wipe the door-knob, hesitatingly the meanwhile to give reply.

"The lady beed out, sor," she returned at length; "an' sure I'm that busy meself I can't be after lavin' the kitchen." Then, having looked her caller over with searching scrutiny, and being apparently satisfied, she added, "If yez don't mind, ye might be after lookin' round' yer self."

Carden nodded his approval of the suggestion. Nothing could have suited him better.

"All right, my good woman," he acquiesced. "Pray don't let me interfere with your duties. I may take some little while, I—" he paused, "I'm not at all causing any vexation for his proposed dallying—perhaps I shall take some measurements." "Don't hurry, sor," she told him. "Take yer time! It's a long while Penfold is home before yez gets 'ough. She can till yer about the rint, sor."

(Concluded next week)

Vacation for the Farmer

If we consider not the worker but work, then a man's need for vacation is measured by the laboriousness of his duties, the time and exertion which he expends upon them, and the lack of cheering and recreating influences in his surroundings. The farmer's life, though one of independence and immunity from temptation, is also one of long hours and drudgery. Though the farmer breathes purer air, and gazes daily upon clearer skies than many of his brother mortals, he must leave his home and become fully aware of it. Though perhaps he looks upon that part of the handwork of God which is least polluted by the finger marks of man, he sees altogether too little of the works of both God and man. He needs a vacation not only for the purpose of rest and diversion, but also to increase his confidence and augment his knowledge.

The vacation of the farmer differs radically from that of the city book-keeper or his digger, an unfortuniate to escape the confinement of a narrow and uncomfortable office—to get out in the woods or fields, where he can throw his hands, dig, run, shout, and frighten the little calves. The farmer desires to forget for a time the dull monotony of the farm; to get away from the ordinary vacation in which fishing tackle, straw hats and camping outfits figure to a greater or less extent, is not the farmer's, or at least does not merit being lengthily treated in answer to the question "Do the farmer and his family need a vacation?"

The general idea of a vacation take his vacation in the city. He cannot, as a rule, take it regularly at a given time every year, nor in company with his family, or at least does not merit being lengthily treated in answer to the question "Do the farmer and his family need a vacation?"

"to think of all the things that I wasn't allowed." Then he fell to wondering how the house might look on the inside. There must have been a world of changes, of course.

But he should like to see the rooms once more; that big, second story front room, especially, wherein his had first met the world's light—his voice had uttered its primal infant cry.

As he gazed, thus thinking, his eyes detected what it had not hitherto noticed, a small, white placard pasted upon the wall between the two lower windows. The legend that it bore was not distinguishable to his near-sighted eyes at the distance, so he crossed the street and, on nearer approach, found that it read:

This House for Sale or To Let.

Inquire Within

An unaccustomed emotion very like reverence, pervaded him as he counted the three little blocks of

of taking a vacation. When extensive purchases in the household line are the object of a visit to the city, the farmer should be accompanied by his wife. It is the latter, often, who most needs a vacation. When shopping only is to be done, the vacation should be confined entirely to the female members of the family. Other opportunities for visits to the city are state fairs, expositions of all kinds, and invitations from the everlasting committee.

Within the restrictions of formality, respectability and proper consideration for those who are with you, see and hear all that you can, when on a vacation. Attend plays, lectures, sermons, concerts visit museums, scientific collections, art galleries, whatever is of interest in the line of machinery or architecture factories of all kinds, libraries, churches, every one according to his taste, his finances, and his convenience. Stay two or three days, or as many weeks, in proportion as you can be spared from home, or as you are in need of an outing, and as you are enjoying yourself.

THE COOK'S CORNER

Send in your favorite recipes, for publication in this column. Inquiries pertaining to cooking are solicited and will be replied to, as soon as possible after receipt of same. Our Cook Book sent free of charge yearly, subscription at \$1.00 each. Address, Household Editor, this paper.

