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Farmers and Stockmen

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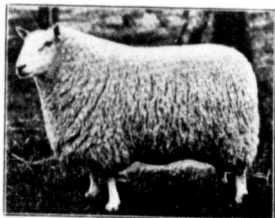
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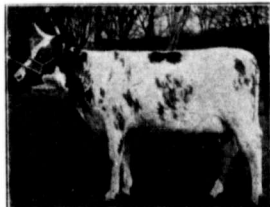
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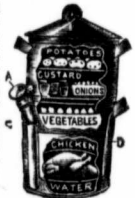
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The Farming World

For Farmers and Stockmen

VOL. XVIII.

MARCH 5th, 1901.

No. 28

The First Provincial Sale

THE great event of the week in the agricultural line was the Provincial Auction sale at Guelph, a report of which appears elsewhere in this issue. It certainly marks an important era in the history of the live stock industry in Canada, and should prove an important factor in advertising Canadian pure bred stock abroad, and in enlarging the market for good stock at home. The results of the sale may not have come up to the expectations of its most sanguine promoters, but considering the large number of animals offered, and the rather inferior quality of many of them, the sale throughout must be considered a success. The attendance was large, the hotels being taxed to their utmost to provide accommodation for the visitors from a distance, many of whom were there from the United States, British Columbia, Nova Scotia, and the intervening provinces and territories. The new winter fair building was utilized for the sale and served the purpose very well, though the seating accommodation provided did not begin to meet the requirements of the crowd around the sale ring, thus making it more difficult for the auctioneers to be heard and the animals to be seen.

The sale was largely a Shorthorn one, over 125 animals of this breed being offered. The demand for this class of stock was good and high quality brought high prices. Of the 100 bulls sold fully seventy-five per cent. of them were only of medium quality, while some few should never have been brought into the ring. A great many of the animals, especially the bulls, though of fair quality and breeding, were not in condition. A little better fitting would have added from 25 to 50 per cent. to their value. In one or two instances animals with no better breeding or individuality, but in excellent shape, brought more than their market value. The younger or smaller breeder, for he is the one chiefly lacking in this particular, must learn to feed and fit his animals better if he wishes to reach the top price at a big auction sale, and many of them we trust carried home a most valuable lesson in this regard. While breeding and individuality count the animal itself must be in a condition to show off these to

the best advantage. This was most strikingly demonstrated throughout the sale, and was an object lesson which those at the sale will never forget.

The highest priced animal was Lord Roberts, bred and contributed by Alex. Moore, Greenwood, Ont. He is a roan, calved March 18th, 1900, and sold to N. Dymont, Barrie, Ont., for the handsome figure of \$315. He was a fine specimen of the breed and was well brought out. While his selling at such a high price proves most conclusively that quality counts. Had he been bred by some one of our larger breeders who have a wide reputation for good stock, we might have looked for a pretty good figure, but the fact that Mr. Moore is one of the smaller breeders, shows that it is within the reach of every breeder, great or small, to obtain a good price when he has the right quality to dispose of. The average price obtained for the bulls sold was within a few cents of \$75, and for the females \$95 each, which are very good indeed for a public sale of this kind.

These prices would have been materially increased by leaving a number of the inferior animals at home, which, however, might have proven a hardship to the owners. We learn that there are a great many of this medium class of stock in the country awaiting a market, whose owners expect that at a sale conducted under Government auspices, an opportunity shall be given to offer them for sale. Then it must be remembered that this class of bulls are in demand on the Western ranges, the owners of which will not pay high prices, from \$50 to \$75 each being their limit. As special efforts had been made to induce purchasers from the West, or their representatives, to attend the sale, it would not have been fair to these parties to prevent this medium class of bulls from being offered. As it was, a great many were sold for ranching purposes, and as they will be taken out of the province there will be an opportunity for better quality to take their place. Then the average farmer does not care to pay a very high price for a bull, though we think it would pay him to do so if he cannot get good quality otherwise. From \$75 to \$100 is his limit, and there were a number of good, useful bulls sold within these figures to farmers that will do good service on grade cows.

The Shorthorn cows offered were, on the

whole, of very fair quality, with a few choice animals which brought good prices. The highest priced female was a beautiful, well set up heifer of fine quality, though the breeding was not as good as some others, which sold for \$200 to A. M. Todd, Kalamazoo, Mich. She was only 15 months old and was contributed by Geo. D. Fletcher, Binkham, Ont. Another fine roan show heifer, contributed by Arthur Johnston, Greenwood, Ont., sold to the same buyer for \$177.

The dairy and other classes of beef breeds and the swine were sold on the second day and did not bring as high prices. Quite a number of the cattle were withdrawn as there did not appear to be a demand for this class of stock. We think a mistake was made in not having the dairy breeds and swine sold concurrently with the beef breeds in another part of the building. Quite a number came to the sale the first day, with the expectation that these would be sold with the others, and as they had not made provision to remain over night went home disappointed. It would have been fairer to these and to the owners to have had this class of stock sold the first day. If the auctioneers employed could not compass the work more should have been engaged. Three Hereford bulls sold at good values considering that they were only registered in the Canadian Herd Book, averaging over \$100 each. The boars sold very cheaply, not bringing butchers' prices, though breeding sows pulled up very well.

Looking at the sale, both from the breeders' and farmers' standpoint, there are many things which can be said in its favor. Some few of the larger breeders looked forward to this sale almost with fear and trembling lest the results should establish a precedent for lower values than they have been accustomed to get during the past few years. But such fears were proven to be utterly groundless. True, many low prices were obtained, but where good quality was offered top prices were reached and the bidding was most keen, showing that good quality is wanted. On the other hand, the sale furnished an opportunity to parties of limited means to secure good serviceable animals at reasonable prices, and had the effect, we believe, of distributing a goodly number of these among farmers for use on grade stock.

A most valuable lesson to be learned from the sale is that quality counts. It was really surprising to an onlooker to notice how quickly the quality of the animal in the ring was shown in the bidding and the temperament of the crowd. There was absolutely no use in trying to palm off any animal on the crowd for anything other than what it really was. This must have proven an eye-opener to many who were looking for first-class prices for second-class animals. Many never knew the real quality of their animals till they came to the sale and were able to measure them up along side of fine quality. Thus the lesson in this particular was most wholesome indeed. A second point which our breeders should pay attention to is that each and every animal must be properly fitted. This does not mean that animals should be up to show condition, but that they should be in good, healthy, thrifty condition, and not looking any better than "scrub" stock, as many of them did, when brought into the ring. The seller of pure bred stock must learn to tickle the fancy of the buyer by having his stock in the best of condition. With good qual-

ity in the animal itself, and fitted up to show off this quality to the best advantage, the first provincial auction sale has certainly demonstrated that the breeder has nothing to fear in selling his animals by public sale. Quality counts.

Tuberculin Test Removed

Hon. Sydney Fisher, Minister of Agriculture at Ottawa, visited Washington last week, where he interviewed the authorities of the United States Department of Agriculture in regard to the withdrawal of the tuberculin test from Canadian cattle exported to the south of the line. Though we are not in a position to speak definitely on the subject, we understand that Mr. Fisher's mission has proved successful, and that while cattle entering the United States or Canada from Europe will continue to be tested, pure bred stocks from Canada will be allowed to enter the United States without interference. Should this turn out to be the fact, as there is good reason to believe it will, a new impetus will be given to the cattle industry of this country. The United States is one of our very best markets for cattle, while Canada has of late become a favorite purchasing ground for Americans desiring to procure good stock. Thus the removal of the testing regulations will be mutually beneficial.

Prices for Canadian Cattle in England

The London Live Stock Journal gives the following as the average top rates obtained per 8 lbs. (sinking the oil) for the best British and foreign cattle, the former being sold at Islington and the latter at Deptford, we have counted the British shilling as 24c.:

MONTHS.	BRITISH.	U.S.	CANADA.
January	\$1.16	\$1.08	\$.88
February	1.16	1.04	.90
March	1.12	1.00	—
April	1.10	.98	.90
May	1.14	1.08	1.04
June	1.16	1.10	1.04
July	1.20	1.04	1.00
August	1.18	1.04	.92
September	1.18	1.02	.96
October	1.16	1.00	.90
November	1.18	1.00	.88
December	1.16	1.04	.92

To those who have been claiming that our export steers need improving the table should be evidence on their side. Time was, in the past, when Canada had fat cattle quite equal to the best from the United States, now, however, with the great increase in the dairy breeds of cattle in Canada, our export steers have fallen very low in quality. The winter-led cattle, marketed in May, June and July, brought a good deal more than those sent over at other times. August gave the largest number, 5,492, and the totals for the year were 25,039, as against 16,683 in 1899. Our cattle are very free from disease, never had any "pleuro-pneumonia" and should be admitted free to the British inland markets.

The Tuberculin Test

At the recent conference at Ottawa there were some pretty warm discussions between the breeders who were present and the medical men and others who were there (so they claimed) in the interest of the public health. This discussion has brought out the following reply from Dr. J. G. Adami, of McGill University, in the Montreal "Gazette," which we give in full, as it shows how ridiculous are some of the arguments advanced in favor of the test, and its relation to the interests of the breeders:

"An unfortunate prejudice exists among cattle breeders against the testing of cattle by means of tuberculin. It is, however, almost a necessity as high-bred herds, by reason of their perpetual inbreeding, are very liable to tuberculosis. Thus a large proportion of the pedigree cattle of England are affected, and the Argentine Republic has entirely excluded their importation while the United States have imposed very severe quarantine regulations. This may be the cause of some of the objections to the Government test, as it appears that a certain party among the breeders are trying to evade the American regulations by bringing English cattle here, and then exporting them across the line as Canadian bred and born. Another plea raised is the inconvenience and cost involved in the case of a thoroughbred sale in the States. All entries detailing the particulars of the cow's appearance, pedigree, age, weight, etc., must be made and paid for thirty days before the sale begins. But if an examination is enforced and a certain proportion of the herd are condemned, there is no time to substitute other cattle to fill their places, and so the entrance fees are lost.

"The complaints that the tests are injurious to cows in calf and cause the calves when dropped to be weak and valueless, may be dismissed as contrary to the experience of other countries, and while it is true that a cow very far gone in tuberculosis will not react to the test, as it produces too much tuberculin on its own account, it is also true that such an animal would be detected for its physical conditions

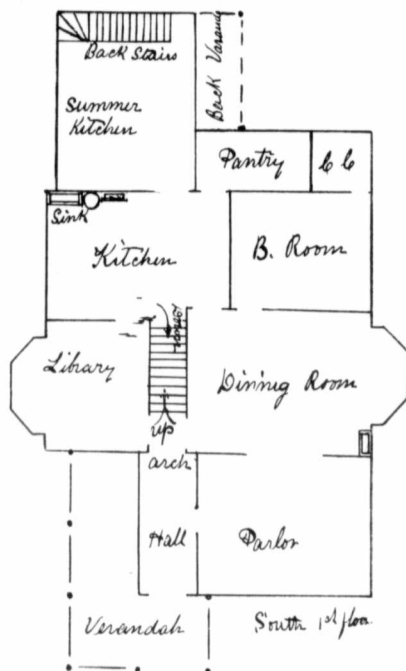


Residence of John Jackson, Abingdon, Ont.

without any test at all, and the tuberculin practically never fails in cases which could be examined by no other method.

"Some alarm has been caused by the discovery of the tuberculosis bacillus in one of Koch's preparations, tuberculin R., and the belief that the disease might be actually spread by mea-

sure taken for its cure. This fear may be set at rest by the facts that the manufacture of tuberculin R. has been so modified lately as to make the survival of the bacillus an impossibility, and that this particular preparation is far too



Residence of John Jackson. First floor plan.

expensive to be ever used upon cattle, and is intended for the treatment of human beings only. The tuberculin for testing herds is subjected to boiling and evaporation to one-tenth of its bulk in the process of its manufacture, and as no bacillus can withstand a higher temperature than 150 degrees, they must all be killed before the preparation is completed.

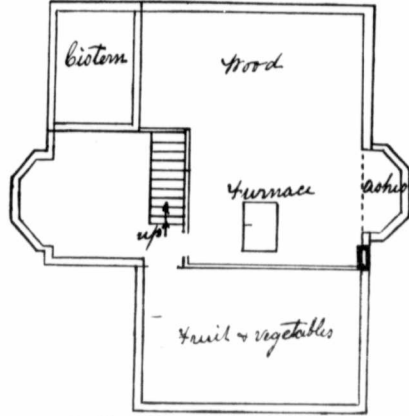
"It would be a most serious retrograde step if Canada were now to give up the tuberculin test, which is being steadily adopted more largely in England, France and Germany. The cost involved is by no means great, as the Government investigators do not ask that all animals reacting should be at once slaughtered. They recommend instead that the animals whose tubercular condition can only be detected by the test, be removed from the rest of the herd, kept under healthy conditions, fed up and only killed when there is a good market for them. It has even been proved that the calves of these slightly diseased animals may be perfectly sound if removed from their mothers to the healthy herd. Thus the loss of the owner would be reduced to a very low figure, and he need not fear to do his best to keep his cattle healthy by the use of the tuberculin test."

