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16 OCTOBER, 1905

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The Farming World

A Paper for Farmers and Stockmen



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The Farming World

Devoted to Country Life in Canada

The Farming World is a paper for farmers and stockmen, devoted to country life in Canada, published on the 1st and 15th of each month, with illustrations.

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ONTARIO PROVINCIAL

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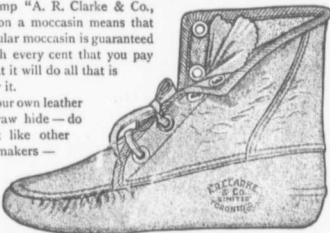
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* Bonuses to Cheese Factories in Quebec

In the article on Quebec, published in our exhibition number, it was stated that the Provincial Government grants a premium to assist in the construction of cheese factories and creameries to the extent of from one to two hundred dollars, according to the dimensions of the building. We have learned since then that this is not wholly correct. A premium is granted in certain cases as when the first factory is built in a newly settled locality, where the quantity of milk is not large to start with.

The Farming World

And Canadian Farm and Home

Vol. XXIV

TORONTO, 16 OCTOBER, 1905

No. 20

Flour-Mill By-Products

IN the marketing of Canada's big wheat crop it might be well to consider the advantages that would accrue to the country if all or nearly all of this year's crop were converted into flour at home. As is usual, the great bulk of the western crop of upwards of 90,000,000 bushels and the eastern crop of one-third of that amount will be exported as wheat, which means that it will be converted into flour abroad, and other countries, instead of our own, will reap the benefits to be derived from the by-products resulting from the milling process.

Years ago the by-products of the mills were thrown away as useless. Today they are the most profitable part of the output. Wheat by-products are of more economic importance as feed for live stock than the grain itself. Fully twenty-five per cent. of all the wheat ground into flour every year is put on the market in the form of bran and shorts or middlings. We have no figures showing the value of the bran produced in Canada, even under our somewhat limited milling facilities, but it is estimated that the annual value of the bran produced in the United States, both from grinding home-grown and foreign Canadian wheats is \$25,000,000. Some mills have reduced the business to a science and are producing standard grades of bran the same as standard grades of flour.

The feeding value of wheat bran is beyond question. Average wheat bran contains from 14 to 18 per cent. of protein, a most valuable and expensive nutrient of foods, 4 to 5 per cent. of fat, and 55 per cent. of carbohydrates. It contains about 8 per cent. of fibre, from one-third to one-half of which is capable of being digested and utilized by farm animals. Compared with other grains and farm products, wheat bran contains a larger amount of protein and fat than corn, oats, rye, barley, spelt or the various varieties of wheat. These grains usually contain from 10 to 14 per cent. of protein and from 2 to 5 per cent. of fat. Under favorable conditions animals can digest about 75 per cent. of the nutrients of wheat bran. Bran is an excellent food, when judiciously fed, for horses, cattle, sheep and swine. As a condiment, it has exceptional value.

While the chief value of wheat bran or middlings is as a food for stock, yet it has a large value as a fertilizer for the land. There is no farm grain which produces as valuable manure as bran. A ton of wheat

bran contains 55 pounds of nitrogen, 52 pounds of phosphoric acid and 30 pounds of potash. If purchased in the form of a commercial fertilizer, the nitrogen would cost 15 cents per lb., the phosphoric acid and potash each 5 cents per lb., making the manuring value of a ton of wheat bran worth \$12.90. As about 80 per cent. of the fertility of the foods consumed by live stock is returned to the soil, \$10.32 would be the value of the fertility of bran returned to the soil when fed to live stock.

Therefore, if we consider only the value of bran as a food and a fertilizer we have a very strong argument in favor of grinding the bulk of our wheat in Canada. If this were done the farmer would have more choice feeding material for his horses, cattle, sheep and swine, and during the feeding process would greatly in-

crease the productive power of his land. In addition, there would be a new industry in every town or village worth having. When wheat is exported the land gives of its fertility to produce the crop. If this is not restored by some means the land's power to produce will soon deteriorate.

Bacon Hogs Scarce: Good and Bad Brining Same Price

Competition among the packers for hogs appears to be unusually keen and prices rule steady and high for this season. At this date a year ago select bacon hogs sold on Toronto market for \$5.35, and lights and fats for \$5.10 per cwt., or at about \$5.00 per cwt. at country points. Prices today are nearly \$1.00 per cwt. higher and if the keen competition of the past few months among the packers continues, are likely to remain high for a time. We are approaching the season, if, indeed, we have not already entered upon it, when prices drop to the lowest level of the year, due, so the packer claims, to large arrivals of poultry and game on the English market, lessening the demand for bacon. Whether the usual drop will come this season remains to be seen. At the moment it looks as if it would not be as serious as in the past.

As we have stated, the usual fall slump is due to the lessening of the demand for bacon in the English market; there may be another reason. It is during the fall months that our farmers have more hogs to sell and it may be that this has some influence in lowering prices. This fall hogs seem to be very scarce and the packer is compelled to keep up the price in order to get a supply sufficient to keep his packing plant running. And many of them are not doing this at the present time and are bringing in American hogs in bond in order to keep their contracts for the British market.

While the large increase in the number of packing plants in recent years and the keen competition for hogs is of the greatest benefit to the farmer, it tends to injure and not to improve the quality of the product. In order to get hogs the packer, or rather the drover, does not discriminate but pays one price per lb. for selects, fats or lights, consequently there is no incentive to the farmer to produce selects as he can get as much for the badly bred, ill-fed hog as for the select bacon hog. The situation is, therefore, not without cause for alarm. As was shown in the discussion on this topic in these columns the past summer, there is

RENEWAL TIME

Do not forget your old friend, THE FARMING WORLD, when renewal time comes round. A glance at your subscription label will show if your year is up. If it is an early remittance of your subscription for another year will give us the greatest of pleasure.

If you can secure your neighbor as a subscriber we will make the two subscriptions to you for \$1.00. Look up the other special offers in this issue. You cannot afford to be without THE FARMING WORLD.

crease the productive power of his land. On the virgin prairies of the west the soil may be rich enough to produce paying crops for many years. But the time will come, if it has not already arrived on the older farms of Manitoba, when the soil must be nourished, and that right well, if anything like paying crops of wheat are to be produced.

It would be well, therefore, to begin laying the foundation early. If every grain elevator in the west or in the east for that matter, had milling facilities, and all or nearly all the wheat delivered were ground into flour on the spot, the farmer would have a market at his own door and there would be fewer complaints regarding the grain standard. The by-products could be utilized for feeding stock and maintaining the ferti-

very great danger of our export bacon trade falling behind unless some greater inducement is given the farmer to produce the select bacon hog. If this type of hog is worth more to the packer than either lights or fats, then he ought to pay the farmer a higher price for it. This in our opinion is the only way of keeping up and improving the quality of our bacon products.

Government sales of Yorkshire swine are announced for points in Lambton and Kent counties this month, with a view to disseminating the bacon bred among the farmers of these districts. While these sales will, no doubt, aid very materially in attaining this object, we cannot but think that much more would be accomplished in this direction if by education or otherwise, the packer could be induced to pay a higher premium than he is now doing for select bacon hogs.

The Farmer's Orchard

It is all too true that the average Ontario farmer pays little or no attention to his orchard. He usually reasons that if the crop is a good one the price will not be high enough to pay for the cost of picking and marketing. On the other hand, if the price is high, as is the case this season, the crop will be so poor as not to be worth while bothering with.

While this process of reasoning may have some foundation, in fact, it might apply to any other branch of farming. If there is a big wheat crop prices will not be as high as when the crop all over the country is a poor one, and yet farmers grow wheat year after year as a money-making proposition. The same is true of other farm crops. Whether the price is high or low especial attention is given to their cultivation and harvesting. But with the orchard it is different. It is in the majority of cases left to shift for itself. Unpruned, unsprayed and neglected it soon becomes an eyesore in the community. If a few apples are grown, sufficient for family use, the farmer is satisfied. As a money-making concern, year in and year out, it is never considered.

This should not be. Given the same care and treatment that the other branches of the farm get, the orchard will pay and pay well. If a few acres are given up for the orchard and money expended in planting trees, then it will pay to give some attention to realizing a profit on the investment. Of course, the average farmer is handicapped in managing his orchard as compared with the fruit specialist. Particularly is this true in connection with spraying, a very necessary operation these days, if clean fruit is desired. The marketing is also a difficult task and often the small grower is at the mercy of the packer and shipper and where

the deal is completed, feels that he has little to pay for his trouble.

But there is a remedy for all this. The co-operative Fruit Growers' Association is essentially a farmers' organization. While it will prove advantageous to the large grower, it is the small grower of fruit who will benefit most by it. It will aid him materially in the picking, packing, and marketing of his fruit. We do not know whether spraying has been taken up in a general way by the co-operative society or not. But if not, it should be. A co-operative society with a power sprayer can do a great deal to improve the fruit crop of its members, and thus encourage the farmer to take better care of his orchard.

Test Your Cows

During a year when the milk flow is large and prices high, dairymen are apt to run away with the idea that everything is lovely, that all cows are good cows and are returning them a profit. But do not be too sure about it. A poor cow certainly has a better chance to pay for her keep when cheese and butter are selling at a high figure than when the market is at a low ebb. But does she do so? That is the question that every dairyman should answer for himself.

The only sure and safe way to answer this question is to test each individual cow. It is not too late now to make a test. In fact the farmer has more time just now for conducting a test than during any other part of the season, and every dairyman owes it to himself and to his pocket-book to make it. Besides, it is not fair to the good cow to have her making up the shortage of the poor cow each month.

A testing outfit does not cost much and will pay for itself in one test. On page 724 of last issue a complete outfit, that we can recommend, was advertised for \$5.00. With an outfit of this kind a dairyman can test his cows individually for a week and know exactly whether a cow is paying for her keep or not. A cow that cannot pay for her keep during 1905 should be relegated to oblivion in short order, as she will be a burden to her owner for all time to come.

Test your cows; find out what each one is doing and dairying will become both pleasant and profitable.

New Ontario Institute

On October 24 a meeting will be held at New Liskeard to organize a Farmers' Institute for the Temiskaming district. The Hon. Mr. Monteith, Minister of Agriculture, will be present and give an address.

This is a good time to clean up around the fences. What is more unsightly than dirty fence corners. Clean fields and clean fence corners add greatly to the value of the farm.

EDITORIAL NOTES

This is delightful weather for fall work on the farm. Under these favorable conditions the farmer who is not up with his work will have no good excuse to make.

The packers are bringing in more American hogs. It is a "hoggish" kind of a thing to do. If they would play fair all the year round the farmers in Canada would produce all the hogs required.

Mr. A. W. Donly, Canadian Commercial Agent in Mexico, reports that the wheat market there has suddenly become very stringent, and if samples of Canadian wheat are forwarded good business may be done.

The farmer who raises good horses is having his innings just now. Never, perhaps, in the history of this country have prices for good horses been as high as at the present time. It is to be hoped they will continue so.

How the price of cheese keeps up! The old brindle cow is in a good way this season to earn the price of her winter's keep. If she does not do so she should be relegated to oblivion, and placed among the "has-beens" of the dairy.

Is it not about time for the horse breeders to get a move on, if they desire the Minister of Agriculture to carry out their wishes regarding the advancement of the business next season. This matter has been delayed long enough. Prompt action is necessary.

Annual agricultural shows are held at Rosebank and Port Elizabeth, South Africa, in February and April, respectively. Commercial Agent Kittson suggests that animals sent from Canada for sale should be exhibited at these shows. There is no use in sending animals of poor quality. Only the best is wanted.

At a meeting of the British Dairy Farmers Association regrets were expressed that the government had failed to pass the butter bill preventing the sale of water-logged butter or the adding of water to butter. It was claimed that most of this came from the colonies. They should have added, "with the exception of Canada."

Dairy Commissioner Ruddick returned last week from Great Britain. Canadian cheese is steadily gaining ground there, and with a little more attention to the details in making will meet all competition. Butter is not so favorably situated. It has to meet competition from all parts of the world. Owing to scarcity this season, Canadian butter has been more asked for, and as the merchants have found it satisfactory, Mr. Ruddick thinks the future for our butter in the British market is very bright.

Managing Brood Mares

Too little attention is given to the proper management of brood mares during the winter season, or to be more exact, during the entire season when they are carrying their young. The total loss of foals is far more frequent than it ought to be, both before the proper time when they should be born and also at the time of birth. Of course one frequent cause of loss is contagious abortion usually following from debilitating diseases such as pneumonia or influenza.

Abortion, however, is frequently caused by one or the other of the following conditions: (1) Slipping while the ground is icy in the winter season and more particularly when such slipping is accompanied by a fall; (2) injury

abused when they are not obstinate, for no other reason than that the attendant is possessed of an unbridled temper which he does not try to curb or restrain.

In addition to the above causes may be added improper food, that is fodder or grain that is moldy or too constipating in its nature. If brood mares are given a good quality of fodder, it is not so very important that it shall be nutritive, provided sufficient grain is given along with such fodder to maintain a sufficient degree of flesh. Some field roots, as carrots and a bran mash occasionally, and now and then a little oil cake will exercise a salutary influence upon the health of the mare.

It is greatly important that every rea-

city. Carriage horse, highstepper, or whatever he may show indications of turning out suitable for, there is usually a strong desire on the part of the owner that his early training should be of a character calculated to still further fit him for the purpose.

Indeed, it is the rule, rather than the exception, to find, wherever a colt shows some indications of aptitude, that the owner has given at least some superficial study to the matter, and has proceeded to put into practice as well or as poorly as he can, the results of his investigation. The result is that the flashy-going colt is never put to work, but his feet are loaded down with heavy iron, for this is used by trainers to increase the knee action. When he is driven he is very apt to be seen struggling



The Clydesdale Stallion Lord Mae, a get of the McGregor stallion Montrose Mae, imported by G. G. Stewart, Howick, Que.

from other vicious horses with whom they may be running at large in a yard or paddock; (3) getting into snow drifts or into marshy places fall and spring and straining themselves in the effort to get out; (4) injuring themselves in going in and out of the doors of box stalls where these swing on hinges; (5) in other instances, they receive injury from trying to crush through places where the openings are too narrow for them.

It may not be an easy matter in all instances to prevent brood mares from injury in the cases named, but there is another cause, which it is possible to protect them from. We refer to the abuse they frequently receive from attendants. Brood mares differ in the ease with which they are managed. Some are obstinate and will not comply readily with all the plans of the attendant. Such obstinacy is followed with abuse. In other instances, they are

sonable effort should be made to prevent loss of foals either before or after birth. Getting them is a somewhat costly process, hence the aim should be to reduce the instances of loss to the lowest possible minimum. That such reduction is possible is clearly shown by the great difference in the relative amount of loss in breeding studs.—Prof. Shaw.

Training the Hackney Colt

The breeding of the Hackney colt is to a very large extent a new phase of the live stock business with Canadian farmers. It has proved a move for the better and it is now not uncommon to meet with colts throughout the country which show fine conformation, combined with useful size and very often, too, a promise of meeting within the next year or two, the requirements of one or another of the fancy leather purposes of the

and fighting with a heavy curb bit, for that is the way it is done by the fancy leather man in the showing in the city, and so the curb bit is put on and kept on, though the colt fights it all the time. Of course, the curb bit, with the line loose and the bit shack, is just the same as any other bit, so the line is kept at least moderately tight, and it is of late not so very uncommon a thing to see a promising colt driven with a curb bit, against which he is boring with blackened tongue, and instead of learning the nice carriage which a proper use of the curb bit imparts, he is learning only one thing, and that is to hate and to fight, the curb bit. The preparatory training of this class of horse is far better left to the skill and judgment of the experienced trainer, for on the care and attention with which the first few lessons are given, depend to a large extent, the value of the future

educated horse. Many, in fact, all our fancy horsemen would rather get the colt to hand with no more training than is necessary to use him to drive on the road and work on the farm. That amount of handling is beneficial, more is nearly always detrimental. The following description of how the colt is given his first lessons with the curb bit will show the fallacy of trying to use it in the ordinary way.

The colt is fitted with a bridle having a curb bit, and a surcingle apparatus called the "dumb jockey." This is a heavy girth, in which, set at each side of the withers, are two strong sticks about two feet long, set at an angle of about sixty degrees. These are supported with braces to the crupper, and from the top of each the lines are loosely connected to each side of the bit. Thus arranged, the colt is turned into a paddock alone, the lesson to be learned being that, as long as he does not pull against the bit he will be comfortable. This is the great lesson, and as soon as well learned, the lines are shortened until the head is held in a nice jaunty manner, with chin well to the breast. This is also a delicate piece of business and requires the greatest care, for only long experience can show exactly how well the colt can be brought to carry himself. These lessons learned, he is then taught to drive, and this again requires great patience, skill, and trained delicacy of touch. He must drive with his head held nicely in position with a loose rein, for continuous pressure on the bit is not to be thought of. He must be trained to move freely and to promptly respond to the delicate "twitch" of the line, to turn, to stand, or to trot, and to "look his best" all the time.

From this it will be seen that the curb bit is no tool for the inexperienced, and that none such should attempt its use, as only harm can result from it. Perhaps it is a less measure, but just as surely it is a mistake to attempt by any artificial means to enhance the natural adaptability of the highstepping colt in the eye of the experienced fancy leather man. He sees too much of that kind of thing not to be able to tell to a nicety what the situation is. It will never make him pay more money for the colt, and may result in his rejecting him altogether.—J. W. S.

The Vanner

Writing of the horses used on the vans in Great Britain, a correspondent of the English Live Stock Journal says:

"It may be asked, in view of the Whit-sundae removals, who breeds the vanner? Take him in a heavy delivery van, bent on wall room decorations for a Mayfair ball, shifting a piano, the hiring period of which has elapsed, or taking up his side in one of the big pantchacoms, he seems always equal to his work—work which he does not seem in any way specially bred for. There is withal a look of resignation about him which says, 'The owner of my mother meant me for the barouche or the hunting field, but things somehow went wrong.' That vanners were never specially bred seems certain; at least, we never yet met a man who put horse to mare with the avowed object of getting a vanner. Van horses, parcel carriers, old-time 'bussers and cavalry remounts are all in their way the minor tickets of the lottery bag of the traveling bazaar, the little bits of pasteboard that entitle one to something of small value. When these animals grow up a bit, being timely castrated, they widen out, thicken and amplify them-

selves in every direction, and when they arrive at six years old would astonish their breeders, who parted with them at two years old. All these van horses are wearers, and with fairly good treatment will stand the stones on the average a year more than heavy cart horses of the same age. A great deal depends upon the breeding and the early treatment, but if the conformation and action is all right blood tells. It would be a pity if the vanner, though undoubtedly a misfit so far as breeding is concerned, should have his future entirely neglected."

A Cattle Shipper's View on the Embargo Question

The following by Mr. Donald Munro, a prominent agent in the export cattle trade of Montreal, shows how some of the shipping trade view the cattle embargo question:

"When the embargo was imposed in 1892, it was considered unjust, and was at that time a hardship to the majority of our farmers, as there was only a small number of them equipped to feed their cattle to a finish. Prior to that time Canada did a large export business in stockers, and as the expenses for transportation, etc., were heavy, we had to ship the very best kept stock that the country produced, consequently the Scotch feeders were able to stock their farms with the best cattle produced in this country; and at prices that nearly put every exporter in this country into bankruptcy. These cattle were fed by them for periods ranging from three to eight months, and were generally marketed about the time our first shipments from Montreal began to arrive in the British markets.

"As all our choice stockers were exported, our own feeders had to buy the culs that were not good enough for export, and to try the impossibility of making choice exporters out of them; but when they reached the markets on the other side, the owners had to face the competition of our own Scotch-land Canadians, with the result that our cattle were always rated a second class article, and sold at fully one cent per pound less than either home-fed or States cattle. The imposition of the embargo, however, changed these conditions very materially, and instead of being a permanent injury, it turned out to be a blessing in disguise to Canada. It compelled our farmers to change their methods of farming. They now do the work themselves that they formerly allowed the Scotch farmers to do for them; and they also get the profits that the other fellows got prior to 1892. At that time, we had no winter steamship service from any of our own ports, and when navigation closed here, about the end of November, we had little else to do than keep our toes warm around the stove, waiting patiently for the ships to return in the spring, when we would again get into communication with the outside world.

"During the period that we had the privilege of free entrance into the interior markets of Great Britain, we had to keep up a barrier between ourselves and the United States, with the result that no United States cattle could be shipped from Canadian ports. After this privilege was withdrawn, we removed the barrier, and now a very large and profitable business is done from our summer and winter ports with United States cattle.

"Shortly after the imposition of the embargo, the old Beaver Line Steamship Company opened up a fortnightly service from the port of St. John, with what success all Canada

now knows. To-day there are three to four steamers weekly sailing from that port, and nearly all of them fully loaded with cattle, not stockers, but the finished article, shipped from our own farms in the west and from Chicago.

"We are also shipping to-day nearly double the numbers that we did prior to 1892, all fed to a finish in this country. The wonderful development in steamship services to our ports is largely due to the cattle trade, as all the steamship men admit that they could not run their steamers if they had no cattle; therefore, if the embargo was removed before we could participate in the so-called benefit of shipping our cattle to the interior markets of Great Britain, we would be compelled to take a step backward and again raise the barrier between ourselves and the biggest cattle market in the world. The inevitable result would be that we could not more than half supply our ships with cargo to our ports, with their cattle cargoes, which is so indispensable to them; and if steamers could not get cargoes here, they would be compelled to head for some other port. Therefore, before we in Canada should raise any further cry about the injustice of the present embargo, we should stop to consider the benefits which we are deriving from the embargo, which was, and in some quarters is still, considered to be a source of loss and injustice to our country.

COUNT THE LOSS

"If, on the other hand, we count the loss that the stoppage of shipment of American cattle via Canadian ports would mean to our railroads, steamships, and farmers, who supply all the feed consumed by them, and contrast this with the very precarious business of being permitted to supply the British farmers with stockers, I consider that in a very few years we would be back to the conditions prevailing prior to 1892.