SOUR CREAM PIE

To the beaten yolks of 4 eggs add 1 cup of sugar, 1 cup of chopped raisins, 1 cup of sour cream and $\frac{1}{2}$ teaspoon of cloves. Cook until thickened in a double boiler. Fill a baked pie shell, cover with meringue made from the whites of the eggs and brown slightly in the oven.

SAUSAGE

Use $\frac{1}{2}$ part lean meat to $\frac{1}{4}$ part fat. To 100 lbs ground meat add 1 qt salt, $\frac{1}{2}$ cup ground black pepper, and $\frac{1}{2}$ cup sage. Mix thoroughly and stuff into casings and smoke, or make into cakes, fry, and put away in jars covered with molled lard.

OX TAIL SOUP

Two sticks, 1 oz. of good beef dripping, 1 carrot, 1 onion, little turnip, 1 stalk celery, a dozen peppercorns, two cloves, 2 qts of cold water or a little more. Cut the tails into

joints remove all the fat on a wash pan. Melt the dripping in a stew pan, when hot put in the joints and fry a good brown, pour off the fat, add some water, a little salt, let come slowly to boil, skim well. Prepare your vegetables, cut into small pieces, put them in the pan, also the cloves and peppercorns. Simmer gently for $\frac{3}{4}$ hours, then strain soup into a basin and let it get cold, next skim off every scrap of fat. Reheat the soup and put the small joints of the tail and any neat pieces of meat from the larger ones into it. Season carefully to taste. Serve very hot.

PLAIN POUND CAKE

Two cups of white sugar, 1 cup of butter, 1 scant cup of milk, 4 eggs, 3 cups of flour, 3 teaspoons baking powder, vanilla, salt.

CANNING AND PRESERVING

RASPBERRIES

Twelve qts. of raspberries, and 2 qts. of sugar.

Put the two qts. of sugar in the preserving kettle; heat slowly on the stove; crush the wooden vegetable masher; spread a square of cheese cloth over a bowl, and turn the crushed berries and juice into it. Press out the juice, which turn into the preserving kettle, with the sugar and put on the stove; stir until the sugar is dissolved. When the syrup begins to boil, add the remaining 10 qts. of berries. Let them heat slowly. Boil berries, counting from the time they begin to bubble. Skim well while boiling. Put in cans and seal.

RASPBERRIES AND CURRANTS

10 qts. of raspberries, 3 qts. of currants, $\frac{3}{4}$ qts. of sugar.

Heat, crush, and press the juice from the currants and proceed as directed for raspberries. Blackberries—the same as for raspberries. Currants,—12 qts. of currants, 4 qts. of sugar. Treat the same as for raspberries.

GOOSEBERRIES

Six qts. of berries, $\frac{1}{2}$ qt. of sugar, 1 pt. of water.

Put water, berries, and sugar in the preserving kettle; heat slowly; boil 15 minutes, counting from the time the contents of the kettle bubble.

CHERRIES

Six qts. of cherries, $\frac{1}{2}$ qt. of sugar, $\frac{1}{2}$ pt. of water.

Measure the cherries after the stems have been removed. Stone them or not, as you please. If you stone them be careful to save all seeds. Put the sugar and water in the preserving kettle and stir over the fire until the sugar is dissolved. Put in the cherries and heat slowly to the boiling point. Boil 10 minutes, skimming carefully.

GRAPES

Six qts. of grapes, 1 qt. of sugar, 1 gill of water.

Squeeze the pulp of the grapes out of the skins. Cook the pulp 5 minutes and then rub through a sieve that is fine enough to hold back the seeds. Put the water, skin and pulp seeds. Put the water, skin and pulp seeds in the preserving kettle and heat slowly to the boiling point. Skim the fruit and then add the sugar. Boil 15 minutes.

Sweet grapes may be canned with less sugar; very sour ones may have more.

RHUBARB

Cut the rhubarb when it is young and tender. Wash it thoroughly and then pare cut into slices about two inches long. Pack in sterilized jars. Fill the jars to overflowing with cold water and let them stand 10 minutes. Drain the water and fill again to overflowing with fresh cold water. Seal with sterilized rings and covers. When required for use, treat the same as fresh rhubarb.