Professor Adami is very much out when he says: "It appears that a certain party among the breeders are trying to evade the American regulations by bringing English cattle here, and then exporting them across the line as Canadian bred and born." This will be news to the breeders, who will only laugh at the too credulous professor, and his ridiculous assertions.

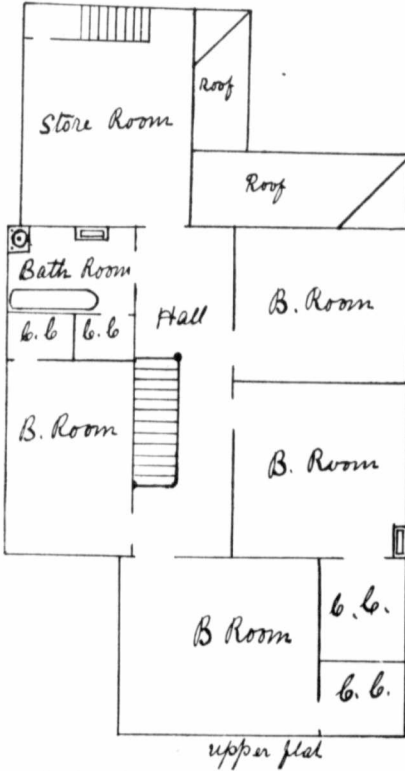
It is true that a "prejudice exists against the testing of cattle by means of tuberculin," and it is also true that this prejudice has grown very much in recent years. Some time ago the Ontario Government endeavored to do educational work along this line. They were met by the Government at Ottawa publishing a bulletin calling attention to the Dominion Act, which makes anyone having an animal affected with tuberculosis liable to a fine for each offence of \$200 if he sells the hide, the hoof, or any part of the animal. At that time very many farmers were prepared to adopt the most modern scientific methods recommended by Bang, of Denmark, for the gradual elimination of the disease from affected herds. All that has changed, and now there is a strong crusade against the "abuse" of tuberculin.

The Professor admits that "tuberculin R," one of Koch's preparations, was found to contain the living germs of the disease, the dreaded "tuberculosis bacillus," but he stills the fears of the cattle breeders by saying that "this particular preparation is far too expensive to be ever used upon cattle, and is intended for the treatment of human beings only." It would be interesting to know how many human beings had this deadly compound squirted into them before it was modified by boiling. Doubtless few of them knew the danger they

crude and useless regulations regarding the treatment of cattle, by such legislation as the measure already attended to, and by the unwise and unfair statements made regarding the danger from the use of the meat and milk of animals affected by tuberculosis. Practically there is no danger from the meat, and while there may be some danger from milk, it is now known to be confined to infants and invalids



Residence of John Jackson. Cellar plan.



Residence of John Jackson. Second floor plan.

who have to use milk as their sole food. Boiled milk is perfectly safe even when from an animal with tuberculosis of the udder. The present ridiculous law should be changed and made to conform to modern scientific knowledge—keeping it on the statute book has caused very much of the present attitude of our cattle breeders on this question. The suggestion made by Professor Adami that farmers be allowed to separate their cattle, feed and sell the suspected ones is right and practical, and it is the only means that will most quickly stamp out the disease from Canadian herds.

Pointers for Dairymen

The Montreal Butter and Cheese Association has addressed a circular letter with some recommendations to factorymen that are worthy of careful consideration by our dairymen. In the letter itself, dairymen are strongly urged not to make any fodder cheese this spring, as stocks of last year's cheese are sufficient for four months' average consumption, which would prevent the market from being clear for the new goods till well on in June.

While we have always advocated the making of no early or late fall cheese in our factories, and still believe it would be in the best interests of the trade if every factory would agree to such a plan, and confine the cheese season to six months and the balance of the year to butter-making, we recall the experience of a year ago, when factories were even urged to make this early stuff, in order to give buyers something to do. At that time the market was pretty clear of old stock, and, of course, the making of this fodder stuff would not injure the market as much later on, as when old stock was plentiful. But it is claimed that the exporting of this early fodder stuff injures the reputation of Canadian cheese (and we believe

were running, and fewer lived to tell the tale. The cattle breeders of Canada are, as a class, prepared to do anything needed to secure the public health, but they have in the past been heavy losers—on both sides of the line—by

it does), and its sale later on. Then why would not the reputation of our cheese be as much injured by sending out this fodder stuff when the market was clear and trade brisk, as when trade was dull, as seems to be the case at the present time? It is reasoning of this kind that bothers the dairyman and leads him to the conclusion that our buyers and shippers are not always as sincere as they might be in their efforts to stamp out the making of early fodder and late fall cheese. However, as we have always advocated such a policy, we trust our dairymen will consider the advisability of discontinuing making fodder or late fall cheese this season and every season hereafter. Even at a high price for cheese it will pay the farmer better to make butter during the early spring and have the skim-milk for feeding his young stock.

The recommendations are as follows:

CURING OF CHEESE.

The Montreal Butter and Cheese Association desires to call the special attention of factorymen to the uncured condition of most of the cheese coming to Montreal. It has become the practice of factorymen to send their cheese to Montreal before they are sufficiently cured (this applies chiefly to Eastern Ontario), and if we are to hold the good reputation we have gained this bad practice must be stopped, and cheese must be held in the factories at least two weeks for fast curing cheese, and longer for slow curing cheese, or in all cases until the cheese are cured. Factories should be so provided that the temperature of the curing room can be maintained at or near 60 degrees Fahrenheit, otherwise cheese are injured, by heat in summer and cold in autumn.

APPEARANCE OF CHEESE.

A large number of the cheese arriving in Montreal have at least one rough end, and some have two rough ends, giving the cheese a very bad appearance and affecting their value. All cheese might easily have a good appearance if the maker would take his cheese out of the hoops early in the morning of the day following the date of manufacture, trim off any unevenness, put his cheese back to press with the ends reversed, and leave them there until the afternoon, using press rings to keep the cheese from pressing up between the hoop and the follower.

CHEESE BOXES.

The cheese boxes generally in use are disgracefully poor, and factorymen should insist upon being supplied with a better box in future. In the box that is at present being supplied, the sides are too thin, which causes them to break, and the head and bottom is frequently made of too many pieces, which causes them to fall out, and insufficient nailing of these is a common complaint. We ask the factoryman to insist upon getting boxes with sides from one-fifth to one-quarter of an inch in thickness, with not more than two pieces in the top or bottom, and with the top and bottom pieces properly nailed. These pieces should be made of well dried material, so that they will not shrink away from the bands and weaken the box.

WHEY.

Another objectionable practice seems to be growing in many districts of the country, and

that is the practice of carrying whey back from the factory to the farm in milk cans, which gives to the cans a bad smell, and this is too often communicated to the milk, and does a great deal to cause bad flavor in the cheese. Where the farmer desires to make use of his share of the whey, it is strongly recommended that he carry with him in his wagon a barrel or other cans than his milk cans to convey the whey to the farm. Under no circumstances should whey be conveyed in milk cans.

BUTTER.

Canada must go more largely into the manufacture of fancy butter, since it is evident that we are now making as much cheese as can be consumed in one season at profitable prices. There is abundant room for expansion in butter making, provided only the best quality is made. All hope of doing an export trade of any importance in dairy butter must be abandoned. Nothing but the best creamery butter will sell freely and profitably. There is proof enough that fancy butter can be made in Canada, but much progress must yet be made ere our average quality will stand as high as that of Denmark or Australia. We are especially behind these countries in regard to packages. Only the best obtainable should be bought, uniform in style and size, and where boxes are used, no more and no less butter should be packed than will test 56 lbs. when delivered in Montreal.

Breeders' Notes

By Stockman

Lord Lionel Cecil, of the well-known horse-breeding firm of Lords Arthur and Lionel Cecil, died recently at Holwood, Bromley-Kent, England, the residence of his mother, the Countess of Derby. Lord Lionel was born in 1853, a son of the second Marquis of Salisbury by his second wife, and a half-brother to the Prime Minister, the present Marquis. The brothers commenced breeding Clydesdale horses at Orchardmains, in Peebleshire, about 1877. They began with a few good mares from the Upper Ward of Lanarkshire. These had a good deal of the celebrated "Blaze" blood, and were the foundation of a first-class stud of Clydesdales. Afterwards they removed to Kent, in England and named their farm there Orchardmains after their Scotch home. Lord Lionel served in the Transvaal war as Major of the 5th Battalion Northumberland Fusiliers. The funeral was unique—by the wish of the deceased no hearse was used—the coffin was taken to the churchyard in one of the farm carts—an ordinary Scotch cart, drawn by a favorite Clydesdale horse. The deceased was widely regretted by a large circle of friends. He was one of the foremost of that large circle of British noblemen who have done so much for the advancement of stock breeding in the Old Land.

The Northumberland Agricultural Society in England have six pedigree Shorthorn bulls standing for service in the country the past year. These are owned by the society, who charge a nominal fee for their service. They also give three prizes of \$150 to horse clubs arranging for service of suitable stallions in their brands. They have 533 members.

The price of heavy wools in England is lower this year than for thirty years. Lincoln wether

wool is 14 1-4 cents per pound, and this, without the burrs and dirt, too common in Canadian wool.

Care of the Bull

Never ill use a bull if there should exist the most remote chance that you may meet that bull while at liberty. Depend upon it, even if months or years have passed reprisals will follow. There is no animal more sensitive or amenable to kindness than a bull, no animal with a longer memory. Many of the attacks of bulls on their attendants are the direct result of brutality on the part of the man at some time or other. In all probability the animal cannot retaliate at the time, but he bides his time, and when it comes, has no mercy.—London Live Stock Journal.

CORRESPONDENCE

Not Opposed to the Babcock Test

Editor THE FARMING WORLD:

Our attention has just been called to an article which appeared in Saturday's issue of the Toronto dailies, containing what is purported to be an account of the meeting of the Directors of the Eastern Ontario Dairymen's Association recently held in Kingston, at which we are represented as being strongly opposed to the use of the Babcock test.

What we did say in effect was, that the work of the instructors employed by the Association was greatly hindered by having to test the milk at the cheese factories, and prosecuting patrons for supplying adulterated milk, taking up much valuable time which could be more profitably employed in giving instructions to the makers and patrons, thus accomplishing the object of our work, by striving to elevate the standard of our dairy products.

Every cheese and butter-maker should be a competent man to test milk, but if it was thought advisable to have the association still continue in charge of this branch of the work, then they should get authority from the Government to appoint men for this work only (prohibiting all others except makers in their own factories) and charge a fee sufficiently large to make it self-sustaining, and use the grant which they now receive exclusively for the work of instruction.

If there is any benefit received by having the milk tested by an inspector, it is purely local, and the factories should bear the cost of having it done. On the other hand, the good or evil of instruction is national in effect, as you cannot raise or lower the standard of one factory without affecting the general average of the whole. To our mind the object of the work to be performed by the association, is the elevation of the standard of our dairy products, not the detection of crime. We are firm believers in the efficacy of the Babcock, and strongly recommend its use, but, not by the instructors sent out by our Dairy Association. They should be given a free hand to instruct and build up this dairy industry, while the work of milk inspection for the detection of adulteration

should be left to the factories, or to some one especially appointed for that purpose only.

Yours very truly,

G. G. Publow,
L. A. Zuleit.

Kingston, Ont., Feb. 26, 1901.

Note—We heartily endorse the position which the instructors of the Eastern Dairymen's Association as given above taken in regard to the inspection of milk. This is a local affair and the factories should take charge of this work themselves and do their own prosecution. The best way to remedy matters is for every factory to pay for milk according to its quality. The time of the instructors employed by our dairy associations should be devoted wholly to giving instruction to the makers and educating the patrons of factories in the best methods of caring for milk for cheese and butter-making purposes.—Editor.