"In this country we require protection in farming, as well as in manufacturing; and the Imperial Government, by imposing the embargo against our cattle, unknowingly gave our farmers the best measure of protection that it was possible for them to get.

"The Scotch feeders miss our cattle much more than we miss them as buyers, but they certainly deserve credit for their perseverance in endeavoring to get the embargo removed; but Canada will be serving her own interests best by letting well enough alone."

Clydesdale Stud Book

The new Clydesdale Stud Book is to hand containing registrations made up to the end of the year 1903. There are 699 stallions and 1504 mares recorded within its pages, in all a total of 1603 registrations, and the finance report of the society shows an expenditure of \$2,506.77 with a balance on hand of \$829.25. These figures convey some idea of the increased activity of the horse breeding interests of the great Dominion of Canada.

Best Farm Paper Ever Read

J. W. Whennan, Prince Co., P.E.I., writes: "As a subscriber to your paper for some time, I can say that it is the best farm paper that I have ever read. Hoping it may long continue to give to its many readers such excellent practical instruction as it has given in the past."

Anthrax in Cattle

(Written for THE FARMING WORLD.)

Anthrax may be described as a fatal form of disease due to the presence of a microbe in the blood and all the tissues in which the blood circulates. The bacillus anthracis, a long, non-mobile rod, was familiar to veterinary pathologists long before its significance was appreciated. Splenic apoplexy was the ordinary name of the disease. It attacked cattle in plethoric condition, and, on the other hand, cattle that had been exposed to certain unsanitary influences.

Some years ago a practical agriculturist of large experience had no hesitation in saying that splenic apoplexy was not contagious, but was caused by an animal progressing too rapidly and making too much blood in a short time. He had seen it occur among poor cattle suddenly put on to good living, but more frequently among fat cattle put on to some fresh keeping. He had seen more than one instance where the same field in pasture had killed grazing oxen, sheep and horses, and when grown over, the hay had proved fatal.

EXPLORED THEORIES

This idea that overfeeding was a

cause to note that the suggestion of contaminated land was so marvellously near the truth that a very slight extension of the theory could hardly have failed to dispel the whole mystery.

A CONTAGIOUS DISEASE

It is hardly necessary in the present day to state what the real explanation should have been. Contaminated lands really meant lands which had become infested with the spores of the bacillus anthracis. Sudden outbreaks of anthrax among stall fed animals, in which only one or two animals suffered and died suddenly, clearly pointed to the use of some article of food contaminated more or less with the anthrax infective matter, so that the one or two animals which were unlucky enough to have the poisoned provender supplied to them were the victims. The same thing may be said in explanation of other outbreaks which were attributed to want of water, cleaning foul ditches or exposing the animals to any unsanitary conditions, and the fact still remains that while our knowledge of anthrax is so far complete that we can safely affirm with

geons, butchers and others—have had their hands and arms smeared with the blood necessarily crowded with the anthrax bacilli without suffering any harm; but now and then an unlucky individual happens to have a small abrasion, and the merest spot which permits the entrance into the blood stream of the organism is sufficient, and he becomes the victim of an attack which is serious and quite possibly fatal.

Recent investigations justify a strong suspicion that many outbreaks are caused by the introduction of the germs of anthrax in feeding stuffs, especially in linseed and cotton cake, but it is admitted that there is really no practical test to make sure of the freedom of any given consignment of such material from anthrax spores; consequently there seems to be little hope that anthrax will ever assume the position of a disease which once existed among the farming community.

W. R. GILBERT.

Ottawa Winter Fair May Lose Grant

The Hon. Mr. Monteth, Provincial Minister of Agriculture, has notified the city of Ottawa that unless a permanent live stock show building were built as promised without further delay the government grant for the



ampton Herefords at Ottawa, 1903. Female—Imported cow, Sunflower, bred by our late Queen Victoria. Male—Two-year old, Orion. Property of W. H. Hunter & Son, The Maples, Ont.

cause of splenic apoplexy was decidedly popular for years, but, in addition, the act of cleaning out ditches and carting the refuse material onto the land where it could be reached by the cattle was also considered a satisfactory solution of an outbreak.

In one case of the sudden appearance of the disease in a herd, a distinguished investigator came to the conclusion in the first instance that the animals had been overfed, but the owner explained to him his system of dieting, which did not err on the side of liberality, and went on to explain that he never allowed the animals any water. This induced the enquirer to report that the want of water was sufficient cause for the outbreak. It is particularly worthy of notice that all the causes which were assumed to be capable of producing anthrax were quite correctly stated. In other cases besides those mentioned, the cause of an outbreak was put down to the land being contaminated by excessive manuring. Outbreaks occurred, for example, on common lands which had been fed over for years by animals of all kinds. In other cases a particular meadow had been employed for feeding sheep, with the addition of abundant artificial provender, so that meadows in their natural state would only support one sheep to the acre would be made to support six or more. It is interesting

regard to any single case that the animal that has suffered has been in some way inoculated externally or internally with the germs of the anthrax organism. It is frequently impossible to do more than guess at the channel through which the organism has been conveyed. It is not an exaggeration to say that there is hardly anything that can be brought upon a farm or in any way come in contact with animals that may not contain the microbe which will produce the disease. In some parts bones bought for manural purposes have brought an attack of the disease, and it is a well known fact that contaminated wool is responsible for the outbreaks of the wool-sorters' disease, which is anthrax of the human subject.

Under these circumstances it is a wonder that the disease has never assumed the epizootic character, like cattle plague and pleuro-pneumonia, but it fortunately happens that the infective power of the anthrax spore is limited by an insurmountable condition. To be injurious it must find a part of the system of the invaded animal which will allow it to enter the blood stream, otherwise its presence is absolutely harmless. Cases have been recorded from time to time of the fatal inoculation of persons engaged in post-mortem examinations of animals dead of anthrax, but thousands of people—veterinary sur-

Winter Fair would be withdrawn.

Three years ago the contract was let for the erection of a building at Lansdowne Park, for the accommodation of the Eastern Ontario Winter Fair, which had been started in Ottawa a year or two previous. The work was begun and in a fair way to completion when the structure collapsed. A year elapsed and another attempt made, only to meet with the same misfortune when nearing completion. In the meantime temporary buildings, not altogether suitable for a winter show, were provided. This year there has been some hesitancy in going ahead with the erection of the building and the government have announced their intention of withdrawing the grant, which amounts to nearly \$20,000, unless assurance is given that a suitable building will be built.

It will be a real loss to the farmers of Eastern Ontario if the Winter Fair in the Capital City is discontinued, as it assuredly will be, if a suitable building is not provided and the government grant withdrawn.

Here's to the ships of the ocean;
Here's to the women of the land;
May the former be well rigged,
And the latter be well managed.

Keep More Sheep

There is great activity among sheep breeders these days, and the business of sheep raising is on a better footing than it has been for some time. Information bearing upon the industry will, therefore, be helpful. For this reason we are asking our readers for replies to the following questions, and trust there will be a liberal response.

(1) What breed of sheep do you keep?

(2) Have you found them profitable for mutton and wool production?

(3) How has the lamb crop been this season? Have you lost many lambs, and what has been the cause?

(4) Is the worrying of sheep by dogs common in your district? What means would you advise for lessening this evil?

(5) Does it pay to wash sheep? We shall be glad to have answers from our readers to some or all of the questions, and any further information bearing upon the sheep industry that they may care to send. A large number of replies would enable us to form accurate conclusions on several important phases of sheep breeding.

The following reply has been received to the above questions:

1. Shropshires.
2. We find them very profitable for both mutton and wool production and excellent foragers.

3. The lamb crop has been fair this season, mostly all being early lambs. Mortality has been low, only a few having died, due to simply natural causes.

4. No; not a single case has been reported in this vicinity for quite a number of years. No extra precautions have been taken to prevent dogs from worrying sheep, as the number of dogs in this district is comparatively small. There is a tax of one dollar on every dog, and the township allows a bounty of five dollars on any dog killed while worrying sheep. Would advise a strict enforcement of all the laws pertaining to dogs and also that these stray dogs be shot, as it is these that create the mischief.

5. Yes, it pays us in that we get a higher price for the season's clip than we would for the unwashed wool. Think the extra labor incurred is well repaid in the higher price received for the washed wool.

M. C. HANSEN,
Waterloo Co., Ont.

Fall Care of Sheep

No stock on the farm receives as little care as the sheep. No stock will do as well under neglect, and yet a little time and attention can be profitably given the flock during the late summer and early fall. There is no stock that relishes a change of pasture more than the sheep and none will respond quicker to its beneficial influence. I have often noticed how ravenously they attacked the weeds, briars and fresh herbage that grow at the roadside while removing them from one pasture to another. At this time of year the goodness for the different weeds is that most farms can well be turned to account by frequently changing them from one field to another, and in so doing many weeds may not only be entirely destroyed, but converted into good wool and mutton, just now the best paying products of the farm. Many weeds usually spring up in the new sowing after harvest, not only detrimental to the seedling but giving to the farm an unsightly, slovenly appearance. If a flock of sheep is turned on at the proper time they will



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make short work of rag weed, plantain, etc., and unless kept on too long will not in the least injure the seedling.

I used to think it best to put only a few sheep at a time on the stubble fields for fear they would injure the seedling. I have found it much the better way to turn on but a few days. They will soon clip the blossoms from the weeds and as soon as they begin to give too much attention to the seedling they are turned off.

Another decided advantage of frequent change of pasture is that while the sheep is a ravenous and almost omnivorous feeder on all vegetation it is particularly

dainty about eating anything that has been defiled by insect. If the old pasture can have a rest of a week or two and has been washed by a good shower it will be far more palatable, the sheep will eat it with greater avidity and will soon give evidence of thrift and improvement.

The careful flockmaster never lets his sheep suffer from lack of water. Because sheep will live without water they are often neglected, and during the dry weather that prevails in the fall they suffer from thirst, as their gaunt, shrunk appearance plainly indicates.

At this time of year it is not at all uncommon to hear a farmer apologize for the unthrifty appearance of his sheep by saying, "They haint had water regular and they're kind of dried up." Going into winter quarters in this condition their wintering is difficult and unsatisfactory. The sheep is particularly hard to bring up into a thrifty condition when once allowed to run down, especially on dry feed in cold weather. Their wintering costs twice what it would if they were in good thrifty condition at the beginning of winter. A little attention to their fall care is time well spent.—E. P.

Multiplying Power of Swine

The story is told of two men driving in one of the western states by the barn of a successful farmer, noticed a thrifty looking sow pig crossed the road before them. They remarked about the beauty of the little animal and the older of the two said: "You may not believe me, but I can take that very little sow and in four years with her increase by the best eighty acres there is in this neighborhood and have enough hogs left to stock up the farm and pay a good share of the expense in their keeping."

At first thought the statement does not seem possible, but a little figuring will prove that it is not far from the truth.

We will suppose that the sow and all her female increase will farrow for the first time when they are a year old and will give birth to a litter every six months thereafter; and that each litter will average six pigs—three males and, with the mother, four females. In eighteen months she has a second litter. This brings the total up to seven sows and six males. After two years have gone this sow has her third litter and each of the three sows of her first litter also farrow. This brings our number up to forty females and thirty-nine males. In three years the sows of her first, second and third litters will farrow, and in addition nine that were born three each to the three of her first litter. This increases the number to 97 females and 96 males. Thus it goes on in progressions till the end of four years we have a total of 598 females and 597 males, hogs enough to buy a good sized farm.

Between Times

My small friend Dorothy was left to entertain an old friend of the family the other day. The old friend—you know the inane way grown ups have with children—at once began to ask questions.

"Do you like going to school?" he inquired.

"Yes," said Dorothy, "I like going to school and I like coming home. It's staying there between times that sticks me."

Tenant—I came to inform you, sir, that my cellar is full of water.

Landlord—Well, what of it? You surely did not expect a cellar full of champagne for \$10 a month, did you?



Sweepstakes Aberdeen-Angus bull, Halifax Exhibition, 1905. Property of C. R. Harris, Halifax.

More Maritime Exhibitions

Specially Reported for THE FARMING WORLD.

New Brunswick Provincial Exhibition

Fredericton exhibition, like its predecessor at Halifax, had its days of sunshine and also of rain. Thus it was that the attendance fell below that of other years. Nevertheless, those who attended saw good exhibits of grains, grasses, roots, vegetables and fruits, as well as live stock.

Following so closely after Halifax, the stock did not arrive till the early hours of Saturday morning, so it was Monday before any classes were judged, except light horses. Many of the winners were winners at Halifax, so need only be mentioned here.

HORSES

In Thoroughbreds, Mobeat, by Honfleur, was worthy of mention. In Hackneys, H. Jewett's Royalist and Royal Briton, winners at Halifax, were beaten by Stampede, a horse of substance, quality and action and a good sire, for many of his colts were shown—one being considered the best harness horse in the show.

In Standard-breds three years and upwards, Montrose Jr. again came to the front, though not in as good shape as when he won at Halifax. Here he had considerable competition. Phair's Korneda was easily first in the 2-year-old class. The other classes brought out many good animals but many were in poor condition. In harness horses there were not many entries, but of fair quality, Scovel's chestnut colt by Stampede was by all odds the best.

In roadsters the classes were larger. Dr. Brown's Gray was an easy first in his class; many others lacked fitting and training. The lady driver's prize went to Miss Mullins, though Miss McKeen and Mrs. Richards were close competitors.

The colt classes were all well filled and some excellent little fellows were shown. The Hackney Stampede, the French coach Remus and the German coach Belshazzar, had at least some eight or ten each to prove that they were worthy sires.

In Clydesdale stallions the competition was keen. Voua's Copyright by Baron's Pride, had a close second in his half brother Geraral. These are really horses of quality and substance, particularly Copyright. In fillies,

Dickson's Ormstown Lass is worthy of mention—a sweet colt of substance, quality and straight, true action, but these mentioned are just a few of the very best. Jewett's Bonny Macqueen, a somewhat undersized horse, has proved a wonderfully valuable horse in this province, judging from his colts. He is certainly nicking well with the rather small mares and producing good colts.

The medium draft classes brought out some good horses, but none worthy of special mention, and the same may be said of the heavy draft classes.

CATTLE

In Shorthorns, Archibald and Thompson again divided the honors, though Snowball got a good share. The diploma and herd prizes went to Archibald. Thompson got first in 2-year-old heifers, and Archibald in yearlings. In bull calves, Snowball had it all his own and he certainly had the right sort. The Shorthorns as a whole were a very good exhibit and in some classes excelled the Halifax show.

In Herefords, W. W. Black had the only entry, but his cattle will stand a good deal of beating anywhere.

Harris was alone in Aberdeen-Angus cattle but he had animals of merit in every class. The Devons, though not as large as we should like to

see, were a nice breedy lot, and were admired by all who saw them. In fat cattle, Black and Thompson left nothing—dividing the money equally between them.

The dairy breeds were all well represented, probably the Ayrshires were the strongest. Archibald, Parlee and Fisher were the chief exhibitors and honors were pretty evenly divided. This time Archibald won sweepstakes on his aged bull with Parlee a close second. In all the other classes very little change took place. It was really a repetition of the Halifax placing of prizes. Some splendid animals were shown in every class.

The Holsteins were next strongest in point of numbers Logan Bros., Giles and Barton exhibited the largest number of this breed. Logan Bros. captured the most of the prizes. They were first in 2-year-old and yearling bulls and second in bull calves, Giles getting first. In cows, 4-years-old and upwards, all went to Logan Bros., also in three, two and yearling heifers. The herd and sweepstake prizes also went their way.

Jerseys were not a strong class in number but of fair quality. McMonagh, Baker and Moore exhibited most of these. Some of the animals were excellent, but on the other hand some were very poor specimens of the breed. McMonagh captured nearly all the red tickets, though the others showed some good animals. Feeding has its place. This was easily seen in this class.

The Guernseys were all shown by either McMonagh or Corning. They divided up the money pretty evenly and showed very creditable specimens of the breed.

The Carnegie special prizes brought out a fair exhibit of calves, and attracted no little attention.

SHEEP

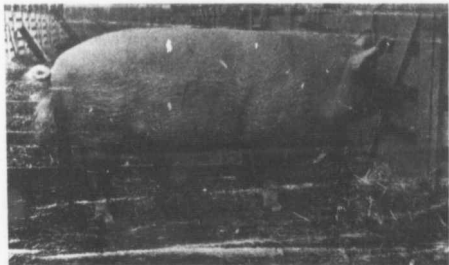
Sheep were not a large exhibit, though taken as a whole they were a fair lot. In Cotswolds, Corning, Parlee and Innes were the only exhibitors. They showed animals of right type, and in fair condition.

The Leicesters were few in number and only fair in quality. Parlee and Moore owned most of them.

The Oxford's were in nice condition and of very fair type. Baker was the principal exhibitor. Logan Bros. captured the lion's share of the prizes in the Shropshire classes, though Lt-Governor Snowball's flock came in for a share.

The fat sheep were good animals and generally in good condition though few in numbers. This is a class that ought to be better filled at all our exhibitions.

The exhibit of swine was rather



The Yorkshire Boar Summerhill, Long Lad, first at Toronto and London Fairs, 1905. Weight at 20 months old, 870 lbs. Bred and owned by D. C. Platt & Son, Millgrove, Ont.

small for a provincial exhibition, and the quality was just fair, classing them altogether. There were none worthy of special mention, though Rogers had a few good ones. Yorkshires had been fitted as they might have been. A little care and fitting would have made a great deal of difference in the show rings. This is true in all classes and sections.

★

P. E. I. Exhibition

The exhibition at Charlottetown followed close upon that at Fredericton. Old Sol smiled down upon those who came on the opening day and again at the close, but not a penny's worth of sunshine on the two days which draw the largest crowds. One Islander confessed that all the weather clerks had failed—in fact it was impossible to make suitable weather for such times.

Despite the inclement weather, the exhibition was a success in every way. The people of the little province are to be congratulated upon the splendid exhibits of grain, fruits, vegetables and roots, as well as in live stock.

HORSES

The horse exhibit was in most classes away ahead of the other Maritime fairs. Another point worthy of notice here was the good condition the horses were brought out in and with few exceptions this was true in all the live stock classes.

Thoroughbred stallions were not numerous, but one at Woodburn, is more than a common horse. A good individual and a very good sire for all his colts were good ones.

The carriage classes were just fairly well filled but in some cases really good animals were shown that would stand close scrutiny anywhere as they had style, action and speed.

Standardbreds were out in full force and as many as twenty faced the judge at one time, any one of which a man might be proud of. Aged stallions were not as good as one would expect from the young stock, but it seems the best were not out. The younger classes had some animals of merit in each class, particularly the winner of the two-year-old class. The fillies in each class were fully better than the stallions and were a nice promising lot, some being extra good.

In the saddle classes the entries were few and though a few good individuals were shown, as a whole they were just a fair lot.

Clydesdales are gaining quite a foothold on the Island as the heavy draft horse. As yet the number is not large, but the quality is good. H. Crockett's Goldfinder is the only stallion we shall mention to illustrate our statement, though other good ones were there. This horse certainly shows the best Clydesdale character as well as draft type.

Three-year-olds and in fact all the fillies were a very good lot. Though grades, they showed the Clydesdale type very clearly and the effect of using sires of the right stamp to grade up with. A competition not common at shows was a walking race for teams. This, we think, is a good competition, for a draft horse that can walk fast is worth twenty-five per cent. more than a slow horse and hence breeding with an eye to this should be encouraged.

BEEF CATTLE

were mainly represented by Short-horns and though the entries were not numerous some of merit were shown. Irving Cass and Boyer were the principal exhibitors and they divided up the prizes very equal-

ly among them. Irving's aged bull was a nice sappy fellow, low set and deep, and Cass' young bull was a nicely turned chap, though not quite massive enough. Boyer's sweepstake female was a very good heifer, true to type and a good beef animal. The grades were just a fair lot, and owing to the scarcity of feed last winter, were in just fair condition.

DAIRY CATTLE

The leading dairy breeds were out in large numbers and made a splendid showing. The Ayrshire class was first judged. Bulls three years old and upwards brought out a goodly number. First prize went to John Morrison on a large typical animal with Bagnall's and Webster's entries following closely. Simmons won on two-year-olds, Easton Bros. on yearlings and calves. The yearling bull was a particularly good animal, smooth and stylish. In aged cows, Easton Bros. were again first; Simmons on two-year-olds and yearlings. In all of the classes Tupper Ferguson was an exhibitor of good stuff but failed in that company to get higher than third.

The Jerseys were a splendid lot. The aged bull class, and in fact all the bull classes, had animals of splendid conformation and quality. The Island Jerseys have long been well known and this year's exhibit was fully up to the mark. Simmons got first in three-year-olds, Hill on two-year-olds, Watts on yearlings, and Hain on calves. In aged cows Esery got first on a cow of good type, a splendid barrel, long quarters and plenty of lung room. Simmons was first in two-year-olds; Gill in yearlings and calves. The herd prize was awarded to Clark for the best bred and owned by the exhibitor.

The Guernsey class contained some of the best entries of the show. Roper Bros' aged bull was not only first in his class but was also awarded sweepstakes as the best dairy sire in the show, though he had a close second and competitor in Simmonds' aged Jersey. Both are excellent animals. Roper Bros. won all the other first prizes on bulls and most of the prizes on females. Their exhibit was good and brought out in splendid shape.

In the aged bull class of Holsteins the judge had his work cut out for him. All the animals were far off type and poor specimens of the breed. Two-year-olds were a good class. First prize went to Bryne Bros. on a very smooth, nicely turned animal. The yearling prize and sweepstakes was awarded to Samuel Dickey, while J. Twedy won the red on calves. The cow class was well filled and brought out a very uniform lot of Holsteins. Hearty won first and sweepstakes on a large uniform cow of excellent quality, that carried a splendid udder—almost an ideal Ayrshire udder, in fact. Dickey, Boswell and Lea won the rest of the prizes in that class.

A large number of grades were shown in each class and some sections brought out as high as fifteen. The cows were a good useful lot but there were a few cows that would have to be considered in any dairy class. All showed that they had pure blood close up, the result of using purebred sires. The agricultural societies are doing splendid work in bringing in and spreading males of breeding and quality.