Green gooseberries may be canned

in the same manner. Rhubarb may be cooked and canned with sugar in the same manner as gooseberries.

Fruit for Jelly Making

An acid fruit is the most suitable for jelly making, though in some of the acid fruits, the strawberry, for example, the quantity of jelly making pectin is so small that it is difficult to make jelly with this fruit. If, however, some currant juice be added to the strawberry juice, a pleasant jelly will result; yet, of course, the acid flavor of the strawberry will be modified. Here is a list of the most desirable fruits for making jelly.

The very best are given first: currants, crab apple, quince, grape, blackberry, raspberry, peach.

Apples make a very mild jelly, and it may be flavored with fruits, flowers, or spices. If the apples are acid it is not advisable to use any flour. Juicy fruits, such as currants, raspberries, etc., should not be gathered after a rain, for they will have absorbed so much water as to make it difficult, without excessive boiling, to get the juice to jelly.

If the berries are especially juicy it will be necessary to wash them, but the work should be done very quickly so that the fruit may not absorb much water.

Large fruit such as apples, peaches, and pears must be boiled in water until soft. The strained liquid will contain the flavoring matter and pectin. It requires more work and skill to make jellies from the fruits with which the water must be added than from the juicy fruits. If the juicy fruits are gathered at the proper time one may be barely sure that they contain the right proportion of water. If gathered after the season the fruit must be boiled a little longer, that the superfluous water may pass off in steam.

In the case of the large fruits a fair estimate is 3 qts. of strained juice from 10 qts. of fruit, about 4 qts. of water. If the quantity of juice is greater than this it should be boiled down to 3 qts.

Apples will always require 4 qts. of water to 8 qts. of fruit, but juicy peaches and plums will require only 3 to $\frac{3}{4}$ qts.

The jelly will be clearer and finer if the fruit is simmered gently and not stirred during the cooking.

It is always best to strain the juice first through cheesecloth and without pressure. If the cloth is double the juice will be quite clear. When a very clear jelly is desired the strained juice should pass through a flannel or felt bag. The juice may be pressed from the fruit left in the strainer and used in marmalade or for a second-quality jelly.

To make jelly that will not crystallize (candy) the right proportion of sugar must be added to the fruit juice. If the fruit contains a high percentage of sugar, the quantity of added sugar should be a little less than the quantity of fruit juice. That is to say, in a season when there has been a great deal of heat and sunshine there will be more sugar in the fruit than in a cold, wet season; consequently, 1 pt. of currant juice will require but 1 pt. of sugar. But in a cold wet season the pt. of sugar for a pt. of juice must be measured generously.

Another cause of jelly crystallizing, is hard boiling. When the syrup boils so rapidly that particles of it are thrown on the upper part of the sides of the preserving kettle they often form crystals. If these crystals are stirred into the syrup they are apt to cause the mass to crystallize in time.

PACKING CANNED FRUIT

Each jar or jelly glass must be wrapped in several thicknesses of soft paper (newspapers will answer).

Windsor Salt

—sparkling in its whiteness—looks as pure as it tastes. Fine and pure.

The Windsor savour is peculiarly delicate and lasting.

Ask your grocer for it.

Make pads of excelsior or hay by spreading a thick layer between the folds of newspapers. Line the bottom and sides of the box with these pads. Pack the fruit in the padded box. Fill all the spaces between the jars with the packing material.

If the box is deep, and a second layer of fruit is to go in, put thick pasteboard or thin boards over the first layer and set the wrapped jars on this. Fill all the spaces and cover the top with the packing material. Nail on the cover and mark clearly: Glass, this side up.

The great secret in packing is to fill every particle of space so that nothing can move.