Re Price of Milk Supplied the City

Editor THE FARMING WORLD:

In your issue of 19th inst. a reply is made by Mr. R. Reid, Secretary Canadian Jersey Breeders' Association, to Mr. Alex. Tait, relative to the price of milk received by the farmer. Mr. Reid states that he reported the meeting at which Mr. Massey stated that the average price paid the farmer was \$1.40 per cwt., and that Mr. Massey's statement was "absolutely correct," rather a strong statement for Mr. Reid. I beg to state, for Mr. Reid's information, that Mr. Massey's statement was absolutely incorrect regarding the price paid to the farmer, and herein produce the figures. As a milk shipper to Toronto I will give you the facts as to what the farmer gets out of it, which is as follows: The farmer is paid 75c. to 80c. net, per can, for six months, commencing 1st May, and 90c. to 95c. for six months, commencing 1st Nov., taking the highest price, he gets on an average \$7 1-2c. per can, not of 80 lbs., but of about 85 lbs., or about \$1.03 per cwt. You may add for purposes of comparison 17c. per cwt. for freight, which would make a total of \$1.20 per cwt., a difference of 20c. per cwt. between Mr. Massey's statement and what is an absolute fact. Again, the price should not be given as delivered in Toronto, but at the point of shipment. The dealer pays the freight, but as the railways will not carry milk without prepayment, the shipper prepays and the amount so paid is refunded by the dealer. The proper view to take as to the price received, is what the farmer gets at his point of shipment, just as in all other lines of business, the price to the producer is at the place of production.

Regarding the cans containing about 85 lbs. milk, perhaps Mr. Reid is not aware that the cans furnished by dealers have largely increased in size during the last few years, so that instead of containing 7 1-2 gals., as at first they did, they now hold, in some cases, nearly 9 gals. The increase has been very gradual, and unless the farmer looks well after his interests he will soon be filling 10 gallon cans and getting paid for 8 gallons. The price for milk now is less than when the cans were smaller.

Milk Shipper.

Halton Co., Feb. 23, 1901.

Cultivation of Lucerne or Alfalfa

Some valuable information on the growing of this important clover is given in Bulletin 111., issued by the Ontario Department of Agriculture, and prepared by R. Harcourt, B.S.A., assistant chemist, Ontario Agricultural College. In many parts of the province a great interest is taken in the growing of lucerne, chiefly because the plant grows and produces large crops even in our driest weather. The compiling of the bulletin was undertaken with a view to ascertaining at what stage in its growth the plant should be cut to get the maximum amount of digestible constituents. Information is given in regard to the history and description of the plant, the vitalizing of the seed, etc., which makes it a very practical treatise on this valuable crop. We subjoin a few extracts from the bulletin which will be helpful to those who contemplate growing this crop the coming season.

CULTIVATION.

One drawback to the growing of lucerne is the fact that it cannot be used in a short rotation of crops. On account of the length of time it requires to become established in the soil, and on account of the size and toughness of the roots, the land seeded with lucerne should be selected with the view of allowing it to remain for a number of years. Just how long it may be profitably left before breaking up depends very much or how clean the land was at the time of seeding; but the time varies between six and twelve years, although in some cases it has been found profitable to leave it even longer. A crop that is expected to hold the ground for so long a period, should have a faultless seed-bed. It will amply repay careful cleaning of the land previous to seeding. This is especially true on rather poor land, where the first year's crop will likely be small and consequently in danger of being overcome with weeds. The land may be prepared by means of a late summer fallow, or better, the seeding may follow a hoed crop; but, whatever the preparation of the land, it must be clean and, as the seeds are small, it is essential that it be in a very fine condition mechanically.

The soil best suited for the growth of lucerne seems to be a deep loam, rather dry, containing a fair proportion of lime, with good, deep, natural drainage. It will, however, do well upon almost any soil that is well drained, provided it once becomes well rooted. Heavy clay and light sandy soils both produce excellent crops of lucerne, but on the latter it naturally requires generous manuring. It should never be sown on land in which the water table stands near the surface, or on land likely to be covered with water at any season of the year. This will exclude most low-lying ground where grasses naturally do well.

The amount of seed sown varies considerably. Some sowing about 15 lbs. of seed per acre, while others use as much as 40 lbs., or even more. Under ordinary conditions 15 to 20 lbs. per acre are sufficient. The covering may be done with a light harrow and roller. If sown with oats, barley, or the like, not more than about one-half the ordinary amount of grain should be sown per acre, even then the young plants are apt to be killed by exposure to the

sun when the "nurse" crop is removed, especially if hot dry weather follows the cutting of the grain crop. Better results are usually obtained by sowing the seed alone. The best time to sow is as soon as the ground can be got into good condition in the spring, and danger of heavy frosts is passed. In some cases, difficulty is experienced in getting a good stand on clay soils. An excellent "catch" has been obtained over bare, heavy clay knolls by giving them a top dressing with barnyard manure at the time of seeding.

AS A FODDER CROP.

When cut before it becomes too woody, there are few plants that are equal to lucerne in nutritive value. It makes an excellent hog pasture but the plants must not be allowed to stand until they become hard and woody. The most nutritious fodder will be obtained by cutting off the plants every time they reach the blossoming stage. Sheep do well on it and produce a fine quality of wool. Dairymen who have used lucerne speak very highly of it as a cheap food for milk production. Bulletin No. 80 of the Geneva Experiment Station, New York, gives results of some feeding experiments in which lucerne and other forage plants were used in the feeding of milch cows. It was found in a greater number of cases that where lucerne was substituted for some other food, or the amount of lucerne in the ration was increased, there followed a decrease in the cost of the milk. According to English authorities, the feeding of lucerne to milch cows produced "milk that was not only rich in solids, but contained a large proportion of butter fat—the butter being of a brilliant yellow color, of exceedingly firm texture, even during the hot weather, and containing a most aromatic flavor."

Although we have not had sufficient experimental evidence to prove it conclusively, it would seem as though there was great danger in feeding in large quantities lucerne hay that has been made from the plant in advanced stages of maturity. For this reason some have objected to its use altogether; but this is an extreme position to take; for, when cut in the earlier stages of its growth, lucerne has been found to be as digestible as either red clover or timothy.

AS A SOILING CROP.

As a soiling crop, it is unsurpassed; it is one of the earliest crops, if not the earliest, in the spring, and by judicious arrangement may be used throughout the whole season. For soiling purposes, it may be cut before blossoming; and as the sooner it is cut, the sooner another crop will follow, it is better not to wait for the full growth of the plant before commencing to use it. By beginning early and cutting about one thirty-fifth of the plot each day, so as to go over it every five weeks, a lucerne field will afford a constant cut from the latter part of May until October, since by the end of each five weeks the portion first cut will be ready with another crop. This is one of the best uses that can be made of lucerne; and, where at all possible, it will be found very profitable to have at least a small plot of it near the farm buildings for supplementary feeding, as all kinds of

stock are fond of it. While all fodders deteriorate towards maturity, this is especially true of lucerne.

AS A HAY CROP.

Owing to the large amount of water in green lucerne and to the thickness of the stem, it is somewhat difficult to cure as hay. This is especially true of the first crop, which, besides containing a higher percentage of water than the succeeding ones, is usually ready for cutting while the ground is still damp from the spring rains, and before good hay weather has set in. As is the case with clovers, the leaves of lucerne break off very readily when dry; and, as these are the most nutritious part of the plant, there is likely to be considerable loss. The curing should, therefore, be done in the cock as much as possible; and, so far as practicable, the raking and handling should be done while the hay is a little "tough." The loss of the leaves will thus be reduced to a minimum. It would be impossible to give detailed directions for the curing of the hay, because conditions and weather vary so much in different parts of the province and different seasons. Much care and time are necessary to make good hay, and experience and good judgment are required.

CONCLUSIONS.

I. That the composition of lucerne is very similar to that of the clovers, both in foods and in ash constituents.

II. That it is quite as digestible as red clover or timothy, when cut at the proper stage of maturity.

III. That, in our experiments, a much larger amount of digestible matter was obtained by cutting when the plants were about one-third in blossom than by cutting either two weeks earlier or two weeks later.

IV. That after the early blossoming stage the deterioration, both in percentage composition and in digestibility, is very rapid.

V. That, cut when about one-third in blossom, lucerne yields more digestible protein than either red clover or timothy.

VI. That there appears to be danger in feeding lucerne hay that has been made from the plant in advanced stages of maturity.

VII. That, notwithstanding the rapidity with which lucerne deteriorates after passing the early blossoming stage, the fact that, when properly saved, it yields a large amount of nutritious food, makes it a most desirable addition to our list of fodders.

Swine Breeding*

The Causes of Scrub Stock

The writer of this article begins with the statement that the scrub animal is all too prevalent in every live stock country, and aptly terms this condition of affairs a disease which he calls "scrub fever." He estimates that over 60 per cent. of the swine in the State of Illinois are suffering from this disease. The reasons for this condition of things, not only in Illinois, but elsewhere he gives as follows:

*Paper read by Prof. W. J. Kennedy, of Illinois University, at the Illinois Swine Breeders' Association. Prof. Kennedy is a Canadian and a graduate of the Ontario Agricultural College.

BREEDING FROM IMMATURE ANIMALS.

I feel safe in saying that the continued use of immature animals for breeding purposes will cause deterioration in swine breeding as quickly, if not more so, than by any other method that could be pursued. It is one of the commonest errors practised by swine-breeders at the present day. Over 60 per cent. of the brood sows kept in the state to-day are under fifteen months of age. The same is true of the sires used. The evil results of such a method, or lack of method, of breeding are very pronounced, and can be seen on almost every farm where swine is reared. Every farmer thus becomes an experimenter, for he tests a new lot of sows each year. What are the results? He concludes after he has experimented with the breed for several years that they are not suited to his conditions as they soon "run out," that is, they become too small, too fine in the bone, too weak in constitution, are susceptible to hog cholera, do not produce large enough litters, etc.; thus he decides to try another breed which he knows is much better adapted to his needs. It only takes him a few years to find out they are no better than the others, and thus he continues to experiment, until he finally decides that swine husbandry is not a profitable business. If he had been a good experimenter he would have kept his best sows as long as they bred good litters and mated them with mature sires, and experience leads me to say that he would not have condemned the breed for the reasons I have heretofore mentioned. I am firmly convinced that larger litters, stronger and better pigs, can always be reared from mature animals than it is possible to get from immature stock.

CROSSING BREEDS.

During recent years a great deal has been written and said about the crossing of different breeds of swine in order to secure larger litters, better grazers, more bone, early maturing, better bacon type, etc., etc. In some instances the crossing of breeds may prove advantageous, but it must be done wisely, else disappointment will oftentimes follow such a practice. I believe that with good care and proper selection the above mentioned desirable characteristics can be secured from any of our generally recognized breeds without the introduction of any foreign blood. Cross-breeding may sometimes prove useful, but it is not a wise policy to make it a general practice.

NOT ENOUGH INDIVIDUALITY.

I am inclined to believe that a great many swine breeders are laying too much stress on "fancy strains" and not enough on individual merit. A few weeks ago I was commissioned by a Minnesota friend of mine to buy him five Poland China gilts. I visited a herd that is extensively advertised to contain all the best and most popular strains of the breed. The proprietor dumbfounded me with such names as Chief Perfection 2d, Perfect, I Know, Chief Tecumseh 2d, Missouri Black Chief, Young Wilkes, etc., etc., but he had not a gilt on his farm that I would pay the transportation charges on to Minnesota. I am a firm believer in good breeding and always want the best, but, good people, what is the value of pedigree without individual merit? The ultimate end of all swine

is the block, and where is the market that demands a popular strain or fancy breeding? They all want the individual animal, and the aim of the breeder should be to produce such. Popular "strains" or "families" contain many animals of the very highest merit, but "scrub fever" prevails more or less in them all. So, good people, get the good individual with the good pedigree and then unto you success will come.

INJUDICIOUS MATING OF ANIMALS.

Too much attention cannot be paid to the proper mating of breeding animals in order to secure good results. This will apply more to the selection of the sire than the sow, for his influence is very great in the herd, and will determine to a very great extent the type of the whole herd. Avoid the common error of to-day is selecting a fine-boned hog. Progeny from such a sire will not bare up the load of a well-developed body, particularly when being transported to market. In making the selection of a sire, always bear in mind the type you already have in your herd on the part of the sows; i.e., are they too long in the body, too high off the ground, too fine in the bone, too short in the body, lacking in constitution, etc. etc.? Then select a boar of the opposite type to correct these errors. Good people, you cannot lay too much stress upon the matter of judicious mating.

CLOSE BREEDING.

The evil results which follow "in" or "close" breeding are very numerous and very marked. Breeding of this kind generally causes a weakened constitution, thus the animal becomes very susceptible to disease. Sterility oftentimes follows such a method of breeding, while a deterioration in the size of the animal always follows such a practice. When animals are strong in constitution, and of good size an "in" cross may prove beneficial, but it should not be indulged in too often for undesirable results are sure to follow its continued use.

USE OF GRADE SIRES.