There was a fairly large exhibit when we consider that this little province has only three counties and just one hundred thousand people, all told.

The Leicesters were of good quality and well fitted. Boswell, Lane and Clarke were the chief exhibitors. Boswell captured nearly all the firsts.

In Cotswolds, Tweedie and Robertson had it all to themselves, while Boswell Bros. owned all the firsts in Furness and Boyer showed most of the Southdowns. Furness was always an easy first. He has a splendid flock. One of his own breeding beat his imported Ontario ram, and rightly so as they showed.

The Shropshires were a good lot of low set, well fleshed and woolled sheep. Geo. Boswell and C. Nunn took most of the prizes in the order named. In Oxford's, P. and S. Lane had the only entries. The Suffolks were all owned by P. Lane. These sheep won all the special prizes for wool, though the Shropshire was so close that it took an expert to decide between them.

SWINE

There was a particularly good exhibit. The animals in all the classes showed breeding, care and feeding, and as the judge remarked, would stand a good deal of beating in any show ring. P. E. I. may be proud of the start she has made in the great hog industry. The breeders have certainly tried for the best.

In Berkshires, Brodie, Lane, Drake and Ingo Bros. were the exhibitors. Brodie had the largest exhibit and won most of the prizes. Wilson and Durham blood shows close up in his hogs. This year Colbeck, the largest breeder of Yorks., did not show, but Crockett, Halliday and Roper Bros. were there with excellent animals. Crockett had the best of it in most classes. His hogs are long, straight, clean and stylish, with strong backs and well spring ribs. Ropers had most of the Tams, their aged sow would come in for sweepstakes in many a Canadian show ring. Toronto not excepted, some years. Quite a number of good bacon hogs were shown. They were hardly as long bodied as those at Toronto but otherwise were just as good. Altogether the management of the exhibition are to be congratulated on the way they ran it from start to finish. Everything was done to make it what it was intended, an agricultural display of the resources of the Island. Not a fakir or juggler was allowed on the grounds. Nothing was there but what all might look upon and learn from—good, not evil. And it paid expenses!

Sharple's
TUBULAR
CREAM SEPARATORS

Will you buy a bad separator because the agent is a "good fellow" and some people do. They should read this.

If You Have a Brand New Separator

not a Tubular, put it in the garbage. We guarantee Tubulars to make enough more butter than any other separator made from the same milk, to pay 25 per cent yearly interest on the cost of the Tubular, side by side. Your decision is final. Careless in using a cheap separator, self-losing gears—are found only on Tubulars. Catalog 7 sent free.

THE SHARPLES SEPARATOR CO.
WEST CHESTER, PA. CHICAGO, ILL.
TORONTO, CAN.

Dairy Work in Ontario

Though the season nearing its close has presented greater difficulties to the producer and maker than for several seasons past, the Department of Agriculture is greatly encouraged by the results which are attending their efforts to improve the quality of cheese and butter in Ontario. Cheese has ruled very uniform and of general high quality.

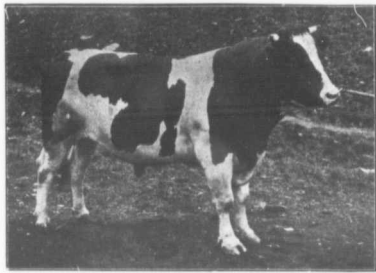
The instructors report that in nearly every syndicate there are at least two or three inferior factories in which it is utterly impossible for even a first class maker to turn out a high class article. Then there are always in many districts two or three in-

the result. It is true that some instructors have accomplished a great deal more than others, but this is largely due to the willingness on the part of the people to comply with the requests made. The number of cheese reported as being faulty is a little greater this year than last, but it has been more difficult to manufacture fine cheese this season than for some years past owing to so much wet weather and the sudden change of temperature. The percentage of rejections from the syndicated factories, however, are less than that of last year. Of the total number of rejections about one-fourth were syn-

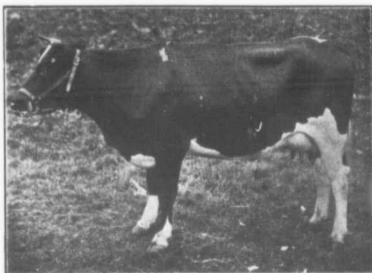
them, with hauling from railroad depot, about 75 cents per 100 pounds. This has been going on for two years, and if these firms can make it pay, why don't the farmers utilize it themselves instead of selling it for 10 or 15 cents for industrial purposes?

Why don't the farmers utilize the skim-milk themselves? Why does it take so much talking and writing and time to get even a few of them to consent to make a fair, square study of the feeding value of skim milk? Why are so many of them content to haul the poorest kind of skim milk from a creamery, year in and year out, losing half or more of the feeding value of it and never make a move towards a reform?

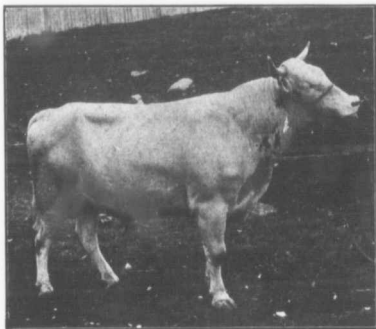
The other day we stopped to ad-



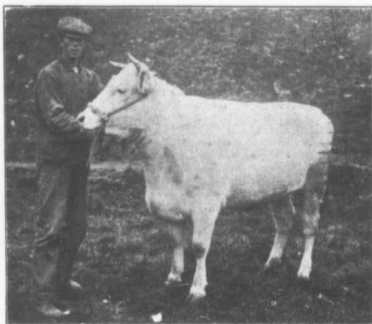
Champion two-year old Holstein, Artes Mercedes Poesch, by Sir Abberkirk Poesch. Property of Logan Bros., Amherst, N.S.



Two-year old Holstein Heifer, reserve champion. Property of Logan Bros.



Lord Dudley, Sweepstakes Ayrshire bull. Owned by W. H. Parlee.



Two-year old, Mary's Beauty, sweepstakes shorthorn female. Property of H. C. H. Starr, Port William, N.S.

WINNERS AT NOVA SCOTIA PROVINCIAL EXHIBITION, 1903.

mers who do not take proper care of the milk, thus lowering the quality of the output of the factories to which they are sending their milk.

But notwithstanding these drawbacks the reports generally speaking are very encouraging. The following from a letter by Chief Instructor Publow, of Eastern Ontario, speaks for itself:

"I found the cheese to be very uniform in make, and of good quality. The majority of the factories were clean and tidy and in a good state of repair, and I found when in conversation with the makers that they appreciated the work done by the instructors. They invariably said that when instructions had been carried out that a marked improvement was

dedicated factories, and the majority of these came from our poorest class of factories. Another reason for the greater number of rejections is that the standard of fine quality has been raised and owing to the high prices which have been ruling merchants have been more critical in their inspection.

The Feeding Value of Skim Milk

That it may be made of great value under certain conditions, is illustrated by the fact reported in Hoard's Dairymen of two poultry buying concerns in Springfield, Mo., buying skim milk at 40 cents for ten gallons, paying fifteen cents a can freight and providing the cans, making it cost

more some very fine calves owned by a neighbor. We said to him that they were the finest calves we had ever seen him produce. He admitted it, and replied that it was due to feeding skim milk separated at home.

The skim milk question has hardly been touched on the edges even by the majority of dairy farmers.

Drink for Fever Patients

Fill quart bottle three-fourths full of fresh milk; to each add two table-spoonfuls of brewer's yeast and one table-spoonful of sugar syrup. Shake well; add milk to the top. Cork tightly, using wire. Keep in a cool, dark place. Compressed yeast can be used instead, but brewer's yeast gives a better flavor.



—Vanward. LEEWARDEN.
 Mgr. P. Spilker, Toms S. Smeling,
 Boshuizen, Leewarden, No. 1013.

Farming in Holland--No. III

Leeuwarden is the chief town in Friesland and situated in the most fertile part of the province. In consequence of its central situation at the junction of the principal roads and railways, it is the centre for all business connected with agriculture, cattle breeding and dairying. This is clearly shown on market days and more especially at the cattle market. Although the best cattle are sold at the farms, the cattle market can give a fair idea of the importance of cattle breeding in Friesland. The present cattle market was erected in 1874. In 1875 the number of cattle (all included) bought in the market was 104,756, of which 11,404 were milch cows. In 1893 the number of cattle amounted to 154,801, of which 41,368 were milch cows. When in 1894 the import of cattle in Germany was prohibited, the number of milch cows decreased to 28,010, but in 1904 the total number of cattle had again increased to 205,057, with 40,121 milch cows. The pigs and sheep are mostly killed for the London market.

As regards

CO-OPERATIVE CREAMERIES

The first steam creamery in Friesland was established in the village of Warga Creameries from that date increased on a large scale. Nearly all co-operative creameries manufacture butter as well as cheese; in a single place only is there a smaller creamery manufacturing butter exclusively. The cow-keepers, whose concern is to keep their co-operative creamery going, have paid attention from the beginning to the improvement of the quality of butter and cheese. The small unequal lots of butter from the different farms are now replaced by the larger amounts from the creameries. This fact, together with the improved quality, has allowed Dutch butter to regain part of its reputation. In order to take care of the common interests and to contend with the common enemy, a society of those interested in the manufacture of butter and cheese on a co-operative basis, was established in 1894, the members of which are mainly directors and managers of co-operative creameries. In 1897 it was dissolved, and in its stead was established an "Association of Co-operative Creameries in Friesland."

The association started with 43 members, and has at present 65. According to article 1 of its by-laws, the association has for its purpose the promotion of the interests of co-operative cream-

eries, and the following provisions are made: (1) Co-operation and mutual advice in all matters able to further an advantageous working of the creameries. (2) To promote the reputation and the sale of dairy produce in the Netherlands and abroad. (3) To regularly test dairy produce. (4) To deposit a trade mark for common use. (5) The purchasing of the materials wanted for the making of butter and cheese. (6) To detect and to contend with adulterations of dairy produce, and fraudulent practices in the butter and cheese trade. (7) To further regular and good dispatching of dairy produce. (8) To co-operate with other societies where beneficial to co-operative dairying. (9) To control the management of active co-operative creameries. (10) To give the opportunity to get certificates of abilities for the various situations in creameries.

GOVERNMENT BRAND

The trade mark "Nedraw" of the above-named society has been transferred to the association. It is now legally protected in the most important countries. As the Government mark on butter has given to all honest butter producers and traders a strong weapon against unfair competition, the association has furthered as much as possible the use of this Government mark. With the exception of two all the association creameries are under control, and have the Government mark on the butter. A regulation has been made, according to which, in case the creamery, in consequence of fire, repair, etc. is not in a condition to work the milk, the surrounding creameries have to assist by taking the milk to work either wholly or partly. When co-operative creameries are being established, the federation assists as much as possible by referring to the advantages of co-operative dairying, and mainly to those of large creameries, in order to obviate in this way the establishment of too small creameries.

The association has drawn up a

MODEL INSTRUCTION

for the staff of the creameries, the stipulations of which have made the condition of the workmen very favorable. Before the insurance against accidents was enforced by law, the association had entered into an advantageous contract with an insurance company, by which all the workmen were insured. At present the workmen are lawfully insured against

accidents during their business hours, and a mutual insurance against accidents when they are not at work has been established. Neither did the association lose sight of the benefits of instruction to the staff. A teacher has now been engaged, who gives class lessons in winter concerning the first theoretic principles of the butter and cheese making.

The association has taken to heart the improving of the productions by introducing

BUTTER AND CHEESE TESTS

The first are held twice a year, the samples of the various creameries being tested by two experts, and the results communicated to all the creameries. After each third test, the butter which has been sent in is exhibited, and the score made is published. At the end of the year, diplomas are awarded to those creameries the butter of which has excelled by good quality.

Cheese is put to the test twice a year, and these tests are arranged correspondingly; the nature of the products of course call for different arrangements, and, as a rule, the tests of butter and cheese have exerted a favorable influence on the products. To the efforts of the association it is due that the steamers from Harlingen to England and the railway carriage to Belgium and France are supplied in summer with refrigerator accommodation, which guarantees the butter arriving in good condition.

The association experiments on various subjects in order to assist in solving practical questions within the sphere of making butter and cheese, the following may be mentioned here: experiments on the intense refrigeration of cream; on the influence of early stabling of the milch cows; on the amount of volatile acids in butter; on the connection between the fat properties of the solids in the cheese, which has been obtained, and the relation between the amount of fat in the milk, and the quantity of butter and cheese which can be made out of it.

REGISTERED TRADE MARK

The Friesian Co-operative Company for exportation of milk products, has for its purposes the sale of products of co-operative creameries which have joined the society, and to improve the quality of these products. In order to attain this end the society commenced by having its trade mark protected, in order to supply all its productions with that mark, which could be recognized on the different markets as its production. To ensure good quality every week, each creamery sends samples, and these are examined by experts, who certify the quality. One sample is examined as to the amount of water, which also influences the price to be paid. The maximum percentage of water allowed is 15 per cent. for salted, and 15½ per cent. for unsalted (fresh) butter. The society was established in 1898 with six creameries, while at present 23 large creameries have joined. The sale proportionally increased very much, and amounted during the last year, for butter only, to 56,611 cwt.

Only those creameries in the province of Friesland, and having constructed their creameries so that first-rate products can with certainty be manufactured, are allowed to join the society. The Friesian Co-operative Company for export of milk products, also undertakes the sale of the different species of cheese which can be manufactured in creameries, the cheese being tested at regular intervals to promote the uniformity of shape and quality.

CONDENSED MILK

The "Hollandia" Anglo-Dutch Milk and Food Company is a limited com-

pany, with factories at Vlaardingen, Bolsward, Purmerend, Heenvliet, Beemster, Limmen, and Gorinchen. The head office is at Vlaardingen, and occupies its season with a preparation of milk products and other articles of food. Its specialties are sweetened and unsweetened condensed milk, creamery butter, cheese, sugar of milk, best sugar, and the refining of that sugar.

In the milk factories at Vlaardingen, Bolsward, and Purmerend it is mostly condensed milk and butter that are made, but Bolsward also makes Gouda and Derby cheeses. At Vlaardingen sugar of milk is made from time to time. The factories at Heenvliet, Beemster and Limmen are in the first place collecting stations for fresh milk, Limmen exclusively, while at Heenvliet is also creamery and Beemster cheese factory. In the "Hollandia" milk factories, 39,694,427 litres, equal to 69,884,555 pints, were received in 1904, and worked into marketable articles for the Dutch and English trade as well as for export.

The sugar factory at Gorinchen, with a capacity of 3,000 tons of sugar per day, makes the raw sugar in the autumn, partly for the company's own refinery at Vlaardingen, and partly for the general market. The factory alone is, of course, already a large industrial enterprise. In the refinery at Vlaardingen 400 tons of brown, ill-tasting raw sugar are weekly refined into pure, well-flavored crystal sugar, which is mainly destined to be melted in the milk factories, and worked into the sweetened condensed milk. The company works over the whole of Holland, and has its own warehouses of sugar, and own shops for milk products in the principal towns.

PURE CULTURES

In sousing the cream, pure cultures are largely used; of course in the hand-power creameries it is not possible to work entirely according to the newest methods. Almost all with the most up-to-date machinery. This is only possible where steam power is available, yet there exists a number of such establishments which turn out a very good article. This may be attributed, amongst other causes, to the careful manipulation and scrupulous cleanliness which is observed. It is indeed a pleasure, both to the expert and others, who may take an interest in this trade, to go the round of many of our steam and also hand-power creameries and to observe everywhere with what painstaking care every article is cleansed and purified, how fresh and pure is the air which blows through the works, and how everything which can be rubbed and polished shines in the old fashion of the Netherlands, showing how well it is understood, that to make good butter, cleanliness in every way is of the very first importance.—A. W. S.

Value of Coal Ashes

An article in the British Fruit Grower makes some interesting comments on the agricultural and horticultural value of coal ashes. The finer these are, the greater is their value, and the general method observed is to put them through four different sieves, the largest of three-quarter inch mesh and the smallest of one-eighth of an inch. The largest mesh is used to clear the ashes of cinders, which are returned to the fires after clinkers have been picked out for paths, etc. The residue of the ashes passed through a two-inch sieve serves admirably for drainage for pots and boxes. Then the quarter-inch sieve is used for the portion for covering stages for plants to stand upon, experiments having demonstrated that

INDIVIDUAL TEST OF DAIRY COWS

The following are the results of the second test conducted by the Dairy Commissioners' Department this season. The test for 30 days ended July 17, 1905, at the Black Creek Cheese Factory, Perth County, Ontario:

Herd No.	No. of Cows.	Average per Cow.			Highest per Cow.			Lowest per Cow.		
		Milk lb.	Fat %	Fat lb.	Milk lb.	Fat %	Fat lb.	Milk lb.	Fat %	Fat lb.
18	11	875	3.6	32.1	1100	3.9	42.9	570	3.6	20.5
19	13	1151	3.4	37.3	1385	3.3	45.7	860	3.0	25.8
20	13	759	3.8	28.2	1100	4.0	44.0	310	4.4	13.6
21	12	809	3.6	29.5	1150	3.7	42.5	70	5.3	3.7
22	5	871	3.3	29.2	960	3.7	35.5	610	3.5	21.3
23	3	973	3.1	30.1	1150	3.0	34.5	930	2.9	26.9
24	10	973	3.5	34.9	1070	3.9	41.7	800	3.6	28.8
25	4	1315	3.1	41.9	1280	3.5	44.8	1360	3.0	40.8
26	9	980	3.6	35.4	1260	3.5	44.1	690	3.6	24.8
27	13	1132	3.7	42.7	1250	3.9	59.2	810	3.8	30.7
28	13	1279	3.7	42.0	1680	3.2	53.7	910	3.1	28.2
29	10	992	3.3	33.0	1130	3.7	41.8	660	3.2	21.1
30	7	774	3.6	28.7	1120	3.1	34.7	760	2.8	21.2
31	2	934	3.3	31.6	1190	3.2	38.0	760	3.8	28.8
32	7	749	3.8	28.3	1060	4.1	41.2	545	3.7	20.1
33	6	793	3.9	31.5	1125	4.2	48.0	395	3.6	15.4
34	9	866	3.7	33.1	1020	3.8	38.7	610	4.6	28.0
35	13	985	3.2	31.8	1170	3.7	43.2	500	3.7	18.5
36	7	999	3.5	35.3	1445	3.4	49.1	710	3.5	24.8
37	4	997	3.2	42.0	960	5.0	48.0	910	3.8	34.5
38	10	792	3.8	30.6	1160	3.8	44.0	510	4.0	20.4
39	2	1155	3.2	37.3	1360	3.4	46.2	950	3.0	28.5
40	10	1410	3.0	43.2	1600	3.2	51.2	1220	3.1	37.8

Average of 198 cows—981 lbs.; 3.5 per cent.; 34.4 lbs.

ashes thus used will always give off by evaporation much larger quantities of moisture in glass houses than will a body of water covering the same area, thus rendering unnecessary the expense of tanks.

The final mesh—one-eighth of an inch—is used for the balance, and this is one of the most valuable parts of a valuable whole. Almost any cuttings can be successfully struck in it. Many things otherwise difficult will in this material strike readily. It can be used instead of sand for potting many plants. It is very valuable for fixing nitrogen and should be mixed in equal bulk with artificial fertilizers of all kinds some days before using. A bushel of artificial mixed with a bushel of fine coal ash becomes almost doubled in value by the admixture, after lying for several days—that is, the ashes have become as valuable as the manure in actual application, for the reason that the nitrogen has been fixed and will be held by the ash for plant use, instead of being washed away by watering or rain in the open.

In heavy land very fine ashes are most useful for early potatoes. A handful put over each set will keep off vermin—but it must be fine.

In connection with the foregoing, the experience of a FARMING WORLD reader is distinctly interesting. This gentleman is the owner of a large

orchard flanking the railway track, his plum trees being the nearest thereto. Clouds of smoke and fine ash from passing locomotives continually envelop these trees, but instead of affecting them detrimentally, the crops they bear are regular and heavy; indeed, much more so than on the trees beyond the reach of coal smoke and dust.

Even the unbroken regularity of such a comparative irregular crop as plums is remarkable, while the continuous heavy yields are still more so. The gentleman in question welcomes as a blessing the volumes of locomotive smoke which so frequently enshroud portions of his orchard.

Potato Rot

The Bacteriological Department of the Ontario Agricultural College, which has been studying this disease for the past year, would like to ascertain if the disease in various parts of Ontario is similar to the one with which it has been working, and which caused so much damage last year, and hence would like farmers troubled with this disease to mail an affected potato and state at the same time if they were troubled with the soft or wet rot last year and to what extent the rot is present in the present season's crop.

CANADA PERMANENT MORTGAGE CORPORATION

Paid-up Capital \$6,000,000.00
 Reserve Fund \$2,000,000.00
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DEPOSITS RECEIVED INTEREST ALLOWED at **3 1/2** % PER ANNUM COM-
 POUNDED TWICE EACH YEAR.

Every Facility—Absolute Security

14-18 TORONTO STREET, TORONTO



Mother's Doughnuts

If you think there's no use trying
To do anything of worth;
If you think you're but a cipher
In the multitudes of earth;
Just remember mother's doughnuts
And press onward to the goal—
Finest doughnuts in creation,
They were made around a hole.

If the patch is on your garment
Where it never was before;
If your pocketbook is empty
Of its hoarded little store;
Just remember mother's doughnuts
When the clouds of trouble roll—
Sweetest doughnuts manufactured,
All were built around a hole.

If you think your next door neighbor
Had a better start than you;
If perhaps you made a failure
And success is hard to woo;
Set your teeth the way you used to,
Lay the comfort to your soul—
Recollect the grand perfection
That was circled round a hole.

About Pictures

Pictures should never be bought simply because they are pretty. If they mean nothing to the buyer they will mean nothing to the home. Among the best pictures to buy those that add to the dignity, repose, culture and refinement of the home are copies of great masters, in brown, black and white, or delicate tints; colored photographs of spots of interest in our own or foreign countries and good prints of the photographs of men and women of art, music or letters, whose productions are beloved by members of the family.