CANNING AND PRESERVING UTENSILS

In preserving, canning, and jelly making, iron or tin utensils should never be used. The fruit acids attack these materials and so give a bad color and metallic taste to the products. The preserving kettles should be porcelain lined, enameled, or of a metal that will not form troublesome chemical combinations with the juices. The kettles should be broad rather than deep, as the fruit should not be cooked in deep layers. Nearly all the necessary utensils may be found in some ware not subject to chemical action. A list of the most essential articles follows:

Two preserving kettles, 1 colander, 1 fine strainer, 1 skimmer, 1 ladle, 1 large mouthed funnel, 1 wire frying basket, 1 wire sieve, 4 long handled wooden spoons, 1 wooden masher, a few large knives, knives for paring fruit (plated if possible), flat bottomed clothes boiler, wooden or willow rack to put in the bottom of the boiler, iron tripod or ring, squares of cheese cloth. In addition, it would be well to have a flannel straining bag, a frame or

Nine O'Clock, and the Washing Done

The "New Century" Washing Machine washes a tubful of clothes in five minutes. And washes them better than you can possibly do by hand.

New Wringer Attachment allows water to drain directly into the tub. Price \$6.00 complete—delivered at any railway station in Ontario or Quebec. Write for free copy of our new book. Dowsell Mfg. Co. Limited, Hamilton, Ont.



PAINTERS AND HOUSEHOLDERS

Who desire a light yet strong extension ladder 25 to 26 ft lengths, one that won't warp, and free from side-swaying, should write to—

BERLIN DOUBLE TRUSS LADDERS, or ask your dealer.

Catalogue Free

Also makers of WASHING MACHINES and Lawn Seats.

Berlin Woodenware Co
BERLIN - ONTARIO

BIG BOOK BARGAINS

1. 150 Songs, with Music, 10c. 2. 116 Humorous Selections, 10c. 3. Humorous Dialogues, 10c. 4. 1,500 Conundrums, 10c. 5. 600 Practical Family Keeper, 10c. 6. Family Cook Book, 700 recipes, 10c. By mail, postage. Send all orders postal note or stamps. THE NOVELTIES CO., Dept. F, Toronto, Canada. 547

Baby's Own Soap

Best for Baby, best for you.
Avoid substitutes.

Albert Soaps Ltd. Mfgs., Montreal.

Try "Albert"
Talc-Violet
Scented and
Antiseptic.

which to hang the bag, a syrup gauge and a glass cylinder, a fruit picker, and plenty of clean towels.

The regular kitchen pans will answer for holding and washing the fruit. Mixing bowls and stone crocks can be used for holding the fruit juice and pared fruit. When fruit is to be plunged into boiling water for a few minutes before paring, the ordinary stewpans may be used for this purpose.

Scales are a desirable article in every kitchen, as weighing is much more accurate than the ordinary measuring. But, knowing that a large percentage of the housekeepers do not possess scales, it has seemed wise to give all the rules in measure rather than weight.

The wooden rack, on which the bottles rest in the washboiler, is made in this manner: Have two strips of wood measuring 1 inch high, 1 inch wide, and 2 inches shorter than the length of the boiler. On these pieces of wood fasten thin strips of wood that are 1/2 inches shorter than the width of the boiler. These cross-strips should be about 1 inch wide, and there should be an inch between two strips. This rack will support the jars and will admit the free circulation of boiling water about them. Young willow branches, woven into a mat, also make a good bed for bottles and jars.

(Continued next week)

Soap and soda often softens the bristles of a brush and turns an ivory back yellow; a tablespoonful of ammonia in a quart of warm water is sufficiently cleansing. Combs should not be washed if it can be avoided, as water is apt to split the teeth. They can be kept clean with a small brush which is sold for the purpose, and rubbed with a cloth or towel.

A Washing Help

Housewives who don't have stationary tubs may find of use this suggestion from my experience. A rubber tube (which may be purchased by the foot, or any druggist) fits over the faucet at one end, while the other reaches into a tub. All the cold water I use is drawn in this way, the boiler being filled as well as the tub. A housekeeper who has a hot water faucet could draw the hot water in this way as well as the cold.

At one side of each tub close to the bottom a tiny hole was bored and fitted with a small plug. To make assurance doubly sure, I cover the plug with a cloth, drive it in with a hammer, and pour a little boiling water right over the plug, after it is firmly in position. This hot water swells the wood and keeps the tub from leaking.