A grade sire should never be used, no matter how good an individual he may be. To use such a sire is gambling on the part of the breeder, for there are nine chances of him being a failure to one of him proving satisfactory. Such a sire lacks prepotency, which is the power to reproduce his like with any degree of certainty. Always bear in mind that the sire is half the herd, thus it is of vital importance that he be a good individual with the best blood possible in his veins.

IMPROPER METHODS OF FEEDING.

The question of the intelligent feeding of swine is one that must receive more attention in the future than it has in the past. No man can be successful in swine husbandry unless he is an intelligent feeder, and by an intelligent feeder I mean a man who studies the needs of his animals. Too many men are inclined to believe that quantity is the only requisite in successful swine feeding, but there is another which is equally important, that is, quality or the composition of the food fed. It is all important that we know what the different kinds of food are capable of producing, that is, whether a food is a fat and heat producer, or a bone and tissue builder. No man in this audience would think of building a house out of

plaster and paint. You all know that the frame-work must first be built, then the plaster and paint will come in later and put the finishing touches on in order to make a complete building. Now fat in the animal corresponds to plaster and paint in the building. It puts on the finish which makes the animal appear well to the eye of the fancier. But, good people, it is just as necessary to build the framework of the animal as it is of the house before putting on the finish, but the vast majority of swine breeders commence with the wrong material, thus there is but one avenue for them to travel in, namely, failure. You must commence at the bottom and lay a good foundation, for the height to which any castle can be built will always be determined by the foundation upon which it is started. Just so in the breeding of swine, the successful breeder has, and always will have, to lay a good foundation and build a strong framework. It should always be borne in mind that out of nothing, nothing comes, likewise that bone and muscle are produced from nitrogenous food, and that fat and heat are the production of carbonaceous food. Thus we see the necessity of feeding nitrogenous food to young animals, and those intended for breeding purposes. Corn is and always will be a great swine food for the Illinois farmer, but for young stock and breeding animals some supplementary food, such as oil meal to the extent of about 10 per cent., shorts, skim-milk and leguminous crops as clover, cow peas, etc., added to the corn ration would very much improve it.

Causes of Butter Flavor

In the experiments carried out at Ohio, it was found that the general superiority of butter flavor in the summer season is mainly due to the greater number of bacteria of the acid class found in the milk during the summer season. The ripening of a good quality of natural cream is mostly a development of acid bacteria. When well-ripened cream is ready for churning, the number of bacteria per cubic centimeter varies from 280,000,000 to 300,000,000. Of this number the acid producing bacteria constitutes from 91 to 98 per cent. As the process of ripening advances the relative percentage of acid bacteria greatly increases. As this proceeds, some species disappear, others are prevented from increasing in numbers. A good natural skim-milk starter is practically a pure culture of acid-producing bacteria. The flavor producing power of four species of acid-producing bacteria, was tried by using them to ripen pasteurized cream. Any one of these gave the butter the typical flavor and aroma produced in natural ripening. The most common milk-souring organism ("bacterium lactarii"), all things considered, gave the most satisfactory results of any of the species tried as a culture for ripening cream. Practical experience and experimental evidence both indicate that the most important factors in cream ripening are the development of the typical acid fermentations, and the elimination or suppression of other and injurious types of fermentation. Prices for Canadian cattle in England

Our special poultry number will appear next week. It will be full of good things for poultry raisers. Every farmer who keeps hens should have a copy.

Studies in Nature

A Monthly Review of Insect and Bird Life on the Farm

Edited by C. W. Nash

Bird Notes.

Never before in my recollection have winter birds been as scarce as they are this season, no redpolls, grosbeaks or cross bills have visited us at all, and but very few snowbirds have been seen. Why this should be so is hard to guess, but probably it is because there is an ample supply of food in the North and the birds have remained there, or they may have migrated this season to some new ground. They certainly have not visited Ontario, and it is not likely that they will do so now, although I have occasionally, in former years, seen great flights of crossbills and redpolls in March.

Already the first bird of spring has arrived. The hardy little prairie horned lark, which is about the last of our birds to leave us in autumn, is always the first to return. This year it was a few days late in arriving, not having reached us until the 13th of February, whereas it usually appears before the tenth of the month. They do not go very far South to spend the winter and I think that in our south western counties they will be found to be resident.

Every winter we hear of robins having been seen from time to time in the southern tier of counties. These are birds that have found a sheltered spot near some garden where mountain ash and other berries will afford them a sufficient food supply. I was, however, very much surprised to hear from Mr. Alfred Kay, of Port Sydney, Muskoka, that on the 19th of February last he saw two robins at that place. The day he says was mild and springlike and so no doubt these birds had ventured out into the open from some sheltered spruce bush in which they were spending the winter. If we had a few more naturalists like Mr. Kay in the Muskoka district a great many interesting facts concerning the animal life of that beautiful region would be brought to light.

Insects.

The Hessian Fly.

I have received the following interesting letter from Mr. Macfie with reference to this pest.

Editor THE FARMING WORLD:

I have read with profit and interest Mr. Nash's recent article on "The Hessian Fly," and notice that therein he offers the generally adopted remedy of late sowing of fall wheat to avoid the pest. This remedy would appear to prove a failure in our section this past fall, as late as well as early sown fields suffered severely from the fly's ravages. It is my opinion that the brood of the fly, which generally passes the winter in the pupa condi-

tion was last fall past to the imago state and that these flies deposited another brood the larvæ of which attacked the wheat, leaving it in such a miserable condition as it appears at the present time to be.

My reason for arriving at this conclusion is that I found larvæ, or what appeared to be such, of the fly on the base of the wheat roots as late as December 20; as many as four of these small white larvæ were found on one root. Flies in the "Flaxseed" were also found. I would like to ask if my conclusions are justifiable.

As we had no frosts until late in the season, would the open fall produce this condition?

If it is so that there was a late brood of flies, may we not expect a diminution of the pest next spring, as the later December frosts would destroy those larvæ and prevent further development. CHARLES M. MACFIE.
Appin.

The weather last fall was exceptionally warm and dry, so that it is just possible, but I think hardly probable, that some of the flies which would under ordinary circumstances have remained in the pupa stage through the winter, emerged as perfect insects, and deposited eggs. The larvæ produced from these eggs would of course feed until overtaken by severe frost. Whether or not they would be able to resist the action of frost in this stage is uncertain, a search early in the spring will decide that question. I am inclined to think that the larvæ found late in December were produced from eggs deposited by late flies of the autumn brood, this brood having appeared later and lasted longer than usual owing to the peculiarity of the season, and I am sorry to say that I do not think that the spring brood will be in the least diminished by reason of the existence of these late autumn larvæ unless perhaps the prolongation of the season enabled the parasitic enemies of this pest to increase sufficiently to materially reduce the number of Hessian flies that should attain the perfect stage next spring.

I hope to receive some more notes on this subject from observers throughout the country.

ANSWERS TO CORRESPONDENTS.

A very highly esteemed correspondent asks me to tell him the difference between a bug and a beetle, and as I find that there are a great many people who do not know the distinction between these two classes of insects, I will mention a few of the distinguishing features of each.

Bugs belong to the order Hemip-

tera, or half-winged insects, so called because the forewings, which are unfitted for flight, have the base thickened, and the tips membranous (some members of this order are wingless). Their transformations are always incomplete, and feeding is always done by piercing and sucking either of plant or animal tissue. Many of them have peculiar and some of them exceedingly disagreeable odors.

A very common example of the winged forms is the squash bug, and the much detested bed bug will serve as an example of the wingless forms.

Beetles belong to the order Coleoptera, and may be recognized by their hard or leathery wing covers, which are laid over the abdomen so that they meet in a straight line down the back, the hind wings being transversely folded beneath them. They all have jaws or mouth parts fitted for chewing, and they feed on a very great variety of substances, both animal and vegetable.

Their transformations are complete. Common forms are the Colorado potato beetle and the June beetle, more often called potato bugs and June bugs.

Oscar L. Haviland asks: 1. What is a sure way to kill bind-weed or wild morning glory?

2. How can I get rid of ant hills at the foot of young apple trees?

I have an orchard and a number of the trees are troubled with them. Are they very hurtful to the trees? Last year I forked up the ground close to the trees and sprinkled salt on the fresh earth, but it did no good.

1. The wild convolvulus is a very difficult weed to destroy, if it has become thoroughly established. The only method of eradicating it which has proved successful is the frequent growing of crops which permit of constant hoeing and cultivating. Smother crops are sometimes of assistance, but the chief reliance is upon frequent hoeing and cultivating.

2. The ants may become exceedingly injurious to your trees, and should certainly be got rid of.

The best remedy is to pour some bi-sulphide of carbon into the nests late in the evening after the ants have returned home; then stop up the holes by stamping on them. One or two applications will generally have the desired effect.

Do not leave the bi-sulphide of carbon where it can by any chance be brought into contact with fire, as it is very explosive.

Fine sand saturated with coal oil and thrown on the nests will drive ants away, but they will generally establish themselves again somewhere near by.

Most Productive Seeds

In Bulletin No. 36, by Dr. Wm. Saunders, director of the Dominion Experimental Farms, are presented the results of a large number of experiments which have been conducted at all the experimental farms during the season of 1900, with oats, barley, spring wheat, peas, Indian corn, turnips, mangels, carrots, sugar beets and potatoes, in uniform plots. The average results are also given of five and six years' tests on such plots with varieties of oats, barley, spring wheat and Indian corn, three to six years' with plots of peas, four and five years' with plots of turnips, mangels, carrots and potatoes, and three and four years' experience with sugar beets.

OATS.

The twelve varieties of oats which have produced the largest average crops for the past five or six years on all the experimental farms, and hence may, perhaps, be regarded as worthy of being placed at the head of the list for general cultivation, are the following:

	Per Acre.	Bush.	Lbs.
1. Banner	75	15	
2. American Beauty	74	31	
3. Bavarian	71	31	
4. Golden Giant	71	19	
5. Holstein Prolific	71	19	
6. Buckbee's Illinois	70	28	
7. Columbus	70	15	
8. Golden Beauty	69	30	
9. Early Golden Prolific	69	28	
10. White Schonen	68	13	
11. Oderbruch	68	5	
12. Wallis	68	2	

An average crop of 70 bushels 31 pounds per acre.

TWO-ROWED BARLEY.

The six varieties of two-rowed barley which have produced the largest crops for the past five and six years, taking the average of the results obtained on all the experimental farms are:

	Per Acre.	Bush.	Lbs.
1. French Chevalier	45	45	
2. Danish Chevalier	44	14	
3. Beaver	44	2	
4. Canadian Thorpe	43	30	
5. Newton	42	6	
6. Sidney	41	38	

An average crop of 43 bushels 30 pounds per acre.

SIX-ROWED BARLEY.

The six varieties of six-rowed barley which have produced the largest crops for the past five or six years, taking the average of the results obtained on all the experimental farms are:

	Per Acre.	Bush.	Lbs.
1. Mensury	51	9	
2. Trooper	48	10	
3. Odessa	48	..	
4. Common	46	46	
5. Royal	46	23	
6. Oderbruch	46	2	

An average crop of 47 bushels 39 pounds per acre.

SPRING WHEAT.

The twelve varieties of spring wheat which have produced the largest crops, taking the average of the results obtained for the past five and six years on all the experimental farms, are:

	Per acre.	Bush.	Lbs.
1. Preston	35	5	
2. Monarch	32	37	
3. Wellman's Fife	32	32	
4. White Fife	31	36	
5. Goose	31	30	
6. Red Fife	31	29	
7. White Connell	31	19	
8. Huron	31	15	
9. White Russian	81	8	
10. Rio Grande	31	6	
11. Hungarian, 5 years	30	52	
12. Pringle's Ctampain	30	52	

An average crop of 31 bushels 47 lbs. per acre.

PEAS.

The twelve varieties of peas which have produced the largest crops for the past three to six years, taking the average of the results obtained at all the experimental farms, are:

	Per acre.	Bush.	Lbs.
1. Crown	35	28	
2. Carleton	34	25	
3. Pride	33	52	
4. New Potter	32	41	
5. Early Britain	32	39	
6. Duke	32	37	
7. Mummy	32	20	
8. Centennial	32	12	
9. Trilby	32	9	
10. Archer	32	6	
11. King	32	..	
12. Paragon	31	54	

An average crop of 32 bushels 52 lbs. per acre.

INDIAN CORN.

The six varieties of Indian corn which have produced the largest crops for the past five or six years, taking the average of the results obtained on all the experimental farms, are:

	Per acre.	Tons.	Lbs.
1. Red Cob Ensilage	19	718	
2. Thoro'bred White Flint	18	1555	
3. Selected Leaming	18	788	
4. Giant Prolific Ensilage	17	1580	
5. Angel of Midnight	17	721	
6. Champion White Pearl	17	657	

An average crop of 21 tons 1,604 lbs. per acre.