Choose the frame and your pictures wisely, for the stranger beneath your roof often judges your culture and intellectuality by those silent picture friends you have gathered about yourself.

Don't hang all the pictures at the same height. If there happens to be two or three similar in subject and the same size and framed almost alike, they can be hung one over the other with the very best of effect.

A picture is often made to look more artistic if a small round picture is placed each side of it. Sometimes a good effect is obtained by grouping three small round framed pictures triangularly just above the square frame.

Don't hang photographs of your friends in the parlor or in the hall. On the mantel in the sitting room one may set a photograph or two, but the place for photographs is in the sleeping room of the person who most prizes them.

The Kindergarten at Home

To the mothers whose little ones come with the oft-repeated questions: "What shall I do?" "What shall I play?" let me whisper a few words of help. Children are always active, always seeking employment when left to themselves, and they should be given some busy work which will turn their thoughts into right channels and strengthen their little minds. This right kind of busy work they are given in the kindergarten schools, but there are hundreds of children

who cannot attend these schools, and it is the mothers of these little ones who will be helped by these suggestions.

We all agree that children should be happy, busy and orderly; but how to make and keep them so is a question which many mothers find hard to solve. Pin your faith in the kindergarten and you will not be disappointed in the results of this system. Mothers with the care of the household upon them cannot give their children the time and attention in this line that they would receive in a kindergarten school, but they can give them suggestive answers to their questions: "What can I do now?" A few minutes spent in showing the children how to do something along the right lines will be considered well spent when mamma sees the little ones happy and busy for hours.

For instance, nearly all the tiny girls want to sew, "just like mamma." It takes but a few minutes to perforate, by running through the sewing machine (with the longest stitch and no thread) objects on the advertisement cards so freely distributed, or the outlines of chairs, stools, tables, lamps, cups, fruit, flowers, animals, etc., drawn on stiff paper and perforated. Then you have the sewing cards which are used in the kindergarten. Sets of three cards can be bought, together with colored threads, but the home-made ones answer every purpose and can be made simple or complicated to suit the ability of the child. After the

straight lines, they can be taught to make the alphabet in cross-stitch and then it will be a proud day when the little miss marks mother's towels. It is surprising how quickly they will learn to thread the needle, make the knot and fasten the ends, and not only this, but a few remarks dropped now and then about their work will train them to observe form and color and help them later on in their work in public schools. Save the best of their work and it can be used as gifts for those who love the little tots.—Canadian Good Housekeeping.

Good Society on the Farm

Mrs. Waldo (of the city)—I have a letter from your Uncle James, Penelope, who wants me to spend the summer on his farm.

Penelope (dubiously)—Is there any society in the neighborhood?

Mrs. Waldo—I've heard him speak of the Holsteins and Guernseys. I presume they are pleasant people.

Sayings of Children

A small boy in the juvenile grammar class, being told to compare the adjective "little," answered: "Little, small, nothing at all."

One morning little Nellie discovered a spider's web in the window. "O mother," she exclaimed, "come and see this bug in a little hammock."

"I want to ask one more question," said little Frank, as he was being put to bed.



The Kindergarten at home—Three of a kind.

cards are ready take bright colored threads and a blunt needle and teach the children to backstitch the outlines; or let them go in and out, all around the design, then go back and "shut up the gates," as some little ones say.

Good results in teaching the alphabet and figures have been obtained by having the letters and figures on these cards. It impresses the forms on the mind, at the same time giving the child pleasure. When they become proficient in following the

"Well?" acquiesced the tired mother. "When the holes come in stockings, what becomes of the piece of stocking that was there before the hole came?"

"Why, Johnny, how much you look like your father!" remarked a visitor to a small four-year-old. "Yes!" answered Johnny, with an air of resignation, "that's what everybody says, but I can't help it."

My head is resting sweetly upon three pillows, infinite love and infinite wisdom and infinite sacrifice.

THE NEW BELL

By ADELBERT F. CALDWELL

MRS. Lockwood sat motionless in the low chintz-covered rocker, a blue pitcher with broken handle resting on the table beside her. "We've got to go without the bell; that's certain! There's barely enough to pay for the carpet, and we ordered the cheapest material we could get and be respectable."

"I shouldn't mind it so much"—there was a trace of disappointment in her voice—"if it weren't that the bishop's to be here to dedicate it."

"It was a pledge just as much his as hers, according to my way of looking at it; and to my notion Squire Holman is just as much morally bound to see that it's fulfilled, although his wife hadn't died without carrying out her promise, Squire Holman's always acted—"

Mrs. Lockwood suddenly checked herself.

"But, then, I don't suppose we're capable of judging; there may be circumstances we know nothing of."

It had been three years since the movement for a new church at Welchville had been set on foot. The little community was not rich, and it had been a hard struggle, raising the necessary funds.

Squire Holman, who was not a church-member, had refused to subscribe even a dollar toward the movement, although it was the best thing out of any man in the community.

"If 'Manda's' promised a bell,"—Squire Holman always referred to his wife as 'Manda,'—"it's enough for one family, and it's just coming out of me, paying for it—every single cent!"

And now before the tasty though unpretentious church was finished Mrs. Holman had died, having left no provision for the purchase of her promised donation.

"Of course he'll get it, or give us the money," had been the rather doubtful conclusion of the committee, of which Mrs. Lockwood was a member, after discussing the matter; but when Squire Holman had been approached on the subject as the building neared completion, he had flatly refused to do either.

"'Twas none of my doings; I'm not responsible for any foolish promise 'Manda' may have made. I've told you before, as I told her, there's no need of that sort of extravagance. Didn't use to have any bells in their churches."

"But, Mr. Holman—"
"Well, didn't I tell you—" irritably interrupting—"that she and I are two different persons? If 'Manda's' lived, you'd got your bell, or if I'd promised it you would; but I didn't, and that's the end of it."

No amount of persuasion could change the man's decision, and as time went on it was evident there would be no bell to peal forth the joyous dedication-day.

"He's just as much responsible for what his wife promised as she was—every bit as much!" declared Mary Holbrook, stopping a moment before Mrs. Lockwood's door three weeks before the bishop was expected. "I should think he'd be ashamed to show himself among folks, small as he is!"

"Amanda Holman was a good woman; and I guess he'll miss his birthday dinner, and his birthday comes in a little over a week now—a week

from Thursday is the seventeenth. I remember it, for my Joel's comes on the same date."

"Well, he doesn't deserve any birthday remembrance, and I hope his conscience that day will trouble him into—but then, it won't," and Mary Holbrook started on up the road toward her home.

It was three days before the seventeenth.

"I'd like to leave my key here; it's possible something might—" "You're not going away?" interrupted Mrs. Lockwood, stepping out on the veranda.

"Only for a day or two; I'll be back Thursday evening. It would be rather lonesome all by my—" There was a tremor in Squire Holman's voice. "If you'll keep it, I'll call on my way back."

"He just can't bear to pass his birthday at home," declared Mrs. Lockwood, closing the door. "It's too bad; and she always made so much of the day, and had such a good dinner for his friends," and Mrs. Lockwood recalled many of the pleasant occasions she herself had enjoyed there.

She went thoughtfully back to her work in the kitchen. Suddenly she stopped in the task she was doing.

"I—I might do it—if he hadn't been so mean; it would have been a pleasure for Amanda's sake!"



"Our congratulations," exclaimed the company.

All the forenoon she couldn't get the project out of her mind.

"It isn't heaping coals of fire, acting on Christian principles, Martha Lockwood. You aren't to be mean because somebody else is!" and her mind was made up.

Early Wednesday morning Joel was sent with invitations to many of the older residents of Welchville, bidding them attend Squire Holman's sixty-first birthday dinner Thursday evening.

"Didn't suppose he'd have one, now his wife's gone," was the universal comment, but all gladly signified their pleasure to attend.

All day Thursday Martha Lockwood was busy at the Holman place.

Long before night the preparations for the birthday dinner were well on toward completion, save the things that had to be done "just before sitting down."

The guests arrived early, 'twas the custom in Welchville.

"I hope they'll all be here when he

comes," thought Mrs. Lockwood, "so when we hear him drive in they can all be at the table. You be ready, Joel, to take his horse the moment he reaches the yard."

By seven o'clock the last guest had come.

"Now be all ready to go into the dining room when you hear the wheels," was the direction given. They hadn't long to wait.

"I'll put up your horse, sir," Joel had already taken the animal by the bridle. "You're wanted inside."

"What in—"

"It's your birthday dinner." "What—wo—!" The Squire stepped out of his buggy, an expression of deep perplexity on his face that had lately grown more care-worn and wrinkled.

"Here, just go right in; we're waiting," gently directed Mrs. Lockwood, taking his coat and hat. "The dinner is steaming hot!"

"Our congratulations!" exclaimed the standing company as the bewildered man entered the dining-room.

"I—I never dreamed of this—after 'Manda's'—!" Something like a lump rose in Squire Holman's throat. "I've dreaded tonight for weeks just because 'twould be so lonesome."

"We must serve the guest of honor first," exclaimed Mrs. Lockwood, bringing in a tray of steaming viands. "And will you have tea or coffee?"

Of Squire Holman's twenty-two birthday dinners, none had ever been a greater success than this, none had brought him such a degree of cheer. "I feel younger tonight," he declared on leaving the table, "than I have before for years."

"It won't make a bit of difference with him, your doing what you did,"

remarked Mary Holbrook, who had dropped into Martha Lockwood's kitchen the next afternoon. "He'll be just as mean as ever. I can't get over his not giving that bell; it's no use, and the dedication only a little more'n a week off!"

"I did it," replied Mrs. Lockwood in a gentle tone of reproof, "because I ought! 'Twas doing unto others."

The morning of the dedication was crisp and cool. The bishop had arrived the night before, and was just leaving the house with Mrs. Lockwood and Joel when—across the fields came the clear tones of a bell.

"Mother!" Joel stopped on the steps. "I was put in place last night; I knew I saw a light there late in the evening."

"Who did it—gave us the bell?" was the eager question on everybody's lips that morning. "What a splendid surprise!"

(Continued on Page 782.)

THE BOYS AND GIRLS

Candle and Star

Said the Candle to the Star,
"How very small you are!
You never can outshine
Such radiance as mine,
Because you live so far,"
Said the Candle to the Star.

Said the Star: "Now wait and see
What comes to you and me.
Though I live far away,
A million years I'll stay,
But you'll forgotten be."
Said the Star, "Now wait and see."

The little Star shines on;
The Candle's light is gone;
For one is God's own plan,
The other made by man,
The Candle's light is gone;
The little Star shines on.

Vegetable Wrongs

Digging the eyes out of potatoes.
Pulling the ears of corn.
Cutting the hearts out of trees.
Eating the heads of cabbages.
Pulling the beards out of rye.
Breaking the necks of beets.
Skinning apples. Knifing peaches.
Squeezing lemons. Quartering oranges.
Threshing wheat. Plugging watermelons.
Felling trees and piercing the bark.
Scalding celery. Slashing maples.
Crushing and jamming currants.
Mutilating hedges. Stripping bananas.
Burning pine knots. Burying roots alive.

The Little Lighthouse Girl

SAILORS who navigate the seas on the South Atlantic coast are always glad when they near the harbor of Savannah, for that means that they will pass within saluting distance of the "little lighthouse girl." This is the officially accepted title of Florence Martus, who has for the last eleven years waved a friendly signal to every craft passing between the city and the sea. It is a hobby of this young girl to greet the ships that go and wish them a safe return, and greet the ships that come and congratulate them on their voyage. She says that the ships are her world. She hasn't much world outside of the marine houses, to be sure, for she lives with her brother and her mother on the bleakest, most uninhabited island imaginable on the southern bank of the Savannah River, ten miles from town.

The Martus dwelling is the only habitation on Elba Island. There is no landing wharf, and visitors arrive on an average once a year. George Martus attends to the range of lights which keep the pilots in the right part of the most tortuous channel in that part of the ocean. Besides the lighthouse is the cottage where these three persons spend their lives. The barks, the steamers, and the various other craft never get near enough for an exchange of greetings other than that most expressive form of good will, the waving of a handkerchief by day and of a lantern by night. And as the girl sends out her welcome the seamen, who know all about her, and who would resent the elimination of the ceremony which

she has so popularized, send back an answering salute, three "toots" of the steam whistle. Then Miss Martus is as happy as a belle at a debutante party.

It is her desire that no vessel shall pass the lighthouse without receiving a salute. She never overlooks a sail in the day time, and her handkerchief is ever ready for its service of cordiality. And at night she seems to feel intuitively the approach of her ships, for she has frequently made ready the lantern before the expected boat hove in sight. She says it is her ambition to signal every ship that touches Savannah. She was asked her reason for signalling the passing sea through.

"I do it," she said, "because they are my friends, almost the only friends I have. I love to see them come and go, and when they go I always pray for their safe return."

Familiar Sayings and Customs

Every day we hear some phrase or proverb that is so familiar we never for a moment think how or where it originated.

"As dead as a door nail" is very familiar. Long ago, when doorbells were unknown, front doors were made with knockers, which were struck against a metal knob to announce arrivals. This knob was called a door nail, and as it was struck so

often it was naturally supposed to be dead.

There are many customs also so familiar and old that we wonder if they ever had any origin.

The throwing of rice at a wedding is a Hindoo custom. Rice is the staple there, and when thrown at the happy pair denoted good will and wishes for a life of usefulness. Throwing old shoes is a very ancient custom. In transferring the property of the bride the father gave one of her shoes, thereby relinquishing all right to her.

She Couldn't Draw It

A teacher went out one day with one of her pupils to do some sketching. The little girl she took with her was about ten years of age, and quite skillful with her brush.

When the day was nearly over the teacher looked at the sky, where the sun was setting.

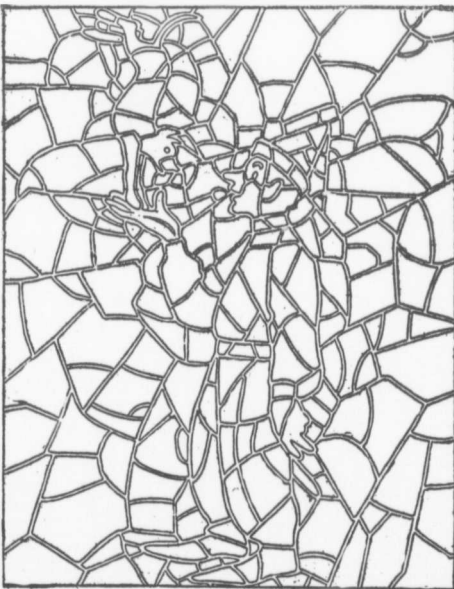
"Try to make a picture of that sunset," said the teacher to her pupil.

The little girl looked at the beautiful sight in the heavens, and then she turned to her teacher and said:

"I can't draw glory."

It was a bright answer made by that little child. It is God who paints the sunset sky, and there is no human skill that can draw the glory which He has created.

There is no life so humble that, if it be true and genuinely human and obedient to God, it may not hope to shed some of His light. There is no light so meagre that the greatest and wisest of us can afford to despise it. We cannot know at what moment it may flash forth with the life of God.



A CIRCUS MAZE.

In this cut, mixed up with the other lines, are the figures of a circus performer and one of his animals. See if you can find them.

IN THE KITCHEN

Consider Ways to Use Meats

When buying a piece of meat one should consider the different ways it can be used. In buying a prime rib roast, as a rule, most people want it cut short. If they will buy a full rib, cut long, it can be bought for about three cents less on the pound. Then have your butcher cut it short and take the small piece with you; you thus have enough meat for another meal.

In the way of soup or stewing meat, if you get your piece short cut you pay as much and the butcher has the end piece left. You can have your butcher remove the bones, roll and tie with clean twine or skewers. These must be removed before serving. Always take the bones with you, as they can be used for soup.

Some Recipes

APPLE FRITTERS—Cut a dozen large, juicy apples into slices after peeling and coring them. Throw the slices into the batter. Have ready a pan of equal parts of lard and butter, boiling hot. Take the batter up in a ladle, allowing a slice of apple to each fritter, and drop into the hot lard. Fry brown, drain a moment and serve with powdered sugar and nutmeg.

PEACH COMPOTE—Use either fresh, canned or dried peaches and stew until very soft; sweeten well and allow them to simmer in the water in which they are cooked; then remove from the fire, and when cold strain and turn into moulds of rice. Make the moulds by lining ordinary teacups with boiled rice and leaving a deep depression in the centre, this depression to be filled with the peach mixture, which may require a little gelatine if it does not "boil down" to the right consistency.

CAKE "SNOWBALLS"—Cut off all the crusts from a loaf of white cake, so that it will look perfectly white. Then cut the cake into squares or balls an inch or two inches wide. Have ready a rich white frosting, and with a fork dip each piece of cake into it on all sides; then roll the snowballs into freshly grated cocoanut until thoroughly coated. They should be the picture of real snowballs.

POTATO SOUP—A very fine potato soup is made by adding a quart of scalded milk, in which several slices of onion have been steeped to two cupfuls of mashed potato. Soften, not melt, a large tablespoonful of butter, and mix with it an equal quantity of flour. Add salt, pepper, and a dash of celery salt, and pour gradually, stirring all the time into the milk and potato mixture. Sprinkle a little finely mixed parsley on top. Serve with buttered crutons.

RICE BREAD—Rub one cup of cold rice till smooth, mix with one cup of flour, one cup of sweet milk, two tablespoonfuls of melted lard and salt to taste, and, like the waffle batter, beat hard and long; then add two eggs beaten very light. Bake in thin layers, spread each hot cake with butter, pile on a hot plate and cut through the layers like shortcake.

WAFFLES—Mix one pint of flour, three-fourths pint clabber (if you use buttermilk, a pint), one teaspoon salt,

one tablespoon melted lard, and beat till perfectly smooth—beat hard and beat long, for your success will depend on it. Just before you put in the irons add one level teaspoon of soda dissolved in a teaspoon of hot water. Grease the irons before you bake the first waffle, they will not need it again. Serve each waffle fresh from the irons, crisp, feathery, melting.

To Preserve Eggs

My method of preserving eggs is so satisfactory that I will report for your readers. I buy the eggs in September or October when they are twenty-five or thirty cents a dozen. Each egg is wrapped in a piece of newspaper and then packed closely in a pasteboard box, filling in any space with paper, and the cover tied on. The boxes are put in a cool place—cold storage, if one has it, a cellar or cold room will do. The air is kept from the EGGS by the paper. In the six years that I have tried this method, I have never lost an egg, and members of my family who have kept them in this way have had them fresh in May, which is, of course, longer than one needs to keep them.—S.

Washing Dishes

A friend who has but a few hours each morning in which to do her housework, has a simple and rapid method of washing dishes. She has a large square box made to order of heavy tin; a hole in one of the lower corners can be closed with a cork from the outside. Dishes are stacked in the box edgewise, and covered with cold water for one hour; in the meantime other work is done, and a dishpan of soapy water is heating to boiling point. The cork is then removed and the box drawn a little over the table edge and slightly tipped for the cold water to drain off. The cork is replaced and the boiling soapy water poured on the dishes, which are allowed to clean under cover. The soapy water is then drained off, fresh boiling water poured on and drained off, and the dishes of three meals are washed at one stroke and need almost no wiping. Of course, the knives, forks and spoons, and pots and pans are washed separately, for, as a rule, they cannot be cleansed so easily.—Mrs. M. S. D.

Cooking Without Fire

In the cooking schools of Berlin, Munich, Frankfurt, and other German cities, the use of the "fireless stove," or "cooking box," is strongly recommended. The apparatus consists simply of a wooden box, thickly lined with hay or felt, and fitted with a tight cover. Nests are made in the lining, into which pots containing food that has first been boiled for a few minutes over a fire are placed, tightly covered, and the box is closed. The lining retains the heat for hours, and the food is slowly cooked, with better results, in many cases, than can be attained by rapid cooking on a stove. Of course the apparatus does not answer for cooking steaks, chops, or cakes which require a quick, hot fire, but it is excellent for soups and vegetables.

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Showing One's Color

The superintendent of a seaman's mission says that one of his young sailors, who had signed the pledge and worn the white ribbon, had to enter a hospital later on. The physician prescribed brandy, but when he saw the ribbon he changed the medicine, saying: "I can give you something that will take the place of it; I never mean to do anything that will rouse a dormant appetite if I can help it." Such an emblem, like the badges of certain organizations, is a positive safeguard. "You'll often be laughed at after you put on this uniform," said General Booth, on one occasion to a company of the

Salvation Army, "but you'll not so often be tempted. All the devils run from a soldier who shows his colors."

Make Haste Slowly

To be in a hurry is never the way to succeed thoroughly, either in material things or the things of the soul. To "make haste slowly" is a lesson we often need to learn. Newman's prayer is a wise one:—

Lord! who thy thousand years dost wait

To work the thousandth part
Of thy vast plan, for us create
With zeal a patient heart.

Sunday at Home

A Poor Example

A certain woman, prominent in church affairs, stood leaning over her big five-year-old boy, who, when he had finished saying his evening prayer with an irreverent drawl and his amen with a yell, asked her: "Mother, why do you make me say my prayers when you never pray at evening or any other time?" Her lips were closed. There are too many Christian women who never pray except in public.

Constancy

In the Old Testament there is a little song which tells the story of a constant friend. "And Ruth said unto Naomi, Entreat me not to leave thee, or to return from following after thee: for whither thou goest, I will go, and where thou lodgest, I will lodge; thy people shall be my people, and thy God my God: where thou diest will I die, and there will I be buried: the Lord do so to me, and more also, if aught but death part thee and me." This is a beautiful song and a sweet spirit.

No earthly friendship can be perfectly constant. But God is constant. He is the same yesterday, today, and forever. "I am persuaded that neither death, nor life, nor angels, nor principalities, nor powers, nor things present, nor things to come, nor height, nor depth, nor any other creature, shall be able to separate us from the love of God, which is in Christ Jesus our Lord."