When the tub needs emptying, this plug is withdrawn by a pair of dentist's forceps (the most useful tool in the kitchen tool chest), a nail being placed under the hole beforehand. The water will flow into the pail without a tube. When it is filled, place a dipper underneath the hole while emptying the water. This hole saves dipping the water up to put into the pail.

The rubber tubing is cheap, and lasts a long time when hot water isn't drawn through it. If a woman is frail she should fill all single pails of water with this tube, since it is easier to lift a pail of water from a chair by the sink, or even from the floor, than it is to lift it up over the sink board—this takes a distinct effort.

Keep an old stool or chair without a back (the latter is the more useful of the two), near the sink. On it can be set pails which are to be filled with water by the tube. It can hold the pail of water which is used to mop the floor, saving the constant stooping over to wring the mop, which makes mopping so tiresome. One may drop into it when preparing vegetables, it being a change from the high stool. Useful for numerous things besides.—Ruth Hartley, Hastings County, Ont.

Preserving Eggs

When eggs are cheap, they should be put down for household use. Like everything else, it is good to buy when the market is down, and sell when it is up. Just now a hint along this line will be timely. Experiments have been conducted with all kinds of processes, and from all these experts turn to the simplest and best

method, known as "liming." Pick out absolutely fresh eggs, and having obtained a clean, watertight barrel, put in carefully or a portion of the eggs intended to be preserved. They may be put in any way provided they are not cracked. Take a separate receptacle and make a saturated solution of lime as follows: Slake a pound of good quicklime in enough water to make a sort of milk, and then thoroughly slaked stir this into five gallons of water. Stir this stirred for a few hours and then allow it to settle. Draw off the clear lime-water, the latter made in the proportion indicated, until there are enough eggs in the pickle. The barrel should be kept covered with a fairly tight lid to keep away the air, and put in a cool place. The eggs will keep almost for an unlimited time, but they must be kept covered with the lime water. A little sweet oil poured on top will act as a protection against the air, or a piece of sacking covered with a pack of the lime makes a good cover.

Bringing Good Results

It is evident that the premium offered each week in the Household Department, is being watched with interest by our readers. Several new subscribers, all at \$1 a year, have been recently secured through these offers, and the persons securing the same have been sent their premiums as a reward for their efforts in securing the subscriptions. Letters from the persons winning the premiums will be published in an early issue of the paper.

It should not be very hard work to secure one, two, or even three new subscribers at \$1 a year. Try and secure one of them for yourself. Watch our premium offer. It changes each week. There may be some articles offered for premiums that you have been needing for a long time. This is the easy way to secure them. Address all letters to The Household Editor, Canadian Dairyman and Farming World, Peterboro, Ont.

Washing Delicate Embroidery

Make a good lather with soap and warm water, adding one-fourth of a teaspoonful of powdered borax to each quart of water. Place the articles in an ordinary glass fruit jar, then nearly fill the jar with the lather. Seal tightly, shake the jar a little, and place it in bright sunshine for twenty-four hours. Of course, if the weather is cloudy, the time may be allowed for. Turn the jar around occasionally, so that the sun may penetrate every part. When the time is up, pour off the lather, press the fabric gently, then rinse several times in clear, soft water. Return it to the jar with more clear water, set it again in the sun, changing the water daily, until the material is white. I recently renovated a bit of fine old hand embroidery, which had become as yellow as saffron, by this method, and it was beautiful.

A Cook Book Free

We have purchased at a greatly reduced price, a valuable and reliable Cook Book, which we are able to offer as a premium for the securing of one new yearly subscription for this paper, at \$1.

This Cook Book is nicely bound, and contains several hundred reliable and tested recipes, and much additional information regarding the various processes of cooking. It is a book well worth the efforts of every housewife to secure. Send your new subscriptions, and money for same, to the Household Editor, The Canadian Dairyman and Farming World, Peterboro, Ont.