CHOOSE THE BEST.

Taking the results of the cropping of the twelve most productive sorts of oats at the Central Experimental Farm for six years, where the climate and soil are fairly representative of the two great provinces of Ontario and Quebec, we find that they have given an average yield for the whole period of 69 bushels 17 lbs. per acre. The remaining 29 varieties have averaged during the same time 51 bushels 7 lbs. per acre, an average difference in favor of the productive sorts of 18 bushels 10 lbs. per acre. The value of these figures is more fully realized if we bear in mind that every bushel of oats added to the average crop of Canada puts

about one million dollars into the pockets of Canadian farmers.

In spring wheat we find similar persistent productiveness in certain sorts. Of the 31 varieties of this cereal which have been tested for six consecutive years, eight of these have appeared among the twelve most productive every year for the whole period. Comparing the best twelve varieties for 1899 with the best twelve for 1900 we find that eleven of them are the same. Taking the results of the cropping of the best twelve sorts of spring wheat for six years at the Central Farm we find that they have averaged for the whole period 26 bushels 57 lbs. per acre, while the remaining nineteen varieties grown for the same period have averaged 20 bushels 30 lbs. per acre, an average difference in favor of the best twelve sorts of 6 bushels 27 lbs. per acre.

The facts presented should induce farmers to choose the most productive sorts for sowing, a practice which if generally followed would no doubt result in a material increase in the average crops of the country and thus make farming more profitable.

Dressed Beef for England.

Four carloads of dressed beef, the first shipment of what is expected to develop into large operations in the future, were shipped to the English market last week. The shipment was consigned by William Harris & Company to Messrs. W. R. Fletcher, Limited, who are one of the largest dealers of meat in Britain, and who will handle it on commission. The cattle were slaughtered at the Harris abattoir in this city, and the meat, after being chilled, was placed in special refrigerators cars. A fast run on the G.T.R. and I.C.R. has been arranged to St. John, when the beef will be placed in the cold air compartments of the "Manchester City." Mr. Thomas Hayes, the representative of the consignees, and Mr. R. D. Harling, representative of the Manchester Ship Canal Company, will both accompany the shipment to Manchester.

The Messrs. W. R. Fletcher Company have wholesale establishments in all the larger cities in Great Britain, and 170 stores in the South of England, and Mr. Hayes, the company's representative, when asked as to his opinion of Canadian beef said: "It is much better than the Argentine beef, and as good as that produced in the Western States, and as to the market, you could probably sell 10,000 quarters a week if you could produce the stock. The Hammond, Swift, Armour, and Nelson-Morris Companies deliver weekly 40,000 quarters, but there will be no competition that will reduce the price."

The result of this first shipment will be watched with much interest by those interested in stock in Ontario.

The Agricultural Gazette

The Official Bulletin of the Dominion Cattle, Sheep, and Swine Breeders' Associations, and of the Farmers' Institute System of the Province of Ontario.

THE DOMINION CATTLE, SHEEP, AND SWINE BREEDERS' ASSOCIATIONS.

Annual Membership Fees:—Cattle Breeders' \$2; Sheep Breeders', \$1; Swine Breeders', \$1.
BENEFITS OF MEMBERSHIP.

Each member receives a free copy of each publication issued by the Association to which he belongs, during the year in which he is a member. In the case of the Swine Breeders' Association this includes a copy of the Swine Record.

A member of the Swine Breeders' Association is allowed to register pigs at 50c. per head; non-members are charged \$1.00 per head.
A member of the Sheep Breeders' Association is allowed to register sheep at 50c. per head, while non-members are charged \$1.00.

The name and address of each member, and the stock he has for sale, are published once a month. Over 15,000 copies of this directory are mailed monthly. Copies are sent to each Agricultural College and each Experiment Station in Canada and the United States, also to prominent breeders and probable buyers resident in Canada, the United States and elsewhere.

A member of an Association will only be allowed to advertise stock corresponding to the Association to which he belongs; that is, to advertise cattle he must be a member of the Dominion Cattle Breeders' Association, to advertise sheep he must be a member of the Dominion Sheep Breeders' Association, and to advertise swine he must be a member of the Dominion Swine Breeders' Association.

Who list of cattle, sheep, and swine for sale will be published in the third issue of each month. Members having stock for sale, in order that they may be included in the Gazette, are required to notify the undersigned by letter on or before the 5th of each month, of the number, breed, age, and sex of the animals. Should a member fail to do this his name will not appear in that issue. The data will be published in the most condensed form.

A. P. WESTERVELT, Secretary,
Parliament Buildings, Toronto, Ont.

Guelph Provincial Auction Sale a Great Success.

The first Provincial Auction Sale held at Guelph on Wednesday and Thursday of last week was a most successful affair, and completely falsified the prediction of pessimists, who had foreseen nothing but failure for the enterprise. It is true that the prices realized showed a somewhat wide range in some cases, but, in every instance, the animals that were of the best type sold for very satisfactory prices, and each fetched a price commensurate with its merit. Shorthorns sold best, the demand for dairy sires not being brisk. The attendance of buyers was very large. They were present from all parts of Canada, from as far west as Calgary and from the Atlantic coast, and a number from the United States.

The arrangements made for the sale were so complete that everything went off without a hitch, and there was no confusion or delay. The seller received his money and the buyer completed his purchase at once.

The average for the Shorthorns was: bulls \$75; females \$95, showing a general average of \$80. The highest price fetched by a bull was \$315, which was paid by N. Dyment, Barrie, to A. Moore, Greenwood, for Lord Roberts—36272—. Second in order of prices came Rantin's Pride—36289—, contributed by C. & G. W. Blyth, Marden, for whom \$200 was bid by Geo. Jamieson, Lucknow. W. Grainger & Son's Look At Me—32229— brought \$160, his purchaser being T. L. Pardo, M.P.P., Cedar Springs. M. Cowan, Guelph, secured Yorick and—36252—, entered by John Bydome, Milverton, for \$142. J. M. Gardhouse's Chancellor Boy—35722—, brought \$140, H. J. Davis's Rathallan Knight—36209—, \$138, and Hon. Joo. Dryden's Revealer—34 65—, and Jeffrey Bros.' Edward 7th—36392—, were knocked down at \$125 apiece.

Several other bulls fetched \$110 to \$115 with a number just over or just under the \$100 mark.

Among the Shorthorn females the best figure was realized by Verbena Languish 2nd, contributed by G. D. Fletcher, Binkham, who fell to the bid of Col. Todd, Kalamazoo, Mich., at \$200. Victoria, entered by Arthur Johnston, Greenwood, brought \$177, and another entry of his \$150, while Jas. Rainie & Son's Crimson Maud 8th—34539—, fetched \$166, and Daisy Elgin—32484—, and Bonnie Lass \$150 a piece.

Of the three Hereford bulls entered, Prince Jubilee 1332, bred and owned by O'Neil Bros., Southgate, brought this satisfactory price of \$125.

FARM HELP EXCHANGE

The Farm Help Exchange has been started with the object of bringing together employers of farm and domestic labor and the employees. Any person wishing to obtain a position on a farm or dairy, or any person wishing to employ help for farm or dairy, is requested to forward his or her name and full particulars to A. P. Westervelt, Secretary, Live Stock Associations. In the case of persons wishing to employ help, the following should be given: particulars as to the kind of work to be done, probable length of engagement, wages, etc. In the case of persons wishing employment, the following should be given: experience and references, age, particular department of farm work in which a position is desired, wages expected, and where last employed.

These names when received together with particulars will be published FREE in the two following issues of the "Agricultural Gazette" and will afterwards be kept on file. Upon a request being received the particulars only will be published, the names being kept on file.

Every effort will be made to give all possible assistance, to the end that suitable workers, male or female, may be obtained. Every unemployed person wishing to engage in farm or dairy work is invited to take advantage of this opportunity.

Help Wanted.

One or two farm hands wanted; also a domestic. No. 719. a

Boy, from 16 to 18 years old, wanted. Must be a good milker and handy with horses. Will engage by the year, and pay suitable wages to a reliable boy. No. 720. a

Wanted, by the Bothwell Dairy Co., a good, strong, active boy, from 16 to 18 years of age, to assist the herdsman

in taking care of cows, milking, feeding pigs, and doing other farm work. A good chance for promotion. No. 721. a

First class married man, with 2 or 3 grown up children, also a young man well trained in farm work, wanted on a fruit farm. No. 722. a

Young man, 18 to 20 years of age, industrious and of good habits, wanted on a farm. Would hire by the year, or for 8 months. No. 723. a

Wanted, a single man to care for a herd of dairy cows, help milk, and do other general work. Must be steady, and have no bad habits. Yearly engagement, and good wages and board. State wages asked, and give good references. No. 724. a

Good general farm hand required by the year. Must be a good milker, good plowman, and understand machinery, also be able to feed all kinds of stock and be kind to them. Wages, \$150 to \$175 with board and washing. References required. No. 725. a

Wanted about March 1, single man, or strong boy, used to general farm work, on an engagement of eight months or a year. Apply, with references, stating age and wages expected, to L. Rogers, Weston, Ont. a

Good man wanted for a good place on a farm near Gravenhurst. Good home and regular wages. No. 726. a

Good strong boy of 16 or 18, or young man, wanted on 100-acre farm in North Wellington, where mixed farming is carried on. Must have no bad habits, and be thoroughly reliable, as the proprietor is frequently away in winter, and be able to milk. Will hire by the year. Wages will be according to competency of man engaged. No. 729. a

Industrious young man of steady habits, and used to all kinds of farm work, care of stock, and milking, wanted by the year, or for 8 months. State wages expected. No. 730. a

Good farm hand wanted by the middle of March or April 1, on a 100-acre farm near Fergus. Must be honest, obliging, and trustworthy, and have no bad habits. Wages, \$15 to \$16 a month for 7 or 8 months, or would hire for a longer period. Also boy wanted, about the same time. Must be able to plow well, and be honest and willing, with no bad habits. Wages, \$12 or more a month, according to ability. Address D. B. Scott, Fergus, Ont. a

Wanted, man experienced with live stock and all kinds of farm work, of temperate habits, and a good and care-

ful worker. Must milk, if necessary. Will hire by the year, or for 8 months. No. 731. a

Single man wanted on a dairy farm near Toronto, to look after dairy cattle, milk, and make himself generally useful. Will hire by the year or for 8 months. Wages, \$18 a month, or \$180 by the year with board. No. 732. a

Wanted, a good steady man to work on a farm in Manitoba. Must be a good plowman, able to milk, look after horses and cattle, and take an interest in his work generally. Good wages and permanent employment to a good man. Also domestic wanted for general housework and to help with the milking. Good home and fair wages to a suitable person. No. 733. a

Young man from 18 to 20 years of age, who understands general farm work, wanted. Must be a good milker. Term to commence immediately for either 8 months or a year. Good wages given, with board and washing. No. 734. a

Wanted, at once, good reliable married man, with knowledge of farm machinery and implements, for a farm in New York State. Wages \$20 a month, free house and milk to begin with. Address, J. D. MacLeay, Tilsonburg, Ont.

Young man required at once on a stock farm near Montreal, to work with horses. Must be temperate and a good ploughman. Good wages and board without washing. No. 735. a

Wanted young man between 16 and 19 years of age, just out from England, with some experience in farming, will hire by the year, teach him farming, and pay moderate wages. No. 736. a

Domestic Help Wanted.

Wanted, on a farm in Grey county, a general servant. Must be kind to children. Good place for a smart girl or woman. Wages, \$6 a month. No. 727. a

Housekeeper wanted on a farm in the township of Manvers. State wages asked. No. 728. a

Situations Wanted.

Boy, 19 years old, who uses neither liquor nor tobacco, wants a place on a farm. No. 903. a

Boy is open to an engagement on a farm. Wages asked, \$150 a year. No. 904. a

Situation as general farm hand wanted by a sober, married man. Would take the management of a farm, or work it on shares. Is a Protestant and total abstainer. No. 905. a

Man, 22 years old, who has worked on a farm all his life, is open to engage at once. No. 906. a

Married man, who can milk, run machinery, and do general farm work

wishes to get a situation. State wages given. No. 907. a

Working foreman's place required. Would go to Manitoba or to the Western States. No. 908. a

Married man, French Canadian, with no children, who can speak English, and who has lived all his life on a farm, is open to an engagement. Has been for three years on a large stock farm in the Eastern Townships. Good references. No. 909. a

Farm Wanted.