Stand Up

"Stand up, stand up for Jesus,
The strife will not be long;
This day the noise of battle,
The next the victor's song:
To Him that overcometh,
A crown of life shall be;
He with the King of glory
Shall reign eternally."

The Life Beautiful

The Rev. Dr. J. R. Miller, recently discussing "Self-development through Work for Others," drew this picture of a life transfigured through thoughtfulness of others:

"A few years since there died in England, at an advanced age, a woman who had been a great blessing in the world, but whose beginning was most discouraging. As a girl she was exceptionally so homely—that even her mother said to her: "You are so ugly, my child, that nobody ever will care for you or love you." Instead of being disheartened, however, by her homeliness, she said to herself: "I will make my life so beautiful and such a help and comfort to others that people will love me, in spite of my face," so she trained herself to be kind to everyone she met. She cultivated gentleness of disposition. She learned to be most unselfish, always loving herself and doing all she could to help others. She visited the sick, carrying gladness and comfort to them and relieving their wants. She sought to give encouragement, cheer, joy to everyone. As the years went on, she became known as the angel of the village in which she lived. Everybody loved her, and her name was spoken in praise in every home. She did not become beautiful in feature, save as the light of love in her heart shone out, transfiguring her face, but her life became beautiful."

HEALTH IN THE HOME

Care of the Feet

People who suffer from tired feet may note that a good deal of their discomfort is caused by the fact that they wear stockings that do not fit. Indeed, the fit of the stockings is almost as important as that of shoes, and, in order that they may fit, it is necessary that they shall have a right and left to the pair. They should have as few seams as possible, as these cause corns. The feet should be bathed at night, and this treatment is an excellent sleep producer. The water should be salted. The feet should be scrubbed all over with a nail brush, which will often prevent the formation of corns; whilst hard spots on the soles may be reduced with a piece of fine emery paper or fine file before the feet are placed in water.

Chronic Rheumatism

The term rheumatism has been, and is even yet, so loosely employed not only by the general public, but by physicians themselves, that it is impossible to determine just what is meant by it.

Almost any painful affection of the muscles or joints, whether acute or chronic, is popularly termed rheumatism. Certainly two or three distinct diseases, and perhaps more, are thus confused, but there seems to be one painful affection of muscles and joints, chronic in character, and not producing distortion of the limbs, which is distinct from the other rheumatic troubles, and which is called chronic rheumatism.

The trouble may come on after one or several previous attacks of acute inflammatory rheumatism, the last of these never entirely disappearing. More or less pain, stiffness and swelling persist in one or more of the joints, or the disease may come on gradually without any preceding acute attack. This is the more common way.

A tendency to suffer from this form of rheumatism seems not infrequently to be inherited, for it is seen to run in families. Exposure to cold and wet is a common cause of the disease. Only one, or at most two or three joints are usually affected, and the changes in these are not very noticeable. The chief symptoms are pain, especially on attempted motion, and stiffness of the joint. Pressure, particularly at certain points, also causes pain. Sometimes manipulation of the joint will give rise to a grating noise or cracking. There may be some swelling of the affected joint, but this is seldom very marked, and it is sometimes only stimulated by a wasting of the surrounding muscles.

If proper treatment is not prompt and persistent there is danger of fibrous adhesions forming which result in a permanently stiffened joint, or one which can be loosened only by an operation of more or less gravity.

A strange peculiarity of chronic rheumatism, in its early stages before adhesions have formed, is that although pain is at first increased by motion, both pain and stiffness may be made to disappear by persistent and methodical movements of the joint. This indicates one of the best

modes of treatment, namely, massage and passive motion.

Sometimes much relief is obtained by exposing the joint to a very high temperature in an apparatus devised for the purpose. Hot baths, electricity, blistering and painting with iodine, are also of value. Drugs are of limited service in most cases. Residence in a warm, dry climate is often curative.

Health Hints

It is said that a pinch of salt placed on the tongue and allowed to dissolve slowly, is a certain cure for sick headache.

The use of plenty of milk with tea is a wise precaution, and must be regarded as a sound and physiological proceeding, since the proteids of milk destroy astringency and probably prevent the otherwise injurious action of tannin on the mucous membrane of the stomach. In the intestinal juice the proteids are separated and the tannin probably co-imbines with the sodium salts.

The British Medical Journal says that the best and most effective remedy for warts and corns is sea water. When sea bathing is not possible, warm footbaths of sea salt will take its place. If used daily, at the end of a fortnight the corns will peel off. Warts are treated by soaking the hands in warm sea water twice a day for ten minutes. Cauliflower warts on the scalp yield to a compress of sea water left on all night each night for two weeks.

Cramp in the Legs

People who are subject to cramp in the legs should always be provided with a good strong piece of cord, especially in their bedrooms. When the cramp comes on take the cord, wind it round the leg over the place where it is cramped, take an end in each hand and give it a sharp pull, one that will hurt a little, and the cramp will cease instantly. People much subject to cramp in bed have found great relief from wearing on each leg a garter of wide tape which has several thin slices of cork stitched on to it.

"Advice," said Uncle Eben, "is like mos' ev'rythin' else. If it's any good, you doesn't have to give it away. You kin ginerly sell it."

The New Bell

(Continued from Page 778.)

Near the close of the exercise Squire Holman, who was in the happy audience,—greatly to the wonder of many of his neighbors—modestly arose.

"With the dedication of our church—for I wish to share its blessings—I dedicate also to God's service my life—what little there is left. Unless there is something in one's religion, I shouldn't have been treated as I recently have by my neighbors," many eyes turned to Martha Lockwood, "after the way I've acted regarding what was no more nor less than a sacred obligation!"

All knew then the secret of the bell and the act that had prompted its giving.



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IN THE SEWING ROOM

May Manton's Hints

LOSE BOX COAT 5154

The loose coat is always a favorite one with many women and suits some figures better than any other sort, in addition to which it is easier to slip on and off and involves less difficulty in the making than do the fitted ones. Here is an exceedingly desirable model that will be much in vogue during the entire autumn and winter, both for the coat suit and for the separate wrap, and which is quite appropriate for all suitings, broadcloth, chevot, homespun and the like and also for the cloakings that are preferred for the all-round wrap. In this instance the color is black and the material English kersey, simply stitched with belting silk, but color as well as material is a matter of personal preference and need.

The coat is made up quite simple lines, consisting of fronts and backs and is finished at the neck with the regulation collar and lapels. The closing is made invisibly by means of button-holes in a fly, and the sleeves are the favorite ones of the season that are full at the shoulders and plain at the wrists, where they are finished with roll-over cuffs that are very generally becoming. When liked the collar can be of velvet but there is a peculiar smartness found in the use of one material throughout.



5154 Loose Box Coat,
32 to 42 bust.



5152 Misses' Seven
Gored Box Plated Skirt,
12 to 16 years.

MISSSES' SEVEN GORED BOX PLATED SKIRT
5152

Skirts worn by young girls follow closely after the models in vogue for their elders and are made full after one manner or another but so arranged as to be plain over the hips and at the waist line. This one is among the best and most graceful of the season's models and is adapted to almost all suitings and dress materials. As shown, it is made of one of the pretty new plaids, cut bias, and finished with stitching of belting silk.

The skirt is cut in seven gores and is laid in box plaits that are stitched flat for graduated lengths and are pressed into position below the stitchings.

GIRL'S DRESS WITH POINTED BERTHA 5155

Little girls are apt to be especially charming when wearing frocks made with low necks and with short sleeves. They allow a glimpse of dimpled arms and throats that always is fascinating, in addition to which they are regarded as desirable from the standpoint of health; for we have learned better than to allow the children to be bundled up too closely even in cold weather. Modern, warm-

ly heated homes render such treatment something of a danger and it is found that little girls who become accustomed to such slight exposure as this grow the hardier in consequence. The dress, however, can be



5155 Girl's Dress
with Pointed Bertha,
4 to 12 years.

5157 Work Apron
with Half Sleeves,
Small, Medium, Large.

made high with long sleeves, if better liked. In this instance the material is cashmere and the frills are of the material embroidered in a simple openwork design, but there are many others which are equally desirable. All the season's novelties are sufficiently soft to be made full with success and there also are some pretty, childish silks which are in every way appropriate to the design.

The dress is made with the waist and skirt. The waist is made over a plain body lining and is finished with a becoming bertha while the skirt is straight and gathered at its upper edge, the two being joined beneath the belt. The short sleeves form full puffs, but the long ones are in bishop style.

WORK APRON WITH HALF SLEEVES 5157

The busy woman, whether her activity take the form of household duties, of art work or of any other pursuit which means the likelihood of soil to the gown, is sure to feel the need of just such a protective apron as this one. In the illustration it is made of checked gingham, but there are many other materials that are suitable the very best of all being butcher's linen, which is durable and improves each time it is sent to the laundry, and altogether is desirable. The sleeves are full enough to slip on over those of the waist without rumpling and are quite as essential to the economic purpose as the apron itself. This last is so simple as to involve the least possible labor in the making while it covers and protects the gown admirably well.

The apron is made with fronts and side portions and is extended at the back to form suspenders, that are crossed and brought over then buttoned into place over the front. At each side is a generous patch pocket, which itself is a commendation. The sleeves are finished with bands at their lower edges and with casings at the upper in which elastic is inserted to keep them in place.

The price of each of the above patterns postpaid is only to cents. Send orders to The Farming World, Morning Building, Toronto, giving the size wanted.

THE FARM BOOK OF THE CENTURY "The Fat of the Land"

Read what some leading agricultural authorities think of it:—

MR. C. C. JAMES, Deputy Minister of Agriculture, Ottawa, says:

I procured a copy of "The Fat of the Land" last May and have only recently read it. Meanwhile I have been lending it to others to read, and the opinion of all has been that it is a very readable, suggestive and helpful book. It is the story of a man of means, broken down in health through strenuous city practice, who sought the country for health and enjoyment. The book is well written and keeps up the interest to the end. The question will at once arise: "Is there anything in it for the ordinary farmer who has to start with small capital?" There certainly is. Some of the most important principles of the present day agricultural practice are worked out in a most interesting form. I would like to see our hard working, close thinking, unostentatious Ontario farmer sit down to read this book. He will enjoy it. He will be able to compare experiences with his own, and he will be able to get much out of it for his own work. He will have no fear of the Ontario farmer being misled by any of the methods proposed. He is shrewd enough to take such advice as is in his own best interests. It is a stimulating book and one need not believe it all, or accept all the statements therein, as I believe it will do good to the struggling farmer as well as man who longs to change his stuffy office for the free air of the country.

DR. JAS. W. ROBERTSON, late Commissioner of Agriculture, Ottawa, says:

I read "The Fat of the Land" with keen interest. It is a book which reveals in a very pleasant way many problems, if not actual achievements, by the application of intelligence and good business management to farming problems and affairs. I count it wholesome reading.

MR. F. W. HODSON, Dominion Live Stock Commissioner, Ottawa, says:

I received a copy of "The Fat of the Land," and have read it very carefully. It contains a good deal of useful information and should be read by every farmer in the land.

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The Farming World
TORONTO

The Drainage of Farm Lands*

There is no question in agriculture more important than that of moisture; in fact the most important influence on the quantity of yield year by year is the amount of rainfall and snowfall in any given district. The Weather Bureau of the United States has established the fact that in the great corn growing States, the yield of corn varies directly with the amount of rain that falls during June and July. For a period of fifteen years it has been found that where the rainfall is below normal for June and July, the corn yield is also below normal, and vice versa. Dr. Shaw, the Chief of the Weather Bureau in England, has established a similar relation between the rainfall and the yield of wheat. He finds that the yield diminishes by one and a

but little being left behind. This happens when a soil is too porous. Or water may fail to enter the soil in any great quantity and will run off the surface. This happens with an impervious soil, especially on sloping and hilly ground. The object of

SOIL MANAGEMENT

is to exercise the fullest possible control over the water supply. Autumn cultivation has for its particular object the preparation of the land to absorb the autumn rains and winter snows, so that the maximum amount enters the soil and the minimum amount runs off the surface. Spring cultivation has for its object the loosening of the seed bed from the wet subsoil so that it may dry out sufficiently for germination of the seed; while summer cultivation has for its particular object the checking of

generally are awakening to the fact that large areas of their land can be improved, in many cases reclaimed, by a system of underdrainage. I venture to predict that the question of underdrainage will form a basis for the next important advance in agriculture in Canada.

BENEFITS OF GOOD DRAINAGE

Let us glance for a moment at some of the benefits resulting from good drainage of lands. The whole thing is summed up, of course, in the control of water supply. The most obvious object of underdrainage is to rid the land of excess water, but this is not the only, nor always the most important object. That is the direct effect, but there are various indirect effects, such as the ventilation of the soil, resulting in a more ready flow of air through the soil; the ready entrance of showers into the dry soil; the deep rotting of crops. The direct effect of the drain in removing



Gathering the Turnip Crop, College Farm, Truro, N.S.

quarter bushels per acre for every inch of rainfall in the previous autumn—September to November. In this instance the relation is the reverse of that established for corn in the States, but the influence in both instances is very marked and very uniform. While this is the case it is nevertheless a matter of common observation that the yield of crops on two adjoining farms may be very different, while the rainfall is practically the same; that is to say, although man has no control over the amount of rain which falls, yet intelligent agriculture is directed toward the controlling of the distribution of the rainfall. It may be remarked here that the amount of rainfall and snowfall may be disposed of very differently, according to the condition of the soil upon which it falls. The water may penetrate the soil very readily and drain out,

evaporation of water from the soil and its conservation by that means. A noted farmer of Ohio once remarked that given plenty of rain and snow in the autumn and the winter he could grow good crops without summer rains. What he meant was that he would prepare his soil in the autumn and would cultivate his soil in the spring and summer so that he could make good use of the autumn rainfall.

It appears, therefore, that intelligent farming is largely directed toward the control of the water that falls upon the soil. Underdrainage is one of the most effective means toward that control, and Ontario farming has reached that stage where much more attention must be given to this important question of drainage before any further advance can be made in agriculture. Thus far the attention of the Ontario farmer has been directed towards the clearing of land of bush and stumps, erecting suitable buildings, and purchasing necessary machinery for the working of the land, but there are signs that farmers

surplus water is beneficial in that it not only makes the growth of crops possible, but where the growth of crops is possible without the drain, the drain enables earlier seeding and insures a warmer soil for the seed to sprout and for the young plant to grow. The effect of the drain in ventilating the soil, that is to say in allowing a frequent change of air throughout the root zone of the plants, means that the roots will be readily supplied with oxygen and other constituents necessary for their healthy growth. The increased openness of the soil, which is a marked effect of the drain, results, besides ventilating the soil, in allowing occasional showers to enter the ground more readily, and thus the drain becomes indirectly a safeguard against drought. The drain is, further, a safeguard against drought in lowering the water-table and allowing the roots of plants to penetrate more deeply into the soil, and thus to feed in a region not subject to extremes of heat and moisture, as at the surface soil.

*Address by Prof. J. B. Reynolds, Ontario Agricultural College, in the Dairy Pavilion, Canadian National Exhibition, 1905.

THE PRACTICAL FARMER

in considering the question of under-drainage makes, first of all, quite naturally and properly, a question of cost. It is not, however, the total amount of cost which should be the only consideration. The cost of drain land, where land needs drainage should properly be regarded not as an expense but as an investment. In a system of bookkeeping it should be charged up to capital account or permanent improvement, not to maintenance. It is not in the same class of expenditures as machinery or repairs or horse feed, but stands in the same category as an expenditure for more land. For instance, to sell ten acres of land for the purpose of buying machinery or horse feed would properly be regarded as a failure to meet the legitimate expenses of running the farm and as a backward step financially, but to sell ten acres of land for the purpose of draining a part of the farm would not be so regarded; in fact, it would, in certain circumstances, be a good business deal to sell an outlying bit of land and invest the proceeds in draining. It would certainly be better to invest surplus money in needed drains than to buy more land, for the effect of drains is to increase the yield by a percentage, considerable in any case, and very large in many instances, where land badly needs a drain. In this respect, that is to say in increasing the total yield, the drainage investment stands on a par with investment in more land, and it must be noted that after the drainage is accomplished it costs no more to work the drained land than it did the undrained land, in fact very likely less, for the land is in better condition, and responds more readily to intelligent cultivation that it did before being drained, but the investment in land would mean a proportionate amount of extra labor in tilling the land and harvesting the crops. Investment in drainage, therefore, is wiser and more economical, where drainage is needed, than investment in more land.

For instance, suppose that the sum of five hundred dollars is invested in laying a thorough system of drains under thirty acres of land. At that rate of cost land can be drained pretty thoroughly. Further, suppose that previous to draining the average yield of oats on that land had been thirty bushels per acre, which at forty cents a bushel, would be twelve dollars. If the cost of working the land is placed at eight dollars per acre, the net profit amounts to four dollars per acre. Now, suppose that after the investment of five hundred dollars on this land the yield is increased to forty bushels, which is a conservative estimate, this yield at forty cents a bushel would mean sixteen dollars per acre and with an allowance of eight dollars for cost of working, the net profit is eight dollars, giving an increased gain for thirty acres of one hundred and twenty dollars per year, which is just twenty-four per cent, of the original amount invested for drains, namely, five hundred dollars; or, to put it in another way, at the rate of one hundred and twenty dollars per year, the original capital outlay is returned in a little more than four years.

THE WISE FARMER

will sit down and count the cost in some such way as this before embarking upon the rather expensive undertaking of drainage. He will consider the circumstances in which drainage is likely to be needed. He may have on his farm a level tract of land or for which is heavy and retentive of moisture. Such soil would be sure to give good returns for the investment in draining. Or he may have a low tract which serves as a sort of sink for the overflow water or underflow water from surrounding higher

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land. Such areas also stand badly in need of drainage.

For a healthful condition of things in the soil, frequent percolation of soil water is necessary, in order to carry off the soluble salts which otherwise would accumulate in excess in the soil. In arid countries, where the rainfall is so slight as never to produce underground drainage, and in swamps, where on account of the ground structure, underground drainage is impossible, the same condition of things occurs, namely, the accumulation in excess of soluble salts in the soil. In the case of swamps, underdrainage is frequently the first remedy to be applied, and in arid lands irrigation with drainage is the most effective remedy for alkali. It is important that the farmer keep constantly in mind that the downward movement of water through the soil is essential to a proper degree of fertility and to a proper physical condition in the soil; and where lands are highly retentive of moisture or where, owing to the underground structure, natural drainage is difficult or impossible, then artificial drains become a necessity in every well ordered farm.

A WORKING PLAN

Next to the cost of drain the great obstacle before the practical farmer is what may be termed the engineering problem, that is the question of preparing a working plan of drainage, locating the right position for the drains, deciding upon the depth, the amount of fall, the size of tile, and, last and most important, securing sufficient outlet. All of these present themselves at one time or another as practical engineering difficulties with which the average farmer, on account of lack of experience, is unable to deal with any certainty of success.

Many cases that arise are easy to work out—such as a single main drain up through a low part of the field or a small field of uniform easy slope. Here the eye may be a sufficient guide in determining the grades best for the drains. But where the field is uneven in surface or where the slope is slight, much more care is necessary and instruments should be used less liable than the eye to make mistakes. A small shack for a summer outing may be built without a prepared plan or without an architect, but if a fine house or barn is to be built a carefully prepared plan is used as a guide in construction, and frequently an architect employed to make that plan. Similarly, for a small and easy system of drainage no plan may be necessary, but for a difficult or large undertaking, it is a matter of economy as well as of efficiency to prepare a plan very carefully, and in many instances to employ an experienced and competent person to do the engineering part of the work. This is especially true for drains, since any mistake or defect in the work is

buried out of sight, and hence defects cannot be remedied without a plan of the work to guide in discovering the location of the drains.

THE OUTLET

In a drainage plan, the first consideration is the outlet. Here it must be said that no part of the drainage is more important than this. For however perfectly the drains may be laid, unless there is a proper outlet there can be no proper drainage. The outlet must be low enough and large enough. Second, the position, direction, depth, and size of the mains must be considered, and, third, the laterals. To deal with these questions the total area to be drained, the character of the ground surface, whether rolling or level, and the character of the soil, are determining factors. For instance, the character of the soil to be drained has its influence both on the depth of the drains and their distance apart. In all soils at any season is called the ground water surface. Where land is drained this ground water does not present a level surface, but rather a rolling or sloping surface something like a series of waves of water—the lowest parts of the surface being naturally over the drains and the surfaces rising in a more or less gentle slope toward the centre line midway between the drains. This slope or gradient of the ground water, it will be seen, carries the ground water at certain times of the year, as, for instance, in early spring or after heavy rains, very near or quite close to the ground surface. In close retentive soils the ground water gradient is steeper than in more open soils, hence in a close soil the drains require to be placed closer together than in more open soil, else the ground water will stand too near the ground surface at points midway between the drains, and will prevent the deep rooting of plants. In the preparation of a drainage plan, therefore, the character of the surface soil as well as the sub-soil must be taken into consideration.

WHERE INFORMATION CAN BE OBTAINED

In the face of these difficulties many farmers who decide to drain their land are at a loss to know how to proceed. To give this important work a start the Department of Physics at the Ontario Agricultural College, over which I have charge, invites correspondence with farmers. I am anxious to assist in the work of farm drainage in every possible way, and, with the approval of the Minister of Agriculture, I now announce that my Department at the College will, for any considerable area, take the levels and prepare a working plan, provided the owner will defray the travelling ex-

penses of the one person sent out to do the work. If such an offer be accepted, the work of making the survey may be made the occasion for a practical demonstration, by the person sent out, upon the proper methods of draining land. Such a demonstration would fall under the same class as the travelling dairy or orchard meetings, and, at the same time, something definite would be accomplished in the survey of land. I should be very glad to correspond with farmers upon this proposition.