The Sewing Room

Patterns 10 cents each. Order by mail, and give age for children, give age for adults, and measurements for waists, and waist measure for shirts. Adults all orders to Pattern Department.

MISSIE'S WAIST 3388

Simple styles always are best for young girls. Such a blouse as this, fashionable, and is charmingly made with the open square neck, but with nevertheless, be finished with a chemise, making it high, if it is found more satisfactory.

Material required for the 16 yr. size is 3/4 yds or 5/8 yd 44 ins. wide with 2 1/2 yds of banding and 3/4 yd. 19 ins. wide for the chemise.

The pattern is cut in sizes for girls of 14 and 16 yrs., and will be mailed to any address on receipt of ten cents.

TUCKED SKIRT WAIST 3264

The waist that is trimmed with buttons is one of the novelties of the season and is exceedingly effective. This one is tucked in a way that is treated with succos and is exceedingly chic and smart. It is tucked to give an exceedingly becoming lines to the figure.

Material required for medium size is 3/4 yds. 23 or 24, 3/4 yds. 32 or 2 yds. 44 ins.

The pattern is cut in sizes for a 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40 and 42 inch bust, and will be mailed to any address on receipt of ten cents.

MISSIE'S YOKI BLOUSE 3276

The blouse that is slightly open at the throat is quite certain to win the approval of the girls who love freedom and active sports. This one is finished with an extremely becoming collar and is well suited to youthful figures.

Material required for the sixteen year size is 3/4 yds. 21 or 24, 3/4 yds. 22 or 2 yds. 44 ins. wide.

The pattern is cut in sizes for girls of 14 and 16 yrs., and will be mailed to any address on receipt of ten cents.

SHORT JACKET 3267

The short, jaunty jacket that terminates just above the waist line is so generally becoming and so well liked that nothing ever supercedes it. The jacket is an extremely noticeable one that is equally available for the entire costume, and for the separate wrap which is so convenient to slip on over thin gowns.

Material required for medium size is 3/4 yds. 21, 2 1/2 yds. 27 of 1 yd 44 ins wide with 4/5 yds of banding.

The pattern is cut in sizes for a 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40 and 42 inch bust, and will be mailed to any address on receipt of ten cents.

We always watch for The Canadian Dairyman and Farming World. We enjoy the Quotation column very much. Clara Grimwade, Alberta.



SWEET AS A NUT

That's what people say about bread made from

PURITY FLOUR

It is reliable.

It is appetizing.

It contains more nourishment than most flours.

Your Grocer Sells It.

713

WESTERN CANADA FLOUR MILLS CO., LIMITED

MILLS AT WINNIPEG, GORDONCH AND BRANDON.



Big Fortunes Are Being Made In Minnesota Iron Lands

Yes. Not only big fortunes but little ones. The smaller people are getting a "show" at the great profits. Farmers, merchants, and others who have money in the iron-bearing lands of Crow Wing County, Minnesota, are getting profits in cash that exceed their fondest hopes. These iron-bearing lands are money makers for those who take out ore. They are situated in the Cuyuna Iron Range which lies along the Northern Pacific Railroad between Deerwood and Brainerd.

End of Ore In Some Old Sections

Although \$5,000,000 in dividends were distributed this year to the stockholders of only one company in Northern Minnesota, still the indications are that the iron-ore in older sections is getting scarcer and scarcer every year. New mines will have to be opened in greater numbers than before in other sections.

Your Opportunity—Our Proposition

This then is your opportunity. Many consider it the chance of a lifetime. We control a quantity of iron-bearing land in Township 46, Range 20, Crow Wing County, Minnesota. It is but 3/4 miles from Deerwood, a town on the

Northern Pacific Railroad between Duluth and Brainerd.

A Rich Strike Nearby

A short distance North of this property a prominent ore company has sunk a shaft and is now mining. In every direction drills have disclosed valuable finds of iron ore. Within 80 rods of this land drills have blocked out forty million tons of iron ore. The above ore company referred to has offered to supply us with money and take half the profits. We prefer, however, to develop it ourselves and divide the profits among those who invest with us in this valuable land. Consequently, we believe it will be an excellent opportunity for you to receive good dividends on your investment.