Wanted to rent a farm near a city where milk can be sold. Address Mr. C., care of A. P. Westervelt, Parliament Buildings, Toronto. a

N.B.—Where no name is mentioned in the advertisement, apply to A. P. Westervelt, Parliament Buildings, Toronto, giving number of advertisement.

Farmers' Institutes.

Under this head the Superintendent of Farmers' Institutes will each week publish matter relating to Institute work. This will include instruction to Secretaries and other officers, general information about Institutes and Institute work, suggestions to delegates, etc. He will also from time to time review some of the published results of experiments conducted at the various Agricultural Colleges and Experiment Stations of Canada and the United States. In this way he hopes to give Institute members some valuable agricultural information which they might not otherwise receive, on account of not having access to the original publications. If any member at any time desires further information along any of the lines discussed, by applying to the Superintendent he will be put in direct communication with the Institution that has carried on the work.

G. C. CREELMAN,
Superintendent Farmers' Institutes.

Farmers' Institute Field Notes.

By the Superintendent.

IN THE OTTAWA VALLEY.

"The people in the East certainly have the advantage of us in the matter of summer rains," said Mr. T. H. Mason, of Strathfordville, on his return from a trip through Grenville, Dundas, Stormont, Cornwall, Glengarry, Prescott and Russell. "They have not had a drouth in that part of the country since 1884," continued he, "and this year they got plenty of snow in the middle of November, and the ground has never been frozen at all."

We remember last year visiting the farm of Mr. W. C. Edwards, M.P., at Rockland, and finding his pasture knee deep with succulent grasses in September; in fact as we went through that part of the country between the St. Lawrence and Ottawa Rivers we found the cattle everywhere revelling in luxuriant pasture. It was noticed more particularly because our York County farmers were at the time feeding ensilage in order to keep the cows up to an even flow of milk.

CORN IS KING.

"Notwithstanding their good summer pasture," said Mr. Mason, "they have come to recognize that corn is king of fodder plants. We on Lake Erie had thought Providence had specially favored us with the only climate in Ontario suitable for the growth of maize. What was our surprise, therefore, not only to find splen-

did corn growing in the region of Ottawa, but I was assured by Mr. Edwards and others that corn was matured by them 100 miles north of the capitol city.

"In Leeds we saw plenty of White Cap and Yellow Dent perfectly matured, and yielding 125 bushels of ears per acre.

"In Glengarry, Mr. D. M. McPherson matures Cloud's Early and Mammoth Cuban; varieties that we thought could not be grown outside of Southern Ontario."

IMPROVED BY SELECTION.

"Corn is not produced so far north by any hap-hazard methods," said Mr. Mason. "Those who have the best success are the ones who, after finding a variety of corn suitable to their needs, go through their fields each year and select the earliest and best matured ears. These they save for next year's seed. In this way it is not long before they have an early maturing strain."

On being asked what varieties were being grown in the East, Mr. Mason replied that in addition to those before mentioned Mr. W. C. Edwards and Mr. N. F. Wilson, two of the best farmers in Russell County, were growing Salsar's North Dakota and Wisconsin Early White. In Grenville Mr. Bush, one of the Institute officers, grows Mastoden Dent.

LIVE INSTITUTE IN RUSSELL.

"One real live man is worth half a dozen lukewarm Institute workers," says Major Sheppard. "In Russell Mr. W. C. Edwards, M.P., president of the Institute, is a whole host in himself. Every meeting starts sharp on the minute advertised, and is not closed so long as anyone has a word to say or a question to ask. More than that, the meetings are well advertised. Besides putting up bills, the president sees that a man with a horse and rig visits every farm house in the vicinity and leaves personally a copy of the programme of the meetings."

HALTON IS WELL MANAGED.

While comparisons are always odious, and we do not wish to draw invidious distinctions, yet we cannot help noticing an especially good thing now and again. Our attention was first called to the rapid progress being made in Halton County by the president and secretary constantly writing us during the year for men and women to address special meetings on special subjects. Although their county is not large, they have one of the largest memberships in the province, and it is on account of the co-operation of the officers and directors. In every place where a meeting is held a local director has practically charge of the arrangements prior to the meeting. While this man is engaged in advertising the meeting he also solicits membership, and, having been previously supplied with tickets by the secretary, he manages to dispose of quite a number. When the meeting time comes he hands over his list to

the secretary, and so the officers and delegates find awaiting them at each place a number of members all ready in their seats, and prepared to get all the information possible out of the meeting. "We are working for the top of the membership list this year," said Mr. J. L. Warren, the secretary, "and with the help of my president and directors I believe we are going to get there."

ROOTS AND SKIM MILK FOR WINTER PORK.

"We had some splendid discussions in South Waterloo," said Mr. T. G. Raynor. "Although this is one of the oldest parts of the province and one of the oldest Institute districts, yet the Institutes never did such good work, and never were more highly appreciated than during the present winter. At one meeting twenty different farmers discussed the matter of pig feeding, and all agreed that too much stress could not be laid upon the value of roots and skim-milk in the winter production of pork. The farmers here are all falling into line in the production of the good type of bacon hog. And right here is where the Institutes have done a grand work. Last winter the bacon hog question was discussed at over 700 meetings, and even in one year we see the beneficial results. I am glad to see," continued Mr. Raynor, "that our exhibition judges are also alive to the importance of this subject, and are judging in all classes pretty close to the bacon type."

YOUNG MEN AT THE MEETINGS.

"A notable feature of our meetings was the large attendance of comparatively young men and boys. This is what gives a delegate new life. In the early days of the Institute," continued Mr. Raynor, "while the parents would attend they did not see the necessity of taking the boys away from the teaming and allowing them to attend the Institute meeting. Now they have come to see the necessity of improved methods in their work. The boys themselves are also beginning to realize that the farmer who works with his hands and not with his head neither enjoys his work nor makes money out of it."

In North Waterloo Secretary Shantz holds three or four meetings each year for the young men. They are called Young Men's Meetings, and the farmers' boys get together and talk over their own business, and go home every time much benefited by their discussions.

IN NORTH BRANT.

"The success of our supplementary meetings in North Brant," said Mr. Raynor, "were largely due to the enterprise and hard work of Mr. A. W. Vansickle, of Onondaga, Vice-President of the Institute. Besides good practical discussions we had good evening meetings. A large number of ladies turned out, and we had also delightful music of the right sort, and just enough to add sauce to the good practical dis-

cussions and talks at the evening session."

NOT WANT OF FODDER BUT WANT OF CLEANLINESS THAT THREATENS OUR WINTER BUTTER BUSINESS.

Mr. Wenger, of Drayton, the great butter and egg man of that district, has been attending some of the meetings in Bruce, where Mr. Alex. McNeill is an Institute delegate. When asked why his creamery was not running this winter he replied that it was not for the want of cream but that he could not get cream of good quality. "Nearly all the cream that comes to the factory in winter is off flavor, and so we find it utterly impossible to manufacture a first-class sample of butter, and hence prefer not to make any at all."

Another difficulty, says Mr. Wenger, is that farmers will insist on ripening their own cream at home, and the consequence is the butter-maker cannot control the conditions of good flavor. "If the farmer hopes to get a higher test by this treatment," said Mr. Wenger, "he is much mistaken. The best result can only be obtained where the farmer keeps his cream cool. Where cream is to be added to that gathered the day before, it should be cooled down to the temperature of that with which it is mixed."

IN MUSKOKA AND PARRY SOUND.

This has a far away sound, and we are more inclined to associate it with rocks and lakes and summer resorts than with farms and farming. And yet Mr. C. W. Nash and Mr. Robt. Twiss, who have just returned from that country, say they have met some very successful farmers and some good farming land. "The majority of them are Old Country farmers," said Mr. Nash, "and as a rule read a great deal about their business."

"Those farmers who remain on their places and work their farms will generally make money. They have a good market for their products in the lumber shanties in winter and tourists in summer time. The trouble is, that a lot of the farmers want to be farmers and hired men both; that is, they work their farms in the spring and plant their gardens, and then neglect them entirely in the summer, and hire themselves out to tourists at so much per day. Where the Muskoka farmer attends to his farm the year round and sells his surplus produce to merchants he invariably makes money."

When asked if he had seen any stock in that country Mr. Nash replied that he had seen some first-class individual animals. "Certain parts" said he, "of Muskoka and Parry Sound are well adapted for stock raising, as they have a bountiful supply of pure water, rich native pasture, and clear rarified atmosphere."

3,000 YEARS OLD.

"To think of fighting an insect three thousand years and still having it with you," said Mr. J. E. Orr at Oakville

last week, "but we believe we have got the Codling Moth checked at last. In our township we have adopted the legislation made optional by the Ontario Legislature during its last session. In Saltfleet township we are bandaging our trees, and in this way I believe are going to solve the problem."

HOW TO BANDAGE FOR CODLING MOTH.

"We use the common 'Burlap or Sacking,'" said Mr. Orr, "such as is used by merchants for wrapping up dry-goods for shipment. We cut it in lengths according to the circumference of the trees to be bandaged, and in strips from sixteen to twenty inches wide. This is folded four times, and placed around the tree at a convenient point between the ground and the first limb. It is kept in place either by means of a stout string, or by overlapping the ends and fastening them with a tack. The bandages should be placed on the trees not later than June 15th. Every fourteen days thereafter, the bandage must be opened and all the larvæ and pupæ contained therein destroyed. This must be kept up until the 15th of August, which will cover the period of the latest brood. Last summer," said Mr. Orr, "I kept account of one tree during the entire season, and found at the end of the summer I had from this single tree, under one band, destroyed between 950 and 1,000 immature Codling Moths."

MAKE THE PUNISHMENT FIT THE CRIME.

In speaking of insects generally, Mr. Orr stated that they might be divided into two groups, according to the shape of the mouth parts and their manner of feeding. By the same classification also we apply our remedies for their destruction. "In the first place" said he, "we have all those insects whose mouths are fitted for biting, such as beetles, grasshoppers, and all insects which destroy plant food in the larval form. For those we must put poison on their food so that it may be taken internally and cause their destruction. For this purpose Paris green is without doubt our very best remedy. We have tried all sorts, and have come to the conclusion that with good Paris green all these insects may be kept in check."

"How can you tell when Paris green is adulterated?" some one asked. "I am glad you asked that question," said Mr. Orr, "or I might have forgotten to mention it. The most common adulterate used in Paris green is chrome green. This is insoluble in ammonia. If you will, therefore, take some common household ammonia and stir in your Paris green, you can easily determine its purity, for pure Paris green is completely soluble in ammonia."

"Watch and spray," said Mr. Orr, "if you would have your orchards and vineyards repay you for the time and attention given them."

The Farm Home

The Friendly Hand.

When a man ain't got a cent, an' he's feeling kind o' blue,
An' the clouds hang dark an' heavy an' won't let the sunshine through,
It's a great thing, O my brethren, for a fellow just to lay
His hand upon your shoulder in a friendly sort o' way!

It makes a man feel curious, it makes the tear-drops start,
An' you sort o' feel a flutter in the region of the heart.
You can't look up and meet his eyes, you don't know what to say,
When his hand is on your shoulder in a friendly sort o' way.

Oh, the world's a curious compound, with its honey an' its gall,
With its cares an' bitter crosses; but a good world, after all.
An' a good God must have made it—least-ways, that's what I say
When a hand rests on my shoulder in a friendly sort o' way.

—James Whitcomb Riley.

The Gospel of Breathing.

A hollow, caved-in chest is a beauty woe for which the afflicted one is herself responsible. If one is in ill-health it is a different matter. Disease will cause the lungs to shrink and contract, and depression of the chest is then unavoidable.

Full, perfect development of the chest is as natural as red lips or bright eyes. Breathe properly, carry yourself with a little vim, and use your backbone instead of a harness made of steels, whalebone and pink satin. Then you will be a real flesh and blood woman, not a fashion plate held together with hooks and eyes, and braced up with a corset that makes one's equator feel as hard as an oak tree or a pavement stone.

The day of the woody, corset-leashed figure is departed, praise be to heaven! The mode now is the rational one of natural, soft lines. The slender woman shuns corsets entirely, and wears a cunning little girdle of tapes or ribbons that brings absolute comfort and yet holds the abdomen in place, and gives a support for petticoats and gown. She can know the joy of full lung expansion, a privilege which civilized women have acquired only in recent years. The girdle is worn loose enough so that breathing can be from the diaphragm. (If you don't know what a diaphragm is, look in the dictionary, but of course you know.)

However, the subject of corsets is not the one which was to be harped upon to-day. I began to talk about slumped-in chests, and the absurdity of these unnecessary and disfiguring deformities.

Let me suggest some exercises for the beauty patient.