To Test Soils for Acidity

Prof. H. C. Greene, of the Missouri Agricultural College, gives the following method for testing soils that are suspected of being too acid to grow clover:

The simplest and most delicate test is by the use of litmus paper. Cut the litmus paper in strips about two inches long by one-fourth inch wide and have it ready. Then take a sample of soil from the field about three or four inches below the surface and powder it without letting it dry. From this sample take say a tablespoon, place in a cup or other open vessel, and add enough rain water to make of the consistency of thick mud. With the hands perfectly dry place one end of a piece of litmus paper in the mud, leave for about three or four hours, and then rinse in rain water. If the end of the paper is pinkish red the soil is acid and needs lime; if it is unchanged it is neutral and needs no lime; but if it is blue the soil is alkaline. Be careful to always handle the paper with dry hands, because the test is so delicate that there may be enough acid on the hands to change the color of the paper and give the wrong results."

A Plea for Better Farming

It is always well to have something to aim and work for, and as "He who aims at a star will shoot higher than he who aims at the top of a tree, even if neither hits the mark," so it is well to strive after such a standard in crops and stock as will improve the output of the farm, even if one never attains to the mark. Most farmers in our part of the country would save more money than they do now if their cultivated acres were reduced one-half; if the same amount of fertilizer and labor was applied to the remainder, the result would be more satisfactory, both in quantity and expense of raising.

I would rather have one calf that was thoroughly well fed and cared for from birth than a dozen feeble runts that had put in a hard first summer on what grass they could pick, and the wiley that the hogs left after getting enough to keep them from starving.

Yet, many calves go into the stable in fall with their hair as rough as a door mat, and in no condition for a satisfactory growth. Most likely they will die before spring, and a good thing if they do; there will be so many less scrub cattle to curse the country later on.

Many men do not seem to realize that a good cow costs no more to keep than the scrub that is in debt for the grass she has eaten every summer. They think that any "critter" provided with horns and a tail, with four legs to carry them round, is good enough, but let those same men get hold of a genuine good cow, and a sudden change of programme is apt to follow.

If I were rich, I would like to give a good cow and a fine hog to several farmers I know, and take my pay in notes rising.

Many grow crops that it would be well to treat, as one man of my acquaintance did his potatoes last fall: he ran the mower over the field before he attempted to dig them, to get rid of the weeds that stood, some of them nearly as high. Of course Providence had used him very badly, because his potatoes were about the size of hens' eggs. His neighbor had been cultivating his crop, while this man sat on the fence and talked to every passerby.

There is hard work enough for most of us in this weary old world, without putting ourselves in the way or more than we are obliged to tackle, and if the final result is nothing more than small potatoes, why, so much the better, but if it is a mortgage that will turn the family into the street when old age is at the door, I think it would be well to get off the fence, pull off your coat and get to work even if the perspiration does start a little.

And it is the men who raise fancy crops or stock that can afford fine buildings and good grounds, who can take a trip each summer, and put in a week's pleasure in the city during winter.

The time when any half-witted individual could run a farm as well as his neighbors if he would work well, is gone by. It is a contest of education, ability, shrewd foresight, and management nowadays. He who would keep in the van must put up his product in the most taking market style; he must use tools as far as possible instead of employing expensive and often unreliable hired help, he must understand stock breeding, and above all have an eye for the future. Some men just find out that horses are in great demand and bringing good prices, and every one about them has been raising colts for three or four years; consequently these earlier ones are full grown and ready to take all the edge off the market before he is ready to compete.

If this same man had studied the subject a little, perhaps he would have discovered that some other issue was being generally neglected about him, and there would be a paying call for something he could supply, and so been ready to meet a rising market, he would not only make money, but been satisfied with himself, and an easier man for his family to deal with.

It is not necessary to invest a great deal of money, usually only to study local conditions, for a local market, if it is a good one, always pays best, as there are no transportation charges and no middlemen's profits to pay.

If all your friends and neighbors are supplied with good horses, cattle, sheep and pigs, perhaps they will want pure-bred poultry. Last year every one had more apples than they could gather, but the one who picked the blossoms off his trees then, will get his crop this year, when they are sure to be scarce.

F. H., Quebec.

The Farmer's Tool-Shop

If there is one thing more than another that is being neglected about the average farm it is the care of the numerous tools and other small instruments which should be found on every well-appointed farm. What a convenience it is in a hurried time, when anything goes wrong about any particular implement you may be using, to know just where to go to get the necessary tools to mend them, instead of having to

waste considerable time going from place to place hunting them up, as is very often the case?

Every farmer should have a suitable building in which to keep his tools and other small knick-knacks. The building need not be large but should be situated somewhere convenient, and, preferably, separate from the other farm buildings. It should be provided with a window large enough to afford sufficient light, and built so that the snow cannot blow in during winter, and have a small box-stove to heat it; occasion required.

It may, if found necessary, have all the requisites of an ordinary carpenter's shop, but all that is required on the average farm is a carpenter's bench, with a good vice on both ends of it, one somewhat smaller than the other. This bench may be stationary or portable, as required, but a stationary one may be found most satisfactory. It should be provided with a number of shelves around the walls, each shelf with its own particular article, and that article kept there and nowhere else when not in use. A suitable place should be found for a ripping saw, a cross-cut saw, a panel, a compass, a lance-tooth and a bucksaw; also a corner for the necessary planes—the jack plane, the try plane, and the smoothing plane. Other tools which should be found in every farmer's tool-shop are: Augers, braces and bits of different sizes and shapes, a counter-sink, screwdrivers, chisels, drawing knives, files, a try, bevel, and framing square, gimlets, and the several smaller planes. This should also be the

place to put all logging-chains, shovels, picks, axes, etc. If such a place is provided on every farm there would be less loss of the farmer's valuable time, often when it is most needed.

J. H. STARK.

Peterboro Co., Ont.

Shelling Peas

A four-year-old Brooklyn child was watching the cook shelling peas. She was noticed to be deeply interested in the process. Finally she looked up all of a sudden and said naively: "Oh, let me unbutton some of them."

Scars on Horses

There are thousands of horses throughout the country with scars, and consequently thousands of horse owners that would like to rid their animals of these eye sores. It is not generally known that it is possible to remove an old scar tissue and heal with hair on and leave no blemish. W. F. Young, P.D.F., 71 Monmouth St., Springfield, Mass., has issued a small printed slip giving detailed instruction for removing scars with absorbine, that should be in the hands of every horse owner. It is free for the asking—a postal will bring it.



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QUESTIONS AND ANSWERS

Wart on Horse

(1) Will you be kind enough to let me know through your question column where I can register the name of my farm, situated in Saskatchewan.

(2) Also I have a yearling colt that has a red bloody spot on his neck a little below the ear. Some say it is a wart and that it bleeds because the horse rubs it. It is about the size of a half dollar. Apparently it is only on the skin, and has been there nearly all summer. The horse keeps in good health and spirits.—J. D. D., Saltcoats, Sask.

(1) You had better write the Department of Agriculture at Regina regarding the registration of the name of your farm.

(2) The spot on neck is probably a wart, and will give the animal little trouble. If it is in the skin and has a neck, tie a small cord tightly around it and if it does not drop off in two weeks tie another cord. When it sloughs off, apply a little perchloride of antimony to the raw spot to destroy the root. This can be repeated every third day. Usually two applications are enough. If the wart is flat and you cannot tie a string around it, scrape off the surface with a blunt knife, and when it stops bleeding apply a little of the perchloride of antimony with a feather. Scrape the scab off in three days and apply a little more, and so on until it is lower than the surrounding skin. Then use oxide of zinc one ounce, lard two ounces. Apply a little once a day till it is healed.

Swelling on Hoof

About two months ago a colt, in jumping over a wire fence, got a small cut (but apparently pretty deep) on his hoof. The wound is now perfectly healed up, but a hard swelling larger than an egg remains. Will it gradually go away itself, or is there anything I can apply to remove it?—R.S., Nova Scotia.

Rub in a little iodine ointment once a day, and the swelling will gradually disappear.

Sweeny

I have a mare with sweeny on left shoulder.—Subscriber.

Sweeny is the name of a wasted condition of the muscles of the shoulder, and is curable in most, but not all cases. The part should be blistered lightly every two weeks with a cantharides blister (cantharides 1, lard 6), rubbed briskly for ten minutes. While under treatment she can do light work and should not be tied up for days without exercise, for the muscles will not become repaired without use, but on no account should she do heavy pulling.

A Running Sore

I have a five-year-old cow that has a sore just in front of her udder. It is hard and has an offensive odor. Did not notice it until after she had calved. I have been washing it daily with carbolic acid and water, but it does not get any better.—Subscriber.

This should be treated by injecting the carbolic solution into the wound with a syringe. Make the solution of one part carbolic to twenty of water and inject it twice a day. If this fails to heal it up, there is probably a piece of wood, a splinter, or something of the kind in the wound

and you should get a surgeon to examine it for you.

Influenza

Having lost two horses this year from influenza, what kind of medicine would you advise me to give in case any more would take it?—Subscriber.

Influenza is not usually a fatal disease, and, if you have lost two horses with it, you have either had exceptionally hard luck or there must have been some mistake made in looking after the cases. A frequent mistake in dealing with this disease is made in working the horses during the early stages when the disease is detectable by the clinical thermometer. A horse will usually show the earliest signs of the trouble by refusing part of his feed and when this is noticed he should be laid off work at once.

Sore Mouths

Have two May colts that until ten days ago have been running with the herd. They are both failing fast, slobber at the mouth (a fairly thick, slightly yellow froth) and are dull in the eye. The mouth looks sore about the upper jaw, outside.—Subscriber.

Examine carefully the inside of the mouth, tongue and cheeks for sores caused by the penetrating awns of spear grass or foxtail. Nature generally gets rid of these by forming an abscess about them and carrying them off in the pus when it discharges. Sometimes, however, the knife has to be used, and you must use your own judgment. Other conditions in the mouth may cause the same symptoms, such as a crop of vesicles (blisters) on the tongue and gums, constituting a disease known as aphtha, and treated by washing the mouth with a solution of borax. Or you may find trouble with the teeth, though in colts of this age it is unusual for the teeth to go wrong.

Feeding Horses

1. Should horses be watered before feeding? 2. Should they be fed grain or hay first in the morning? 3. How long should a mare go after foaling before being bred?—New Subscriber.

1 and 2. Horses should be fed hay first in the morning, then watered, then lastly fed oats. There are many good reasons for this, which we have not space to discuss at present.

3. The ninth day after foaling is usually the earliest that breeding can be accomplished, and following that the periods recur about every three weeks. If a mare is healthy and strong, there is no objection to breeding her as soon after foaling as possible.

Umbilical Rupture

Foal has what appears to be a rupture at the navel, about the side of an egg. When young he seemed to have difficulty in getting up and I think he brought on the trouble by struggling. It can be shoved back into place, leaving an opening about an inch and a half long, through which it protrudes. J. K. T., Kent Co.

This form of rupture is very common in young foals and is not due to accident or injury, but is the result of arrested development in the non-closure of an opening which exists in every foal during its prenatal existence. If the rupture is small, as in this case, it will generally disappear. If not, it can be cured by simple operation when the cool fall weather comes on. At present it would be unwise to meddle with it.

ABOUT RURAL LAW

In this column will be answered for any paid-up subscriber, free of charge, questions of law. Make your questions brief and to the point. This column is in charge of a competent lawyer, who will, from time to time, publish herein notes on current legal matters of interest to farmers. Address your communications to "Legal Column," The Farming World, Toronto.

Building Line Fence

A and B own adjoining farms. A has twenty-five acres of bush in which he pastures his cattle. B has three acres of bush and ten acres of old field adjoining. B's half of line fence is made of logs and brush—much of it not three feet high. A's cattle got over the fence into B's property. B drove them out with a dog and made them jump over fence into A's wheat on three occasions. A asked B to repair the fence, but B refuses to fix or build his portion of same. What is the proper course for A to take to have B put his share of the fence in proper repair and if A should give B notice in writing what is the form of the notice?—D. F. (Newpark), Ontario.

The proper course for A to take to compel B to put his portion of the line fence in proper repair is to proceed under the provisions of "The Line Fences Act," Revised Statutes of Ontario (1897), Chapter 284. By that Act it is provided that "owners of adjoining lands shall make, keep up and repair a just proportion of the fence which marks the boundary between them, or if there is no fence they shall so make, keep up and repair the same in proportion which is to mark such boundary." The above provision applies to occupied lands, and from your letter we understand that both farms are occupied.

By Section 4 of the said Act it is provided that in case of dispute between owners respecting such proportion the following proceedings shall be adopted: 1. Either owner may notify the other owner or the occupant of the land of the owner so notified that he will, not less than one week from the service of such notice, cause three fence-viewers of the locality to arbitrate in the premises. 2. The owner so notifying shall also notify the fence-viewers not less than one week before their services are required.

3. The notices in both cases shall be in writing, signed by the person notifying, and shall specify the time and place of meeting for the arbitration, and may be served by leaving the same at the place of abode of such owner or occupant.

Melotte

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pant with some grown-up person residing thereat.

4. The owners notified may within the week object to any or all of the fence-viewers notified, and in case of disagreement the judge of the County Court in which the lands are situate shall name the fence-viewers who are to arbitrate.

The Act also makes provision that the fence-viewers shall examine the premises, etc., and shall make their award which shall specify the locality, quantity and description, and the lowest price of the fence it orders to be made, and the time within which the work shall be done and shall state by which of the said parties the costs of the proceedings shall be paid, or in what proportion the same shall be paid.

The Act also contains provisions for the trying of the award and for the manner of enforcing its provisions.

Two of the fence-viewers notified must be fence-viewers of the municipality in which the lands of the owner notified are situate and the third fence-viewer a fence-viewer of the municipality in which the lands of the owner giving the notice are situate. If the lands of both owners are situate in the same municipality then the three fence-viewers shall all be from the same municipality.

The forms of the notices provided in the Act are as follows:

Notice to Opposite Party—

Take notice that Mr.—, Mr.—, and Mr.—, three fence-viewers of this locality, will attend on the day of 190 at the hour of

to view and arbitrate upon the line fence in dispute between our properties, being lots numbers and in the Concession of the Township of in the County of

Dated this day of 190

(Sign here)

Owner of Lot No.

To (Fill in name here.)
Owner of Lot No.

Notice to Fence-viewers—

Take notice that I require you to attend at

on the day of A.D. 190 at o'clock a.m. to view and arbitrate on the line fence between my property and that of Mr.—, being Lots Nos. and in the Concession of the Township of in the County of

Dated this day of 190

(Sign here)

Owner of Lot No.

American Institute Workers

The tenth annual meeting of the American Association of Farmers' Institute workers will be held in Washington, D.C., on November 9-11 next. President Creelman, of the Ontario Agricultural College, Guelph, is the secretary of this association and will gladly give information about the meeting to those asking for it. Among those whose names appear on the program are C. C. James, Deputy Minister of Agriculture, and G. A. Putnam, Supt. of Farmers Institutes, Toronto.

Mrs. Duncan Scott, of Lower North River, recently made 15 lbs. of butter in 5 days from two cows. The butter is first class, for we have tested it. She has been selling it readily for 25c. a pound. She also brings to market regularly every Friday, a quantity of beautiful fresh cream, which she sells for 24c. per qt. Their cows are good milkers, and well fed.

A meat-chopper prepares citron, cocconut, hickory nut kernels and bread and crumbs beautifully.

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Please mention The Farming World when writing Advertisers.

FINANCIAL NEWS AND NOTES

Some Aspects of Our Wealth

At the present time in our Canada prosperity about the Atlantic on the east to the Pacific on the west, and from the international boundary line on the south to the utmost limits of settlement on the north. New enterprises are being floated and old businesses enlarged; new railroads are being projected and built and the old lines extended; the building trades everywhere have more work than they can easily care for, and nearly all the different lines of manufacture and commerce are working to their utmost capacity to keep pace with the constantly increasing demands.

And now at this flood tide of our affairs the questions are sometimes asked: "Will it last? Will there not be a speedy reaction from this rapid progress?" Before answering these queries there are some facts that should first be looked at. Canada is a country of great natural wealth, in minerals, forests, arable lands, and fisheries. The production of all minerals in Canada in 1904 was of the value of \$66,343,000, and this production is but a small portion of the possible production of our mines. Our coal areas are estimated at 97,200 square miles, not including areas known but as yet undeveloped in the far north. To give some idea of the richness of some of these coal fields we note that those of Nova Scotia comprising some 635 square miles, are estimated on the most conservative basis to contain about 7,000,000 tons. There are 15,000 square miles of coal areas in Manitoba, 50,000 square miles on the basis of the Rocky Mountains, and 13,000 square miles on the Pacific Coast. This most valuable of all industrial minerals is thus to be found in prodigious quantities at both east and west and centre of our land, and also at the north when required. The production in 1904 was 7,590,860 tons. In connection with these immense stores of coal it is important to note that iron ores of the best quality are to be found in almost boundless quantities within reach of the coal beds, a source of wealth hardly yet appreciated. The more valuable minerals are also found abundantly in our land, copper, asbestos, lead, gold, silver, and one of the largest nickel mines in the world. This nickel was first discovered some twenty-two years ago when making a cutting for the line of the C. P. R. and recently the rich silver deposits at Cobalt were discovered while making a cutting for the Temiskaming and Northern Ontario Railway, which goes to show further that in this land of teeming mineral wealth the mining so far done is a mere scratching of the ground, a veritable prospecting, in comparison with what the future in this field will reveal.

In our forests are to be found an almost unexpended store of pulp wood, and besides quantities of valuable hard wood, we have almost all the white pine remaining in North America, as it is stated that the pine forests in the U. S. will not last much more than another decade.

The fisheries of Canada are important. They employ about 80,000 men and equipment valued at \$12,000,000. The total value of the catch in 1901 was \$21,100,000, nearly half of which was exported.

Last and greatest, consider the

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great agricultural wealth of Canada. The census of 1901 showed some 63,000,000 acres occupied, but this has since been greatly exceeded and yet is a very small portion of the lands in the west and north available for settlement. Many millions of acres of excellent land await the settler, and the great 100,000 wheat crop of the west of this year will look like a small thing in comparison with the crop that will be produced there when the millions of acres in Manitoba, Saskatchewan and Alberta, now awaiting cultivation, are made to respond to the plow of the settler. In Manitoba, with an area of over forty million acres, the census of 1901 showed less than ten per cent. under cultivation. The new provinces of Alberta and Saskatchewan, with about four and a half million larger land area than Manitoba had yet a much smaller portion occupied or cultivated. One other fact should be taken into account in this brief review, that of our increasing immigration. This is showing rapid growth, the number of declared settlers recorded for the fiscal year 1904, 130,331 being three times larger than in 1899, and it is to be understood that these figures do not nearly represent the actual additions to our population from outside.

The larger population means a larger production from the farms of grains and animal products for which there is a constant demand. The large immigration of today means still larger arrivals in the approaching years of the friends and relatives of those now settled and satisfied in their new land, and whose letters "home" form the best of immigration literature. All of these, unhampered by heavy rents or high priced acres, will speedily become the consumers of the goods from the factories and warehouses of the east. Lumber and other building materials must find a steady market in supplying the homes required by our larger numbers. The iron and steel mills already have orders for all their products for some time ahead in providing for the general demands of the country and rails for its new railroad lines. The laying of these new railroad lines and providing their equipment will provide employment for large numbers of men for years to come, and when completed they will require a small army of men to operate them.

The bugbear of over-production may be an approaching evil elsewhere, but it does not now appear that it will be felt in Canada in the near future.

All of these matters, and others that might be cited, point in the direction of a continued and increased prosperity for Canada for some years ahead, at least.

Count your mercies often, and you will not have time left to count your losses. Take plenty of time to look on the bright side of your prospects and the dark side will not look as attractive enough to be worth your attention.

It's a Handy

is a remark often made about our new Catalogue. You may have it by return mail if you will send a postal request. It will surely please if you have any interest at all in education. Will you use that postal and learn something about the largest and best Business School in Canada?
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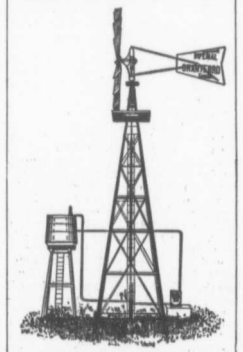
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In the Poultry Yard

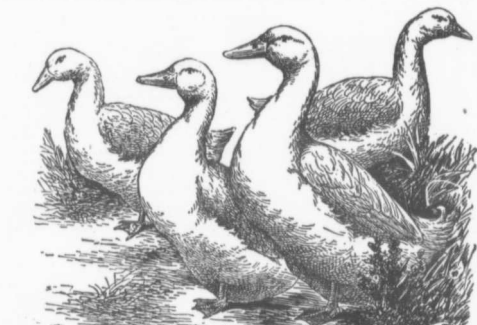
White Pekin Ducks

Of all ducks for farm and practical purposes none stands higher in popular esteem than the White Pekin, valuable for raising on a large scale, and it is the most easily raised of any. It is a very timid bird and should be handled quite carefully. This breed was imported from China in the early seventies, and has steadily grown in popularity since its introduction into this country.

The Pekin duck has a distinct type of its own, and differs from all others in shape and carriage of its body. With some it is credited with having a shape much like an Indian canoe, owing to the full growth of feathers under the rump and the singular turn-

in the tail of the drake are hard and stiff. The thighs are short and large; shanks short and strong, and in color of a reddish orange; toes straight, orange in color. The plumage is downy, and of a faint creamy white throughout. Recently it has been noticed that preference is given in the show room to birds of white plumage. The breeders are selecting as their show birds those that have snow white plumage instead of the creamy white as given in the standard.

The standard weight of the adult drake is 8 pounds; adult duck 7 pounds; young drake 7 pounds, and young duck 6 pounds.—George E. Howard.



ed-up carriage of the tail. The legs are set far back, which causes the bird to walk in an upright position. In size these ducks are very large, some reaching as high as twenty pounds to the pair. The flesh is very delicate and free from grossness, and they are considered among the best of table fowls. They are non-sitters, hardy, easily raised, and the earliest in maturing of any ducks. The method given for raising ducks is based usually on the Pekin as a standard, and the treatment, food, housing, etc., is given as used by the largest and most successful raisers of Pekins. Other ducks are judged for practical qualities by the Pekin.