We are an organized corporation, capital \$500,000. The price per share is \$10.00 each. Our prospectus and other literature give full description of the property with pictures, guarantees, references, map, and everything that it is possible to put on paper which reflects an honest, straight-forward and reliable investment.

A visit to these lands will well repay you. Send for above prospectus quick, and ask us any questions if you feel inclined to. We will give you an honest, straight-forward answer.

IRON PRODUCING LANDS CO.,
222 Bank of Commerce Bldg., Minneapolis, Minn.

PURE BRED LIVE STOCK EASILY SECURED

Would you like to secure some pure bred live stock for just a little work in your spare time? The stock is pure bred and eligible for registration. It is not for sale but is given as premiums for New Subscriptions to **The Canadian Dairyman and Farming World**. Read Our Offer:

PURE BRED PIGS

We will give a Pure Bred Berkshire, Yorkshire, or Tamworth Pig, of either sex, and from six to eight weeks old, for **Only Seven New Subscriptions** to **The Canadian Dairyman and Farming World** at \$1.00 each. Animals are Pure Bred, with Pedigree, eligible for registration. They will be delivered now or next fall, whichever you prefer.

PURE BRED CALVES

We will give a Pure Bred Ayrshire or Jersey Bull or Heifer Calf, or a Holstein Bull Calf, for only **Thirty New Subscriptions** to **The Canadian Dairyman and Farming World** at \$1.00 each.

We will give a Pure Bred Holstein Heifer Calf for **Forty-Five New Subscriptions** to **The Canadian Dairyman and Farming World** at \$1.00 each.

If you would prefer Cash Premiums write for particulars regarding our

SPECIAL \$1,500 OFFER

We will give **\$1,500 for 1,000 New Subscriptions** to **The Canadian Dairyman and Farming World** at \$1.00 a year. Cash Prizes offered for any number of **New Subscriptions** from 1,000 down to 50 or less. **Prizes are not simply to one, but to all.** Further particulars furnished on application.

A Post Card will bring Sample Copies and All Necessary Outfit to Canvass for Subscriptions. WRITE TO-DAY.

THE CANADIAN DAIRYMAN AND FARMING WORLD
PETERBORO, ONT.

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

EVERY FARMER NEEDS A FAIRBANKS-MORSE JACK-OF-ALL-TRADES ENGINE



They will Pump Water, Thresh, Grind Feed, Turn Separator, Churn, and make life easier.

OUR CATALOGUE WILL TELL YOU all about this Labor saver. Sent Free.

FAIRBANKS' STANDARD SCALES

The Canadian Fairbanks Co.

LIMITED

Montreal, Toronto, St. John, Winnipeg, Calgary, Vancouver

The SUCCESS MANURE SPREADER



OLDEST
NICEST WORKING
BEST WORK
LIGHTEST DRAFT
MOST DURABLE

The "Success" has the largest rear axle and strongest drive-chain of any spreader made. It is the only machine with heater freemoving and many other points covered by strong patents. Our catalogue tells all about it and gives most valuable information for farmers. Write for it.

MANUFACTURED BY

The Paris Plow Co., Limited.
WESTERN BRANCH:
WINNIPEG, MAN. PARIS, ONTARIO.

The Maple Leaf Gold Sheaf Harvest Tools



These tools are tempered by the same process used in the tempering of the famous Maple Leaf Saws. They are the best goods of the kind ever offered to the Canadian public. Every tool is warranted. Handles made of best second-growth white ash. It pays to see the best. If your merchant has not got them, send to the

Maple Leaf Harvest Tool Co., Ltd., Tillsonburg, Ont.

who are the manufacturers. None genuine that do not have the Gold Sheaf on the label
J. C. DREHICH, President.
C. J. SHURLY, Vice-president.
F. D. PALMER, Treasurer.
C. K. JANNEN, Secretary