Stand in a doorway—a narrow doorway preferred. Place the palms of the hands flat on the door casing, the tips

of the fingers being placed at the height of the shoulders. Walk through the door without removing your hands until you are the length of your arms away.

At first you will declare that you can't do it. But keep on, day after day, and the first thing you know you will be so supple that you can float through the door after the approved hygienic fashion described. And it is great fun asking other girls to try, it looks so easy—but it isn't.

This exercise draws back the shoulder blades, bringing into play all the important chest muscles. It will make your throat full and pretty, and the bony girl will find that it will help fill up the ugly hollows in her neck and chest. Night and morning walk through the doorway fifty times.

Breathing exercises are invaluable if one would have a high chest, firm, full bust, and a waist round and supple. Nature did not intend us to waddle about with drooping chests that cause us to look like consumptives in the last stages of the disease.

Expand your lungs to the limit. Raise your chest and keep it raised. Practise the exercises as they are given here, but make it a rule to breathe correctly all the time. While waiting for a street car, while standing in the kitchen door, fill your lungs to the splitting point, and, more important still, expel thoroughly, emptying the lungs completely. It is quite as necessary to get all the bad air out as it is to get plenty of fresh air in.

When you arise in the morning slip on a bathrobe and bedroom slippers. Open the window. To take breathing exercises without perfect ventilation in the room is to waste your time.

Place yourself in an erect, easy position, with one foot a little forward, allowing the weight to rest upon it. Put the arms akimbo, the fingers pressing on the abdominal muscles in front, and the thumbs on the dorsal muscles on either side of the spine. Hold the head vertical, the hips back, the shoulders backward and downward, chest high and full.

Take a deep, tranquil breath, but one that will cause the chest to rise fully and to fall freely at every effort. Do this twenty times.

Second exercise: Place the heels together, right hand on the chest and left hand just above the waist line. Take a deep, long breath, raising the chest to the limit. Expel the breath from the diaphragm, allowing the left hand to press inward. But don't let the chest fall. Exhalation must be slow and complete. The air can be forced out of the lungs with the chest kept erect. It is not an easy matter to master this exercise in the beginning. Do this twenty times.

For relaxation try this exercise: Take a deep breath, close the hands, stretch one arm backward and upward, then the other, moving the body at

the waist line one way or the other, expelling the breath slowly. Keep in mind that belts and corsets restrict the development of the abdominal muscles, and it is these that you wish to stretch and pull and exercise.

In the act of inspiration take in as much air as you can hold. In that of expiration retain all you can and give out as little as possible.

This is particularly necessary in effusive breathing, which is excellent for chest development. Draw in a full breath and send it forth in a prolonged sound of the letter H. Never mind if you sound like a steam radiator ready to explode. You'll get a chest, and the girl who laughs at you won't.

Exercise in expulsive breathing: Draw in a full breath, and emit with a lively, expulsive force, still sticking to your H sound. Do not prolong it as you do in the effusive breathing. Let it be a sort of snort or moderately whispered cough. The breath is projected in the air. In the exercise mentioned just before this one the breath is merely effused into the surrounding air.

Before going to sleep give your lungs an air bath.

Lie flat on the back with no pillow under the head.

Place the arms close to the sides, then inhale and exhale slowly, allowing yourself a rest of five or ten seconds between breaths. Do this fifteen times. Then, with arms extended straight out across the bed, breathe slowly and deeply fifteen times more.

You'll sleep like a top unless you have been filling up on mince pie or cheese sandwiches or deviled crab with tartar sauce. Girls who do these rash acts aren't in our beautifying "set," so mention was after all unnecessary.—Chicago Times-Herald.

Some Good Recipes.

Rich Corn Cake.—Mix and sift one cup flour, one cup granulated cornmeal, one-fourth cup sugar, four teaspoons baking powder and one-half teaspoon salt. Add two eggs well beaten and one-fourth cup melted butter. Bake in a shallow pan.

Mushroom Purée.—Clean one-fourth pound mushrooms, break caps in pieces and saute in one tablespoonful butter five minutes. Add one cup chicken stock and let simmer ten minutes. Rub through a sieve and thicken with one tablespoonful each of butter and flour cooked together.

Sausages with Fried Apples.—Prick sausages several times with a carving fork. Put in frying pan, cover with boiling water and cook fifteen minutes. Drain, return to frying pan and fry until well browned. Serve on a bed of mashed potato and garnish.

Fried Apples.—Core apples, cut in one-third inch slices, and fry until soft.

Buckwheat Cakes.—Soak one-third cup fine breadcrumbs in two cups scalded milk 30 minutes. Add one-half teaspoon salt, one-fourth yeast cake dissolved in one-half cup luke-warm water and one and three-fourths cups buckwheat flour. Let rise over night, and in the morning add one tablespoon molasses and one-fourth teaspoon soda dissolved in one-fourth cup luke-warm water. Fry on a hot greased griddle and serve with maple sugar.

Coffee.—Mix one cup ground coffee with one-half cup cold water, one egg slightly beaten, and crushed egg shell. Turn into coffee pot, pour on six cups boiling water and let boil three minutes. Add one-half cup cold water and let stand on back of range ten minutes. Serve with sugar and cream.

Kitchen Thoughts.

Beware of the frying pan.

Consider a properly-cooked piece of meat a more artistic achievement than all the "icings" in the world.

Never forget the virtues of green vegetables.

Don't forget that even though foods be put up attractively they are likely to be villainous from the digestive standpoint.

See that the ubiquitous potato is roasted rather than boiled.

Convince yourself that "devil" and "croquetting" are bores save for utilizing first-class left-overs. Why make a good, wholesome chicken masquerade as a set of paper weights when she's at her best?

Don't cook vegetables in so much water that all the good goes down the waste pipe. And don't cook them so fiercely that flavor, color and form is bounced out of them.—*Philadelphia Record.*

Hints by May Manton

WOMAN'S TUCKED SHIRT WAIST, NO. 3755. TO BE MADE WITH OR WITHOUT THE FITTED LINING.

The finely tucked shirt waist has a vogue which few styles can rival. The very charming model illustrated is of linen batiste, with trimming of needle-work, but is entirely suitable for all the thinner, finer, washable fabrics, and for soft-finished silks. When made from cotton or linen it should be left unlined, but silks look better and wear better when made over a fitted foundation. The simple lining is correctly fitted with single bust darts, under-arm, shoulder, and centre back seams. The back proper is laid in two groups of five straight tucks, the fronts in three groups each, with larger tucks between extending to yoke depth only. The tiny tucks are exceedingly pretty and fashionable, while the arrangement of the larger ones between means just the additional fullness that is needed. The sailor collar is entirely separate, and could be omitted if a plainer waist is



3755 Tucked Shirt Waist,
32 to 40 in. bust.

preferred. The shirt waist sleeves are in bishop style, with invisible openings at the back, finished with straight cuffs. At the neck is a stock collar covered with the tucked material.

To cut this waist for a woman of medium size, $4\frac{1}{4}$ yards of material 21 inches wide, 4 yards 27 inches wide, or $3\frac{3}{8}$ yards 32 inches wide, or $2\frac{1}{4}$ yards 44 inches wide, will be required.

The pattern No. 3755 is cut in sizes for a 32, 34, 36, 38 and 40 inch bust measure.

The price of above pattern post-paid is only 10 cents. Send orders to "The Farming World," Confederation Life Building, Toronto, giving size wanted.

Useful Hints.

Soap should be kept for some time before it is used. It will then go further.

Fish as a food contains much the same proportion of nutriment as meat, only in a much lighter form.

A lump of soda laid upon the drain pipe down which waste paper passes will prevent the clogging of the pipe with grease.

Chloride of lime is an infallible preventive of rats. It should be put down their holes and spread about wherever they are likely to appear.

Cayenne pepper blown into the cracks where ants congregate will drive them away.

Soap and chalk mixed and rubbed on mildewed spots will remove them.

All spices should be kept in tins, and salt be kept in a dry place.

Baked apples are the most healthful dessert that can be placed upon the table.

Good pastry can only be made when the ingredients are absolutely cold.

The colder eggs are, the quicker they will froth.

A spoonful of vinegar added to the water in which fish is boiled will make it firm and tender.

A little vinegar should be kept boiling on the stove while onions or cabbage is being cooked; it will prevent the disagreeable odor going through the house.

Grained wood should be washed with cold tea, a small surface only at a time, and rubbed well with a flannel cloth before it becomes dry.

Ammonia painted over woodwork will darken it.

Pickles should never be kept in glazed ware, as the vinegar forms a poisonous compound with the glazing.

Always well heat a gridiron before broiling meat, fish, bread, or anything else.

Whole cloves will more effectually exterminate moths than camphor, tobacco or cedar shavings.

Lemons will keep a long time if covered with cold water.—*American Queen.*

How to Run a Furnace.

The following directions, addressed to those who take care of their own hot-air furnaces, are given at the end of an article on the subject by T. N. Thompson in *Science and Industry* (January):

"Keep the furnace clean outside and inside. It is part of the house. Do not let the ashes accumulate in the ash pit, or the grates will soon burn out.

"Fire lightly and often if you can, and you will not use so much coal. If you must fire thick, pile it up first on one side, then on the other. This will give you fire on top all the time; otherwise the fire will be alternately dead and alive on top, and the heating results will be intermittent.

"Keep the fire door shut. If you want to deaden the fire do so by closing the bottom door only. It this will not shut tight enough you had better get the furnaceman to make it fit close.

"Never open the check draught at the back of the heater, otherwise this will allow furnace gases to flow through the joints of the furnace, and poison the fresh air that comes up the registers. Rather open the by-pass damper that is fitted to all modern furnaces to prevent ash dust from getting into the cellar when the grates are shaken. This should check the draught.

"Do not use a damper in the cold air box, but regulate your heat at the registers. This is the best safeguard against furnace gases getting into the house.

"Keep the water tank filled with water, to moisten the air, for in winter the hot air is too dry.

"Keep the ground around the mouth of the fresh air box clean.

"Do not sweep dirt from the floors into the registers.

"Train your wife to run the furnace when you are sick.

"Finally, do not jump on the furnaceman because you cannot run your own furnace."

The Farming World

A PAPER FOR FARMERS AND STOCKMEN.

Publisher, D. T. McAINSH.
Editor, J. W. WHEATON, B.A.

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Business Notes.

Sheep and poultry, page 664.

Shorthorn announcements, pages 662-3.

Tolton Bros. for spring goods, page 667.

Ayrshires, Jerseys and Guernseys, page 663.

Spavia Cure, page 666, don't allow your horses to suffer.

Very large attendance at the Ontario Veterinary College, see 663.

Deafness can be overcome. Write to common sense Ear Drum Co., page 665.

Champion Evaporators make splendid maple sugar and syrup, no doubt the best on the market. See page 638.

Vermont Farm Machinery Company makes a good showing in their announcement on page 638.

Harvesting machinery. See Deering announcement on page 668, Matthew Moody on same page.

Mammoth Southern seed corn is the right thing, according to E. D. Tillson's testimonial on page 668.

Agents goldmine in the steam cooker handled by U.S. Specialty Co. See announcements page 667.

Rail fences are not thought of this century, being fast replaced with wire. American Steel Co. advertisement on 657.

Gombaul's Caustic Balsam is giving splendid results where used. Testimonials are received by every mail. See announcement on page 666.

Mr. Gillespie, of Vessot & Co., is an up-to-date business man, their grinder can be seen at 108 Front St., East, Toronto. Announcement on page 638.

The Canadian Dairy Supply Co., handling DeLaval cream separator, claims this machine to be the most profitable to the farmer. The great number in use is a proof. See announcement on page 638.

Spraying time will be soon. Spramotter announcement on page 660. A very convenient hand sprayer is now offered at a price to suit all, no pumping needed while spraying. See advertisement on page 660.

A beautiful seed catalogue of Steele-Briggs is to hand and an interesting hanger showing the wonderful growth, the result of 28 years supplying good seeds. Write for catalogue and hanger. See front page of March 12.

QUESTIONS AND ANSWERS

Grub in Sheep's Head.

A subscriber at Rodney, Ont., writes:

(1) "I have a large flock of sheep and to protect them from dogs in the summer time I intend to have a moveable wire fence or gates so as to make a fold or enclosure to put the sheep in at night. Do you think it advisable?"

(2) "Do you think the dogs will dig through underneath the fence?"

(3) "Is a man allowed by law to put poison on his own farm so that dogs which come on the farm may get it. Is he liable to a fine for doing so?"

(4) "Give me a recipe to cure grubs in a sheep's head. I have a sheep which droops her ears and runs freely at the nose. Several breeders have seen her and think she has the grub in the head. She eats well and is in good condition."