The cut shows a group of White Pekin ducks. The standard breed Pekin has a long, finely formed head, a bill of medium size, of a deep yellow color, that is perfectly free from any mark or color other than yellow. The color of the bill is very important for exhibition birds, and it is not infrequent that one of the best ducks in a show room is disqualified for having a faint tracing of black in the bill. The eyes are a deep leaden blue color. The neck of the Pekin should be neatly curved; in the drake it should be large and rather long; while that of the duck is of medium length. The back is long and broad; breast is round, full and very prominent. The body is long and deep, the standard gives for adult birds a body approaching the outlines of a parallelogram. The wings are short, carried closely and smoothly against the body.

The birds cannot sustain flight, a two-foot fence being ample to restrain them in an enclosure. The tail is erect, more so than in any other specimen. The curled feathers

Feeding Chicks for Market

Spring chicks usually bring about seven cents per pound live weight, when sold without special preparation. A little feeding will give them an extra market value whether sold alive or dressed, and will pay well for the trouble. There is a good demand this year for a good quality, but dealers do not want the poor scrub. Farmers will do well to put their chicks on the market in good condition; one can make a pound of chicken as cheaply as he can make a pound of pork or beef, and the difference shows in the price. If you have not customers already, ship only to reliable produce merchants. If shipping alive, one must allow for considerable shrinkage.

The most economical method of fattening chickens is in crates. These are usually made 6 feet long, 16 in. wide and 20 in. high inside measurement. Each crate is divided into three compartments which hold four chickens each. The frame is covered with slats placed lengthwise on three

sides—bottom, back and top—and up and down in front. Two inch space between the slats in front enable the chickens to eat from the trough. In warm weather the crates should be placed outdoors in a sheltered position. In unsettled weather erect a rough board shelter to shed the rain. During cold weather the crates should be placed in a warm building. Abundant ventilation is required at all times.

Chickens should be put in the crates when from three to four months old, though suitable market chickens of any age will show gain in the crates. Chickens of medium size, broad, square shape, short straight legs, set well apart, and a good constitution, should be selected for fattening.

A satisfactory ration is one that is palatable and that will produce a white flesh. Oats, finely ground, or with the coarser hulls sifted out, should form the basis of all the grain mixtures. Ground corn fed in excess will result in a yellow flesh of inferior quality; and raw vegetable part a hardness that is not desirable. Ground oats, buckwheat, barley and low grade flour are the most suitable meals. The following are some satisfactory meal mixtures:

1. Ground oats (coarse hulls removed).
2. Siftings from rolled oats (no hulling dust should be included).
3. Two parts ground oats, two parts ground buckwheat, one part ground corn.
4. Equal parts ground oats, ground barley and ground buckwheat.
5. Two parts ground barley, two parts low grade flour, one part wheat bran.

The meal should be mixed to a thin porridge with thick sour skim milk or buttermilk. On the average 10 lbs. of meal require from 15 to 17 lbs. of sour skim milk. A small quantity of salt should be added. When sufficient skim milk or butter milk cannot be obtained for mixing the meal, animal or raw vegetable food should be added to the ration. The chickens should remain in the crates not more than 24 days. Some will fatten more readily than others. These should be picked out a week before finished, and during this last week it is well to feed a little beef tallow, shaved into the trough along with the mash, about 1 lb. tallow per day to 50 or 60 chickens.

Before the chickens are placed in the crates they should be well dusted with sulphur to kill the lice. They should be sulphured again three days before being killed.

Feed them lightly the first week. Give them water twice a day and grit two or three times a week. After first week the chickens will be given twice a day as much food as they will eat. Half an hour after feeding, the trough should be cleaned and turned over. Water and grit should be supplied as in the first week.

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PURE-BRED STOCK

NOTES AND NEWS FROM THE BREEDERS

These columns are set apart exclusively for the use of breeders of pure-bred stock and poultry. Any information as to importations made, the sale and purchase of stock and the condition of herds and flocks that is not in the nature of an advertisement will be welcomed. Our desire is to make this the medium for conveying information as to the transfer of pure-bred animals and the condition of live stock throughout the country. The co-operation of all breeders is earnestly solicited in making this department as useful and as interesting as possible. The Editor reserves the right to eliminate any matter that he may consider better suited to our advertising columns.

Farming World Man on the Wing
Brown Bros., of Lyn, Ont., are a firm of nine years' standing in the Holstein dairy cattle business. Commencing with good foundation stock from Mr. Stevens, of Attica, N.Y., they have by judicious selection built up a grand herd that is achieving fame both in the showings and in actual production, the *sine qua non* of the dairy cow. A favorite strain of breeding which is making a reputation with the firm is the De Kols. Among their leading cows may be mentioned Sara Jewel Hengevelt, who holds the record of 2434 lbs. of butter in seven days at 4 years of age, with a record also of 97.2 lbs. of butter and 2452 lbs. milk in 30 days. Car Bona De Kol will be remembered as winner of sweepstake prize at Toronto two years ago, and is now one of the breeders and producers of the herd. Empress Josephine of Brookside is another with a record of 18 lbs. 9 ozs. butter in 7 days, and this year to be submitted for another test, holds sweepstake for 1903-4 at Ottawa show. Her daughter at 4 years of age attained a record of 17.20 lbs. in 7 days and her grand dam also holds a record of 15 lbs. butter in 7 days at 3 years of age. The present head of the herd is Beryl Wayne of Concordia, sired by Beryl Wayne's Paul De Kol, whose dam has a record of 27.14 lbs. butter in 7 days. His sister Aggie Cornucopia Pauline holds the world's record of 15 lbs. butter in 7 days. There are at the present time a number of his daughters for sale and two young bulls 12 and 13 months of age, together with a number of the young milking cows holding official records. The winning of this herd at the late shows is no criterion of its quality, as it is now in course of preparation for the official tests in October, and it has won the gold medal for the past three years at Ottawa, and all firsts but one at Ottawa a year ago.

A visit to the herd of Jas. Crerar, the well known and popular Short-horn breeder, of Shakespeare, Ontario, affords the visitor a sight of a splendid lot of cattle in fine condition. Headed by his imported bull Scotch Hero, is a herd of cattle that has achieved fame in Ontario's leading showings. The winning of the junior classes at Toronto and London this year was not by any means the winning of the weakest classes, a feat which was to the credit of the well fitted youngsters of the Crerar herd. There are at the present time offered for sale three fine young bulls, among them Scottish Prince, now two years of age, and a winner in his class at Toronto last year. He is a son of imp. Scottish Hero and Gem of Ballechin. He is a massive, smooth and thickest animal, red in color. A fine dark roan December calf, sired by Scottish Hero, dam imp. Bellechin Daisy, promises to make a first class herd leader for some judicious breeder. Another worthy of consideration is a nice red and white son of Scottish Hero and the Mayflower cow Ruby 4th, an October calf of good promise.

Mr. W. Ische, of Sebringville, Ont., has been for some years engaged in

the breeding of Polled Angus cattle and has a herd of some 30 head of this popular breed in his stables. The herd is an exceptionally good one, comprising a number of very choice cows, and among the progeny can be found a number of youngsters that would take some beating in any showing. Among these is a two-year-old bull, Homestead Gordon, sired by Gordon of Tweedhill, dam Favorite of Willow Grove, a cow sired by the World's Fair champion, Evelyn. He is as smooth, thick-fleshed, stylish and active animal as is not often seen, and gives promise of a very encouraging order, as two calves sired by him show a marked superiority. Noble of Willow Grove bred by W. R. Stewart, now two years of age, is a fine bull doing service on the farm. There are several other fine males and a few splendid females for sale at the present time.

Mr. W. Suhring, of Sebringville, Ont., has for years been known as a breeder of Holstein cattle and has this year to offer a number of young dairy bulls and also a few females. Mr. Suhring has always made a strong point of actual production and his herd will bear witness to his success. Those in quest of something practical in dairy cattle will do well to communicate with Mr. Suhring.

Mr. John Bright, of Myrtle, Ont., in this number makes an offering for sale

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The Great French Veterinary Remedy.
A SAFE, SPEEDY & POSITIVE CURE.

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SUPERSEDES ALL CALTERY OR FIRING.

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RO. B. ARMSTRONG, Teeswater P.O. and U. sta., C.P.R.; Midway sta. G.T.R. Short-horn Cattle, Scotch topped, from choice milking strains.

W. HAY, Tara, Ont., Clydesdale Horses, W. Short-horn Cattle, best Scotch strains. Present offering, some choice young bulls, also a number of females.

ROBT. NICHOL, Brussels, Ont., P.O. and sta., G.T.R. A few good Short-horns, also a limited supply of choice Yorkshire breeding stock.

T. GIBSON, Denfield, Ont., sta. G.T.R. Imported and home-bred Scotch Short-horns. Choice breeding stock in Lincoln Sheep.

H. C. GRAHAM, Alisa Craig, Ont., sta. G.T.R. Short-horn Cattle of choice milking strains. Also some fine Collie Pups for sale.

THOS. ARKELL, Teeswater, Ont., sta. C.P.R.; Midway, G.T.R. Choice breeding stock, Oxford Down Sheep.

PETER ARKELL & SONS, Teeswater P.O. and sta., C.P.R.; Midway, G.T.R. Oxford Down Sheep, showing and breeding stock, imported and home-bred.

RO. B. ARMSTRONG, Brewhill Farm, Teeswater P.O. and sta., C.P.R.; Midway, G.T.R. Importer and breeder of Short-horn Cattle and Leicester Sheep. Young breeding stock for sale.

H. M. STOCKTON, Hedgrave P.O., Harrison sta., C.P.R.; Yorkshire Swine, breeding stock from imported sows and boars. Pairs not skin furnished. Write for prices.

J. COWAN, Donagel P.O., Atwood sta., G.T.R. Choice breeding stock in Leicester Sheep and Berkshire Swine.

GRAHAM BROS., Claremont, Ont., P.O. and sta., C.P.R.; Clydesdale and Hackney Stallions. Write for catalogue.

SMITH & RICHARDSON, Columbus, Ont. P.O., Brocklin and Myrtle sta., G.T.R. Clydesdale Horses, Short-horn Cattle, imported stock, always on hand. Long distance phone.

T. H. HASSARD, Millbrook, Ont., P.O. and sta., G.T.R., importer of Clydesdale and Hackney Stallions.

W. M. GARDHOUSE, Weston, Ont. Clyde and Shire Horses, Short-horn Cattle, Leicester Sheep.

J. B. HOGATE, Sarnia, Ont., importer of Shire, Clyde and Hackneys. Write for catalogue.

W. COLQUHOUN, Mitchell, Ont., P.O. and Hackney Horses.

JAMES DOUGLAS, Caladonia, Ont. Short-horn Cattle, Leicester Sheep, Stock for sale.

BROWN BROS., Lyn P.O., Ont. A number of young Holstein stock of both sexes for sale, from prize-winning and advanced registry parents.

W. GALBRAITH, Dutton, Ont., Short-horns of good stock breeding. Will now offer stock bull imp. Prince Imperial, for sale.

J. McFARLANE, Dutton, Ont., Finely bred Shire, Short-horn, Oxford Down Sheep, and Berkshire Swine, Good imp. Herd bull for sale.

W. N. FORD, Dutton, Ont., Short-horn Cattle, Scotch and Scotch-topped. Good individuals. Prices right.

of Clydesdale fillies, imported and home bred, Shorthorn cattle, and Colonsay and Shropshire sheep. The fillies which he has to offer are a remarkably fine lot, including a number bought at the recent auction sale of Mr. Flatt, Hamilton. Among these is the choice and drafty filly Miss French, a nice brown of heavy scale and good quality, sired by the celebrated premium Baron's Pride stallion Acme, the sire of a number of Clydes which have been winning recently in the showings of Scotland. Rosalie is also a nice brown, of good size and the quality kind of feet and legs, a nice trim and flashy mare, sired by Boghall Mac, and with five recorded dams to her credit. Both these fillies were stunted to the Baron's Pride horse Durlar, a son of Baron's Pride, and the equally celebrated dam, Kate of Bomble. He is thus a full brother to the celebrated show mare Empress of Bomble. The Chicago champion, Earl of Bomble, Graham Bros' Yester, Mr. Sorby's Baron Bonny, and other prize winners, are from this lucky cross. Durlar is an H. and A. S. winner, and has never failed to land a premium, being this year selected for the district of Bute. Diana is a filly of extraordinary promise, being both drafty and flashy, splendid at the ground, a fine mover and good on top. She is a get of the good Sir Everard stallion Argosy, and her pedigree shows five recorded dams. Royal Nannie is another good two-year-old, bay in color with stripe on face and near hind foot white. She is a good mover and has a well turned body standing on first class underpinning. She is a get of Royal Champion, he by the famous Lord Lothian. Columbus Jess is a thick, low set and drafty mare, sired by Sir Walter imp, dam by Pride of Perth, g.d. Prince Imperial, g.g.d. by Bolt Buckleugh, g.g.g.d. by the famous Netherby. Imperial Nell is a good thick black three-year-old, sired by The Archer imp, dam by Prince Imperial, a stallion, by the way, which cost \$2,000 in Scotland, her g.d. by Scotland's Glory, and g.g.d. by Comet imp. Mr. Bright has also some other horses and fillies for sale, among them a very typical and stylish carriage mare with foal by the imported Hackney stallion, Royal DREWTON, at foot.

Among the Shorthorns can be found representatives of the best old families of Ontario County, the Crimson Flowers, Miss Ramsdens, Lady Raglans and others, famous as having been bred for generations from the most carefully selected bulls, together with the blood of fresher importations. At the head of the herd is the imported Heatherwick bull Royal Archer, sired by Prince of Archers, a son of the great Scottish Archer. His dam is Rosalie 5th, by Radical, he by the Wanton bull Wide Awake, out of Rosebud 2nd, by Socrates. Rose imp. is a fine red cow, sired by Kinsman, another son of Scottish Archer. On the farm is a fine two-year-old heifer, her oldest calf sired by Mr. Peter White's bull, Nonpareil Archer. Kitty Wells is a fine fleshy red cow of Miss Ramsden breeding, and her bull calf by Royal Archer won first at the show in Ottawa, 1904. She has also a fine two-year-old daughter in Miss Ramsden 12th and a bull calf from the fine imp. bull Roan MacKay, both of which bear solid testimony to the qualities of the Miss Ramsdens. Stamford Lucy 4th is a cow which has added her tribute to the general excellence, being a cow of the famous Marr-Stamford strain, sired by the Marr-Beauty bull Canada, a son of the Barmpton Hero bull Clan Stewart. She has to her credit a pair of twin heifers which have at foot fine calves by Royal Archer. Brookline Queen is a nice cow of Lavinia breeding, a strain noted for their dual purpose qualities and her

SMITH & RICHARDSON

Importers of

High Class Clydesdale Horses

We have just landed a choice and carefully selected lot of grand, big horses, of the splendid quality which Scotland's best blood alone can impart. Come and see them at their stables at

COLUMBUS, ONTARIO
OSHAWA STA., G.T.R. MYRTLE, C.P.R.

"CLYDESDALES" "HACKNEYS"

A few fine Clydesdale and Hackney stallions always on hand. Write to

T. H. HASSARD, Millbrook, Ont.

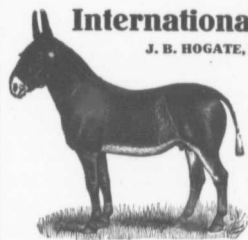
International Importing Barn

J. B. HOGATE, Proprietor, Weston, Ont.

Importer of

Clydesdales, English Shire, Hackney, Percheron Stallions, and Mammoth Cattle and Spanish Jacks, ranging in height from 14½ to 16 hands. Buy imported Jacks and raise big mules.

BARN: Half-mile from C. P. R. and G. T. R. Stations, Weston. Nine miles west of City Hall, Toronto. Take Dundas Street car to Toronto Junction and transfer to Weston Street Railway.



JOHN GARDHOUSE & SONS, Highfield, Ont.

Breeders of Scotch and Scotch-topped Shorthorns, Shire Horses, Lincoln and Leicester Sheep. A good selection of young stock of both sexes for sale.

Farms 3½ miles from Weston Station, G. T. R. and C. P. R. and electric cars from Toronto.

Shire and Clydesdale Horses, Shorthorn Cattle

Choice Stock on hand at all times. Customers never disappointed. Phone

J. M. GARDHOUSE, Weston, Ont.

Farmers' Sons Wanted with knowledge of farm stocks and fair situation, to work in an office, \$60 a month with advancement; steady employment; must be honest and reliable. Branch office of the association are being established in each Province. Apply at once giving full particulars. THE VETERINARY SCIENCE ASSOCIATION, London, Can.

pedigree runs through such sires as Royal Gloster, got by the Clipper bull Conqueror, and her dam, Lena, by Gloster King. Queen of York is of a good roomy and useful kind, now nine years of age and has at foot a fine 9 months' filly calf, from Royal Archer. Jane of Glen Dhu 3rd is a nice red three years of the old English Beauty strain, and sired by Valiant, he being by the Kinellar Rosalind bull Kipling, a half brother to the immortal Barmpton Hero. In sheep Mr. Bright has to offer a ewe of about 30 lambs from his flock, which is bred along the lines of the best flocks in Canada. This includes a number of fine ram lambs. A large flock of especially choice Shropshires, consisting of about 200 ewes and ewe lambs, the flock headed by imp. Historian, bred by J. Harding, and the pick of R. Miller's last year's shipment, a son of Fieble's Fortune, by M. F. Fine Juvenile. There are also about 60 shearing and 40 head of two-shear ewes and about 40 ram lambs, all the ram lambs and shearing ewes being for sale.

Clydesdales

I have just landed a carefully selected shipment of Clydesdale Stallions and Fillies. They are of the right kind, and will be sold at prices that will interest you. Write to

**JOHN BOAG & SON,
 Ravenshoe P.O., Ont.**

THOS. MERCER, Box 33, Markdale, Ont. Breeder and Importer of Clydesdale Horses, Shorthorn Cattle and Yorkshire Pigs. Car lots for western trade a specialty. Driving Horses handled if ordered.

CLYDESDALES?

I have just landed a consignment of Clydesdale stallions which will be offered at a very low price considering the kind and quality. If you are wanting a good one, write or call at my stables at **NEWICK, P.O.**

GEO. G. STEWART, Importer and Breeder.

Live Stock Auctioneers

**T. E. ROBSON,
 Live Stock Auctioneer,
 ILBERTON, ONT.**

**GEO. JACKSON,
 Auctioneer, PORT PERRY, ONT.
 Live Stock a Specialty.**

Yorkshire Sales

The Ontario Department of Agriculture will hold sales of purebred Yorkshire swine at Theford, on Oct. 19th and at Bothwell on Oct. 21st. These sales are being held for the purpose of distributing good bacon stock among the farmers at these points.

O. A. C. Live Stock Sale

Parties desiring to buy purebred cattle, sheep and swine should attend the annual sale of the Ontario Agricultural College to be held at the College at Guelph on Oct. 25, at 1 p.m. sharp. The breeds to be offered are Shorthorn, Aberdeen-Angus and Galloway cattle, Shropshire, Leicester and Oxford sheep, and large Yorkshire and Berkshire swine.

To Import Horses

Mr. Dagald Ross, Streetsville, Ont., well known as a breeder of Clydesdale horses, Shorthorn cattle and Yorkshire swine, sailed for the old land on Oct. 7th, and will import a consignment of Clydesdale, Shire and Hackney fillies and stallions, which he expects to land about the middle of November.

More Clydesdales and Hackneys
Mr. T. H. Hassard, Millbrook, Ont., arrived home last week from Scotland with an importation of fifteen fine Clydesdales and three choice Hackneys.

The Dominion Fair

The Dominion Fair, held at New Westminster, B.C., the first week of October, was a great success. Reports seem to show that it was the biggest thing ever held west of Winnipeg. Eastern live stock and manufacturers were largely represented. A full report, specially prepared by a Farming World representative on the spot will appear in our next issue.

Gold Medal Winners at Ottawa

The following are the winners of gold medals at the Canada Central Exhibition, held at Ottawa in September:—

For the best thoroughbred stallion, an age—Peter Gorman, Ottawa.

For the best pair of matched carriage horses, in harness—George Pepper, Toronto.

For the best single carriage horse, in harness—George Pepper, Toronto.

For the best pair of matched horses, highsteppers, exhibited—George Pepper, Toronto.

For the best standard-bred stallion—R. W. Stewart, Aylmer, Que.

For the best pair of roadsters, style, speed and value considered—Dr. Boucher, Ottawa.

For the best single roadster (gelding or mare), in harness—E. Chevrer, Ottawa.

For the best Hackney stallion, any age—G. Hale, Lachute.

For the best saddle horse (gelding or mare) exhibited—G. Pepper, Toronto.

For the best team of general purpose horses (geldings or mares) in harness—Gorman Bros., Hurdman's Bridge.

For the best team of agricultural horses (geldings or mares), any age—J. Callander, North Gore.

For the best team of general purpose horses exhibited from the county of Russell—Gorman Bros., Hurdman's Bridge.

For the best purebred heavy draught stallion, any age—Smith & Richardson, Columbus, Ont.

Important Auction Sale Of Cattle, Sheep and Swine

Under instruction from the Minister of Agriculture
there will be sold at the

**Ontario Agricultural College, Guelph, Ontario,
on October 25th, 1905**

A number of **Shorthorn, Aberdeen Angus, and Galloway Cattle;**
Shropshire, Leicester, and Oxford Sheep;
Large Yorkshire and Berkshire Swine.

The sale will commence at 1 o'clock, and will be held in the comfortable
judging pavilion at the college farm.

Bids by mail will receive special consideration.

For catalogues, apply to G. E. Day, Professor of Animal Husbandry.

Thos. Ingram, Auctioneer.

G. C. Creelman, President.

NOTICE

We have been greatly reducing our herds, but still have a few
good Jerseys and a number of Guernseys to dispose of. Breeders
will find it to their advantage to correspond with us.

DENTONIA PARK FARM, Coleman, P.O., Ont.

CHAS. RANKIN, Wyebridge, Ont., importer
and breeder of **Shorthorn**
Cattle and Oxford Down Sheep. (Herd
headed by Pride of Scotland (imp.).) **For sale**
—Females and bulls of all ages, from noted
Scotch families.

HOLLYMOUNT STOCK FARM
MITCHELL, - ONT.

Pure-bred Shorthorns of best imported
strains. Present offering—A grand 12 mos.
bull calf from imported sire and dam.

Address:

W. J. THOMPSON, Mitchell, Ont.

Shorthorn, Clydesdale and Shropshire for Sale.
Bulls and heifers of approved breeding and
quality. Clyde fillies, imported and home bred.
Shropshire and ram lambs, imported. Mansell.
Prices Moderate. **G. A. BRODIE,**
Bethesda, Ont., Mountville Sta.

Ashland Stock Farm

Pure Scotch-Topped Shorthorns. Cows bred
from imported stock of grand Scotch breeding.
Young stock of both sexes for sale.

J. S. BARRELL, Jackson, P.O., Ont.

Tara Station, G.T.R.

ONTARIO VETERINARY COLLEGE, Ltd.

Most successful Vet. Institution in America.
Prof. A. SMITH, F.R.C.V.S., Principal,
Temperance St., Toronto, Can.

DAVID McCRAE, Janeville, Guelph, Canada,
importer and breeder of Galloway Cattle,
Clydesdale Horses and Cotswold Sheep. Choice
animals for sale.

For the best Shire stallion, any
age—Anderson & Stewart, Moose
Creek.

For the best Dominion-bred heavy
draught stallion—John Wallace, North
Gower.

For the best Canadian stallion, any
age—C. E. Standish, East Hatley,
Que.

For the best stallion exhibited in
Class 17, Percherons, Belgians and
Normans—Andrew Spratt, Johnson's
Creek, Que.

For the best herd of Shorthorn
cattle, over 1 year—Hon. P. White,
Pembroke.

MAPLE LODGE STOCK FARM

Scotch Shorthorns, Choice Milking
Strains, Prize Winning Leicester,
Young Stock for sale—imported
and home bred.

A. W. SMITH, Maple Lodge, P.O., Ont.

Pine Grove Stock Farm

Breeders of High Class Scotch Shorthorns,
Choice Shropshire Sheep, Clydesdale
and Hackney Horses.

Second Annual Sale of Shorthorns at farm,
Wednesday, January 10th.

Herd Catalogue on application. Address
G. W. WILSON, W. C. EDWARDS & CO., Limited
Superintendant, Proprietors,
Rockland, Ont., Canada.

John Bright,

MYRTLE, - ONT.

Choice Breeding Stock in

Shropshire and Cotswold Sheep,

Shorthorn Cattle and Clydesdale Horses

Some fine flock headers in Sheep.
Choice young breeding stock in Short-
horns, and some fine imported and home-
bred Fillies.

Myrtle Station G.T.R. and C.P.R.

Long Distance Telephone.

NOTE

Our Special Offer
When Sending
Your Renewal.

THE
Farming World
TORONTO

For the best herd of Galloway cattle, over one year—Col. McCrae, Guelph.

For the best herd of Hereford cattle over one year—W. H. Hunter & Son, Orangeville, Ont.

For the best herd of Polled Angus cattle, over one year—A. G. Stafford, Compton, Que.

For the best herd of Holstein cattle, over one year—G. Rice, Tillsonburg, Ont.

For the best herd of Jersey cattle, over one year—E. H. Bull & Son, Brampton, Ont.

For the best herd of Guernsey cattle, over one year—E. P. Ball, Rock Island, Que.

For the best herd of Ayrshire cattle, over one year—R. Hunter & Son, Maxville.

For the best herd of Ayrshire cattle, under two years, bred and owned by exhibitor—R. Hunter & Son, Maxville.

For the best herd of French-Canadian cattle (Race, Canadienne) over one year—L. P. Sylvestre, St. Therese d'Acton, Que.

For the exhibitor scoring the greatest number of points on agricultural products and vegetables—George Canton, Avonmore, Ont.

For the exhibitor scoring the greatest number of points in the cut flower class—Mrs. Edgar Johnson, Lennoxville.

For the exhibitor from the Ottawa Valley scoring the greatest number of points on fruit—W. Trick, Billing's Bridge.

For the best two factory cheese exhibited—Arthur Conley, Stanley's Corners.

For the best lot of creamery butter exhibited—W. H. Stewart, Frontier, Que.

For the best lot of dairy butter exhibited—W. Thorne, Frontier, Que.

Markham Fair

The 53rd annual Markham exhibition was beyond all doubt the largest and most successful held in that busy town. The entry list was twenty-five per cent. ahead of last year in the horse classes. In every other department all previous records were past. Every stall was occupied and temporary stalls had to be provided for many animals. The high quality of the animals shown is worthy of note. Great credit is due Secretary Milne for his work in managing the show. Though there were big crowds to handle, everything ran smoothly.

The principal exhibitors of live stock were: Horses—Graham Bros., Claremont; John W. Cowie, Markham; Geo. Davidson & Son, Cherrywood; Jas. Maxwell, Locust Hill; H. J. Spenceley, Box Grove; Alex. Douglas, Markham; Cattle—J. & W. Russell, Richmond Hill; D. H. Russell, Stouffville; Miss Katy Miller, J. J. Baldson, Markham; W. H. Tram, Cedar Grove; J. A. McLeod, Plainville (who exhibited a large herd of Polled-Angus cattle). Sheep—John Scott, Athol; W. Thompson, White Rose; W. J. Devitt, Greenwood; M. Allyn, Newcastle; W. D. Dyer, Columbus; J. W. Widdfield, Uxbridge; Swine—Thos. Teasdale, Concord; L. E. Morgan, Milliken; John J. Baldwin, Colwell Bros., Newcastle.

Big Ayrshire Sale

Owing to the impaired health of the senior member of the firm, Messrs. R. Hunter & Sons, Maxville, Ont., have decided to offer for unserved sale their entire herd of prize winning Ayrshires. The sale will take place at their farm at Maxville on November 16th, and will

furnish a splendid opportunity to secure the choicest kind of Ayrshire blood at the market price.

This herd was founded in 1889 by selections from the best herds in the country at that time. Since 1900 three importations have been made from Scotland, the largest being in 1903, when 20 head were brought over.

The greatest care has been exercised and no expense has been spared in selecting animals for this herd, whether in Scotland or at home, the aim being to secure only those bred from the heaviest milking strains, with good big teats and strong constitutions. Particular care was taken to secure cows testing high in butter fat, for the large cream trade carried on by the firm in Montreal.

That type as well as performance were looked after in founding this herd is shown by its splendid show record. The show record of this herd during the past three years has, perhaps, not been equalled by any other Canadian herd. With two exceptions it won every first prize competed for at the Canadian National Exhibition this year, including both the aged and young herds and all the championships and medals offered. Included in the sale is the champion bull at Toronto and Ottawa this year, Lessensock King of Beauty, and the champion cow for two years in succession at Toronto and Ottawa, Garclough Bloomer 2nd. This bull is the present herd bull, and is, perhaps, without an equal any-

where at the present time. All the sires that have been used have been the best obtainable.

The herd numbers at the present time 50 head, of which 38 are imported or from imported sires or dams, and is admitted to be one of the best on the continent. It will be found to contain several animals that are, perhaps, not excelled, if equalled, in the breed anywhere, Scotland not excepted, and altogether is one of the best herds that has ever been offered at public auction in this country. Fuller details will appear next issue.

Live Stock at Portland Fair

The live stock show at the Centennial Lewis and Clark Exposition, Portland, Oregon, was considered very satisfactory by the people on the Coast, and did very much to pile up the surplus the promoters are sure to have at the close, the attendance being very much greater than at any other period of the fair, and they quite evidently came to see the live stock, too, for great crowds were always looking at them, and they were, as is usual at these large expositions, given quarters away off in the most out-of-the-way part of the grounds, and it rained almost incessantly; but the people on the coast seem to be used to rain.

The exhibit of cattle and sheep in most classes was indeed creditable, and

(Continued on Page 799.)

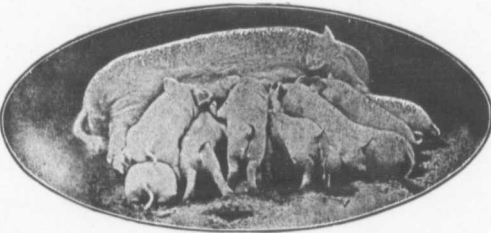
Oak Lodge Yorkshires

A large herd of choice Pigs of all ages on hand, quality guaranteed. No other herd has such a record in the show ring, covering several years. Oak Lodge type of hogs are profitable breeders and ideal bacon hogs. Correspondence solicited.

J. E. BRETHOUR, BURFORD, ONT.

CHAMPION BERKSHIRE HERD OF CANADA. Winner of Championship at leading shows for several years. Splendid importations of new blood, the championship winners of England. Young pigs, imported and home-bred for sale. Pens at Islington, near Toronto. **W. H. DURHAM**, Box 1052, Toronto.

WARM MEALS AT ALL HOURS.



The next best feed to Carnefac.

If you are not already feeding **CARNEFAC**, we ask you to be guided by the advice of all the best feeders in Canada. It pays them to use it. It will pay you. If your dealer cannot supply you, a card to our office will bring you a pail on trial.

The Carnefac Stock Food Co., Toronto, Ont.

Market Review and Forecast

The Trend of Markets—Supply and Demand—The Outlook

Toronto, Oct. 14th, 1905.

Trade is reported good in most wholesale lines, and the conditions of general trade throughout the Dominion are of the most encouraging nature. The money market continues firm, with an upward tendency in the rates.

WHEAT

The wheat situation remains about the same. Quotations here rule steady at from 74c to 75c for red, with No. 2 white $\frac{1}{2}$ c higher at outside points. Goose and spring are quoted at 69c to 70c. At writing Manitoba wheat is considerably stronger on good export demand. No. 1 Northern being especially stronger. Manitoba wheat is grading high this year.

COARSE GRAINS

The new oat crop seems to be coming out very slowly. The farmers are busy with fall work and are not marketing heavily. The English oat market is firm, with an upward trend in prices, which helps to keep up values on this side. The market both here and at Montreal is stronger and prices firm. Here quotations rule at 32c to 32 $\frac{1}{2}$ c at outside points. About 35c is the ruling figure at Montreal. Peas are firmer at about 70c. Barley rules steady at 44c to 50c outside. Corn prices here are largely nominal, with little or no business done.

HAY AND STRAW

The English hay market has been disappointing of late, owing to liberal receipts from this side, but has improved the past few days. There is a good local demand, and consequently supplies are not accumulating. At Montreal dealers have been active, but are finding it difficult to get ocean space to accommodate shipments. There is a weakness in the market for clover and second grades at Montreal, owing to large supplies. No. 1 is in fair demand here at \$8 and No. 2 is dull at \$6 for car lots on track.

The baled straw market is quiet at \$6 per ton for car lots on track Toronto.

POTATOES AND BEANS

There is a good local demand here for potatoes at 70c to 75c per bag for car lots. Some New Brunswick potatoes have come into the city and bring higher prices than the Ontario grown. They are said to be better keepers.

Supplies of new beans are coming to market very slowly, and quotations are rather unstable, as dealers do not know what price to pay. Montreal quotations range from \$1.20 to \$1.60 per bushel.

EGGS AND POULTRY

Egg exports are increasing, but the English demand is not so keen, owing to large Russian receipts. The Montreal market is a little easier, with selects selling for 22c and candled and straight at 18c to 19 $\frac{1}{2}$ c to the trade. Receipts have fallen off somewhat here and the market is firm at 18c to 19c, with some dealers asking 20c for choice cases.

While the offerings of poultry are large, there are complaints as to the quality. The market here is on the quiet side at the following quotations: Fat hens, 6 to 7c; thin, 5 to 6c; chickens, 8 to 9c; thin, 6 to 7c; ducks, 7 to 8c; turkeys, 13c, all live weight.

FRUIT

There has been much activity in the apple market lately, and the grower with choice, clean winter fruit can get about

what he likes. Quotations are rather unstable. We have heard of as high as \$1.50 to \$2.00 per bbl. for choice winter fruit picked. Exporters have been making good money this season. As high as \$5.00 per bbl. is reported for fall fruit XX in the British market. The outlook for big prices is very bright.

DAIRY PRODUCTS

The cheese market keeps up to the top notch though the make keeps up. Should the weather keep favorable, there will likely be a big make of November cheese. With prices as high as they are now, there is every inducement to keep the factories open. During the past few days a little weakness is reported at some of the country markets, though quotations are about the same. At Montreal Quebecs are quoted at 11 $\frac{1}{2}$ to 11 $\frac{3}{4}$ c and Ontarios at 11 $\frac{1}{2}$ to 11 $\frac{3}{4}$ c. At the country markets about 11 cents is the ruling figure, with some offers below 11c reported.

The butter market is dull and business is quiet, especially for export. Finest creamery is quoted at Montreal at 23 $\frac{1}{2}$ to 23c, and undergrades at 22 to 22 $\frac{1}{2}$ c per lb. Receipts are large here excepting choice dairy. Prices rule steady at 22 to 23c for creamery prints, and 21 to 21 $\frac{1}{2}$ c for solids. Choice dairy rolls bring 19 to 20c per lb.

LIVE STOCK

Receipts of live stock at Toronto market the past week have not been as heavy as usual. While a firmer tone prevailed in the market, no very definite advance was recorded, though good butchers' cattle sold some higher. Trade in export cattle at the city market does not amount to much, as the bulk of that trade goes through the Junction market. Very few first class exporters, therefore, are offering. Owing to depression in the British market, and the difficulty of securing space on vessels, there was little done. Quite a few lots of inferior stuff were on hand, but are not wanted. The highest quotations for those offering was \$4.35, though \$4.75 per cwt. would have been paid for choice animals. Good butchers' cattle are in demand, and a firmer feeling prevails, but here also the quality was far from being what it ought to be. Choice butchers' sell at \$4.00 to \$4.25, good at \$3.80 to \$4.00, medium at \$3.60 to \$3.75, and other quality at \$2.75 to \$3.00 per cwt. There is a brisk trade for good stockers and feeders: Best feeders, 1000 to 1150 lbs. each, at \$3.70 to \$4; medium feeders, 1000 to 1150 lbs., at \$3.40 to \$3.70; best feeders, 850 to 1000 lbs., at \$3.25 to \$3.75; medium feeders, 850 to 1000 lbs., at \$3 to \$3.40; best yearlings (steers), 600 to 750 lbs., at \$3 to \$3.25; good stock heifers, 700 to 1000 lbs., at \$3.35 to \$3.75; medium stock heifers, 700 to 850 lbs., at \$2.60 to \$2.85; common stock steers, 700 to 850 lbs., at \$2.40 to \$2.70; common light stockers, 400 to 600 lbs., at \$2 to \$2.25.



Capital Authorized,
\$2,000,000.00.

Head Office, Toronto, Ont.

EDWARD GURNEY,
PRESIDENT.

Special Attention given to Accounts of Cheese Factories, Drovers and Grain Dealers, and all out-of-town accounts.

Farmers' Notes Discounted, Farmers' Sales Notes Collected and Advances Made against their security.

Municipal and School Section Accounts received on favorable terms.

SAVINGS BANK DEPARTMENT Deposits of Twenty Cents and upwards received, interest at three per cent. per annum, **COMPOUNDED FOUR TIMES A YEAR**, without presentation of passbook. No delay in the withdrawal of any portion or the whole of the deposit.

G. de G. O'GRADY, General Manager.

The Canadian Produce Markets at a Glance

The highest quotations of prevailing prices for standard grades of farm produce in the leading markets on the dates named. Poorer stuff lower.

Date	Toronto		Montreal		St. John		Halifax		Winnipeg	
	14	14	14	14	12	11	11	11	11	11
Wheat, per bushel.....	\$ 0 75	\$ 0 82	\$	\$	\$ 0 78 $\frac{1}{4}$					
Oats, per bushel.....	33	36	43	44	29					
Barley, per bushel.....	50	46	55	56	36					
Peas, per bushel.....	70	75	77	78	66					
Corn, per bushel.....	62	63	65	66	66					
Flour, per barrel.....	3 40	4 80	5 50	5 50	3 40					
Bran, per ton.....	14 00	15 10	19 00	19 00	13 00					
Shorts, per ton.....	18 00	20 50	20 00	20 00	15 00					
Potatoes, per bag.....	75	65	60	60	60					
Beans, per bushel.....	1 80	1 60	1 80	1 00	1 75					
Hay, per ton.....	8 00	8 50	11 00	12 00	6 00					
Straw, per ton.....	6 00	5 50	9 00	9 50	5 00					
Eggs, per dozen.....	20	22	20	21	21					
Chickens, per pound, d.w.....	9	10	per 1 00	10	per 1 12					
Ducks, per pound, d.w.....	8	10	per 1 00	10	per 1 12					
Turkeys, per pound, d.w.....	13	15	18	18	18					
Geese, per pound, d.w.....	7	9	16	16	11					
Apples, per barrel.....	2 50	3 00	3 50	3 50	4 00					
Cheese, per pound, d.w.....	12 $\frac{1}{2}$	11 $\frac{1}{2}$	12	12	13					
Butter, creamery, per pound.....	23	23	24	24	22					
Butter, dairy, per pound.....	20	20	20	20	16					
Cattle, per cwt.....	4 15	4 75	5 50	5 50	3 25					
Sheep, per cwt.....	4 25	4 75	5 50	5 50	4 50					
Hogs, per cwt.....	6 25	6 75	7 00	7 00	7 00					
Veal Calves, per cwt.....	6 00	5 60	5 00	6 00					

number of different fruits. In this collection are tomatoes closely resembling pears, plums, currants, cherries, peaches, apples, etc., showing how closely the tomato is related to the fruit families of the country.

The fruit exhibit was smaller than that of last year. Some beautiful varieties of plums were shown. Mr. Robertson, of Inkerman Farm, had a splendid exhibit, and Mr. E. G. Love was a contributor to the exhibit to the extent of 54 different varieties, including apples, plums and pears, all grown in his own orchard. Surmounting the trophy exhibit there was a fine cluster of strawberries picked on the previous day from the fields of Mr. F. Boyer, of lot 48. A plate of seedling plums, produced from the stone of a California plum, was shown by Mr. Wright.—A.R.

Live Stock at Portland Fair

(Continued from Page 796.)

although several of the best herds and flocks came from the East, the home exhibit was very creditable. To be sure many of them came here from Ontario and some from the Western States, but they are able to make the stock fatter than I have ever seen them in the Corn States or Canada. Several of the very fattest shown were fed in Oregon, Washington and California.

The horse exhibit was perhaps the most disappointing. Not a great many Clydesdales were shown, several of the best of them coming in from British Columbia, shown by Mr. Vasey, Ladner, B.C. Wilkinson Bros., Chiliwack, B.C., had a half-dozen Standardbred horses on exhibition and succeeded in taking home several of the premiums. Mr. Vasey won the championship with his Clyde stallion.

The exhibit of sheep was exceedingly good, and since the Coast States are particularly well suited for the production of long wools, these classes were particularly well filled. Three Ontario flocks were represented. J. H. and E. Patrick, Iderton, Ont., had a splendid lot of Lincolns from their excellent flock, and succeeded in getting all the firsts except one on ram lamb, and nearly all the seconds, as well as champion and flock prizes.

The champion "Maple Lodge" flock of Leicesters, shown by A. W. Smith, Maple Lodge, Ont., won all before them, taking every first prize, all champion and flock prizes, and were greatly admired, especially the Louis champion ram, "Sanford." R. H. Harding, Thornedale, had a nice exhibit of Dorsets from his flock and won a good share of premiums from strong competition. J. H. and J. T. Wilkinson, Chiliwack, B.C., had a handsome lot of his Southdowns present, and as usual won out at the top in premiums. His flock showed beautiful quality and symmetry. Shannon Bros., Cloverdale, B.C., and H. M. Vasey, Ladner, B.C., practically divided the Oxford list of premiums between them, leaving scarcely any for their competitors, and each showed a flock of good quality, Shannon's being largely of the shorter legged, thick type, while Mr. Vasey's had perhaps more scale.

Altogether the Canadian exhibit in the sheep was as usual very creditable for Canada, practically taking all the cream of the list in the classes in which they competed.—J. G. K.

Tom—Are you deaf to my pleading?

Eva—I am.

Tom—But what if I were to offer you a diamond ring.

Eva—Oh, I am not stone deaf.—Chicago News.

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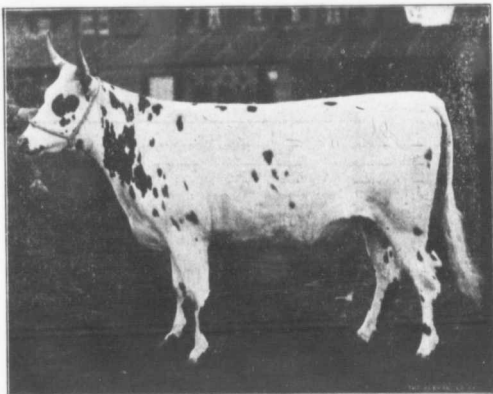
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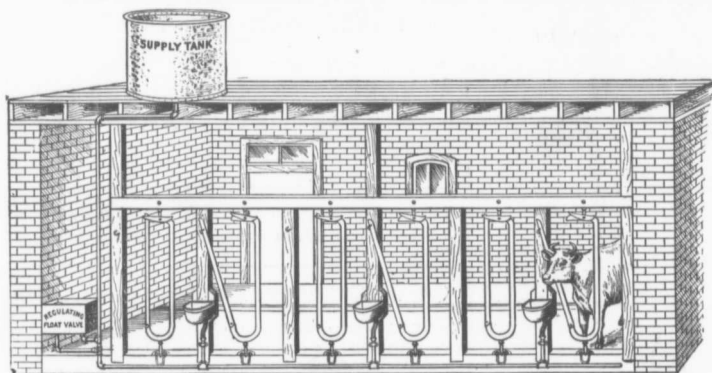


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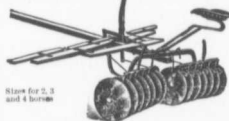
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