(1) We should think that a fold or enclosure for the sheep during the summer would be a good plan.

(2) No, not if the fence were built close to the ground.

(3) A person is not allowed to place poison on his farm to kill his neighbors' dogs, unless said dogs have been caught killing or worrying his sheep. In such cases it would be better to shoot the dog or dogs than place poison where it might be taken by other animals.

(4) Grub in the head is a disease affecting sheep, due to the sheep gadfly laying its eggs in the nostrils of the sheep, which eggs eventually hatch out the larvae or grub, causing sneezing and discharge of mucus from the nostrils and by the irritation set up in the nasal cavities may cause death. The gadfly somewhat resembles a small brown bee. They usually appear in June and July, and the length of time the larvae take to pass through their full development in the nasal chamber is about 10 months.

Preventive measures are the most satisfactory to adopt, tarring the nostrils being as good as any. For a flock it is a good plan to bore two inch auger holes in a log, place salt in the bottom and smear the edges with tar. The sheep in their desire for salt will in this way apply the tar themselves and thus keep off the fly.

Treatment of the grub itself, as a rule, is not very satisfactory. The usual plan is to inject some agent into the nasal cavity, such as olive oil and turpentine in equal quantities. Pass the nozzle of the syringe up the nostril and inject about a teaspoonful; withdraw the syringe and in a few moments serve the other nostril in the same manner. The trouble with this is that the turpentine will cause much irritation to the sheep for a while, though the oil will counteract this in a large measure.

The Royal.

The annual show of the Royal Agricultural Society of England, will be held at Cardiff, Wales, from June 26 to July 1, 1901.

Mr. James Miller Honored.

At the Commercial Hotel on Wednesday evening the Guelph Fat Stock Club tendered a complimentary banquet to Mr. James Miller, the retiring president, who has been connected with the club since its inception in 1882. There was a large attendance of local and visiting stockmen. Mr. J. M. Duff, Guelph, presided.

Mr. Miller was presented with an illuminated address, accompanied by a gold watch and a purse of gold, as a slight token of his services in the interest of live stock in the Guelph district.

Shorthorn Breeders.

The fifteenth annual meeting of the Dominion Shorthorn Breeders' Association was held at Guelph on Thursday last. There was a large attendance and representatives were present from many of the outside provinces, including Nova Scotia and the Territories. The greatest enthusiasm was displayed in the proceedings, and in the work outlined for promoting the interests of the most popular and useful breeds of cattle.

The chair was occupied by Mr. Robert Miller, vice president, who in his opening address referred in feeling and appropriate terms to the able services of the late president, Mr. John I. Hobson, whose labors for the Association and for Shorthorns had been most self-sacrificing and helpful.

The annual report of the Executive Committee was presented by the secretary, Mr. Henry Wade, and showed a most satisfactory state of affairs. The registrations have steadily increased for the last four years, 1900 being the banner year. The amount granted for prizes at several exhibitions in the Dominion totalled \$2,550, as against \$2,075 last year. In addition \$475 had been given in prizes to the Provincial Winter Fair, through making the members of the Shorthorn Association members of the Dominion Cattle Breeders' Association. Through the efforts of a committee which visited the Maritime Provinces, the Eastern breeders had been induced to amalgamate their herd-book with that of the Association. The number of importations of Shorthorns during the year were 115 bulls and 343 cows. Special reference was made to W. D. Flatt's sale at Chicago, where 59 head averaged \$793.40 each, and to John Isaac's sale at Markham, where 52 animals averaged \$421 each. The annual fee had been reduced to \$2 by which the membership to the Association had largely increased. In 1900 there were 7,990 registrations, as against 7,068 in 1899. The income from

members' fees was \$2,502 as against \$2,112 in 1899. The total receipts for the year were \$19,431, and the expenditures, \$11,210.56, leaving a balance of cash on hand of \$8,220.44.

A committee was appointed to draft a resolution of condolence to the families of the late John I. Hobson, and of the late J. H. Pickrell, secretary of the American Shorthorn Breeders' Association.

Several recommendations were presented by the Board of Directors for consideration by the meeting. In connection with the recommendation of grants to fairs the following resolution, moved by A. W. Smith and seconded by Capt. T. Robson, M.P.P., was adopted: That the Dominion Shorthorn Breeders' Association grant the amounts as outlined below from the funds of their association towards the prize lists of the different exhibitions, on condition that each fair board association grant the same amount for Shorthorn prizes or in event of any exhibitions not giving the same amount, the amount donated by this Association be the same as the sum granted by said exhibition associations, but they must, however, give as much for Shorthorns as for any other breed. Competition to be open to Canada or the United States, and all animals must be recorded in the Dominion Shorthorn Herd Book. Grants as follows: Toronto, \$1,000; London and Winnipeg, \$500 each; Brandon, \$250; Ottawa, Sherbrooke, Que., Halifax, N.S., St. John, N.B., Charlottetown, P.E.I., and New Westminster, \$100 each; Assiniboire, Saskatchewan and Alberta, \$25 each.

In the discussion on the above resolution, a strong feeling was expressed in favor of making the grant to the Industrial as large as possible during 1901, with a view to bringing out an extra large exhibit of Shorthorns with which to attract visitors from the Pan-American. A few opinions were expressed in favor of recommending a list of judges to the local fairs and of giving prizes only to the breeders of the animals shown. But the latter view was considered by the majority present to be unfair to enterprising breeders with means and would not be in the best interest of Shorthorns generally, though a few classes for the breeders only might be advisable.

It was decided to continue the arrangement of last year and make all the members, members of the Cattle Breeders' Association at 50 cents each, the amount of the fee to be devoted to prizes at the Provincial Winter Fair.

A resolution moved by Major McGillivray, and seconded by A. W. Smith, was unanimously adopted, conveying to the Minister of Agriculture under whose direction and with the assistance of Live Stock Commissioner Hodson and others the auction sale had been conducted, and which had terminated so satisfactorily, the thanks of the Association.

Mr. Wm. Linton, seconded by Mr. Arthur Johnston, moved the following resolution, which was carried without

a dissenting voice: "That we, the members of the Dominion Shorthorn Breeders' meeting, feeling that Mr. Robert Miller has sustained a great loss through the slaughter of 13 animals imported by him in 1898, which we believe were imported by him in good faith, believing that he had complied with all the requirements of the law, hereby request that the Dominion Government pay him the cost and expense connected with importing said cattle."

Mr. F. W. Hodson, Dominion Live Stock Commissioner, addressed the meeting and strongly urged that the Shorthorn breeders make a special effort to turn out an excellent exhibit for the Pan-American. An effort should be made to get together a fine exhibit that would do credit to Canada. Five cows should be selected for competition in the dairy test at Buffalo.

Officers for 1900 are as follows: President, Robt. Miller, Stouffville, Ont.; 1st vice president, Wm. Linton, Aurora, Ont.; 2nd vice president, W. G. Pettit, Freeman, Ont. Vice-presidents from Provinces: A. W. Smith, Maple Lodge, Ont.; F. G. Boyer, Georgetown, P.E.I.; W. H. Ladner, Ladner's Landing, B.C.; James A. Cochrane, Hillhurst, Que.; George A. Fawcett, Sackville, N.B.; R. A. Wallace, High River, Alta.; C. A. Archibald, Truro, N.S.; W. E. Heubach, Touchwood Hills, Assa.; J. E. Smith, Brandon, Man. Board of Directors, C List: W. G. Cargill, Cargill, Ont.; Alex. Smith, Maple Lodge, Ont.; John Isaac, Markham, Ont.; Geo. Raikes, Barrie, Ont.; C. M. Simmon, Ivan, Ont. B List: W. J. Bggins, Clinton, Ont.; Wm. B. Watt, Salem, Ont.; James Tolton, Walkerton, Ont.; W. D. Flatt, Hamilton, Ont.; John Davidson, Ashburn, Ont. A List: Edward Jeffs, Bondhead, Ont.; H. Smith, Hay, Ont.; T. E. Robson, M.P.P., Ilderton, Ont.; T. Russell, Exeter, Ont.; James M. Gardhouse, Highfield, Ont. Delegates to Industrial Exhibition: Hon. John Dryden, Brooklin, Ont.; Robt. Miller, Stouffville, Ont. Delegates to Western Fair: Henry Smith, Hay, Ont.; C. M. Simmons, Ivan, Ont. Delegates to Central Fair, Ottawa: R. R. Sangster, Lancaster, Ont.; D. McLaren, Dunmore, Ont. Delegates to Provincial Exhibition, Nova Scotia: O. Chase, Church Street, Cornwallis, N. S.; C. W. Holmes, Amherst, N.S. Delegates to Provincial Exhibition, New Brunswick: Senator Josiah Wood, Sackville, N.B.; George A. Fawcett, Sackville, N.B.; Delegates to Provincial Exhibition, Prince Edward Island: C. C. Gardiner, Charlottetown, P.E.I.; F. G. Boyer, Georgetown, P.E.I. Delegates to Winnipeg Industrial Exhibition: Hon. T. Greenway, Crystal City, Man.; W. S. Lister, Middle Church, Man.

Mamma (plying the strap)—There, there and there! Now, don't let me catch you in the pantry again. Tommy—Boo! hoo! I tried not to let you catch me this time.

Prince Edward Island Meetings.

(SPECIALLY REPORTED.)

THE FRUIT GROWERS' MEETING.

The meeting of the Fruit Growers' Association opened at Charlottetown on Wednesday, Feb. 6, at 2:30 p.m., his Honor, the Lieutenant-Governor, and a number of prominent fruit growers being in attendance.

President H. A. Stewart, Hamilton, P.E.I., read an address directing the attention of the Association to protecting ourselves against the dread San Jose Scale. He gave a review of the year's progress in fruit growing, sharing a satisfactory advance along all lines.

Rev. A. E. Burke, Alberton, then read a paper on forestry. The attention of the Association was called to the fact that this province is being rapidly deprived of its forest areas, and a strong plea was made for careful preservation of shelter belts.

Premier Farquharson in addressing the meeting stated that the Government had lost money by inattention to horticulture. In conversation with Hon. Mr. Fisher recently, he gathered that there is a great future in store for the Island as far as horticulture is concerned and announced that the Dominion Government had in contemplation the granting of aid for the development of horticulture and agriculture in the Lower Provinces.

Prof. Macoun, of Ottawa, addressed the Association on the subject of general fruit growing. First, he strongly urged the importance of union and therefore wise organization. Demonstrate to your Government that it is in their interests to assist you; unite with the fruit growers of Nova Scotia and Ontario in securing the best transportation as well as careful inspection that will make fraud practically impossible.

Rev. A. E. Burke moved the re-affirmation of the resolution passed last year asking the Government to take steps to prevent the introduction of the San Jose Scale. Before adjourning the different specimens of apples that had been brought to the Association were sampled. Many of them were of excellent flavor and would compare favorably with those imported from the other provinces.

Prof. Robertson in opening referred to the importance of the farmer's calling and the necessity of his doing business on business principles and keeping in touch with the march of progress. There is always something to be learned by the farmer. He was pleased to hear of the progress of dairy farming in the Island, as, other things being equal, it was one of the most profitable branches of farming. He was followed by Lieutenant-Governor McIntyre who gave a short address.

The committee on new fruits recommended an apple known as Guard's Seedlings and the seedlings and the seedling plum originated by Geo. King, Royalty. Prof. Macoun then delivered a lengthy and valuable address on "Apple Growing." Sir Louis

Davis, on whom a committee had waited, then addressed the meeting, giving many valuable hints to the Association.

The following officers were elected for 1901: President, Edward Bayfield, Hamilton, P.E.I.; vice-president, David P. Irving, Vernon River; secretary, Peter McCort; treasurer, Thos. L. Gourd. Directors—Queens—John Johnson, Long River; J. E. McCallum, Covehead; John Newson, Long River; Kings—John Robertson, Inkermann; Fred. Piggott, Savage Harbor; F. G. Bwyer, Georgetown; Prince—Rev. A. E. Burke, Alberton; Charles Dickie, H. A. Stewart, Hamilton. Auditors—F.L. Hassard, Charlottetown, and L. B. Miller.

It was moved by William Whitehead, and seconded by John Gill, that whereas by reports given out in the newspapers as expressing the opinions of Premier Farquharson, and his Government, we understand a movement is on foot to contribute from the revenue of this province towards the maintenance of an agricultural college in Nova Scotia, and whereas under such an arrangement the maintenance of students from this province would impose a heavy burden on the parents of such students, therefore, resolved that this Association desire to place itself on record as being opposed to any scheme that will cause an expenditure of our revenue in the neighboring province, or necessitate sending our students at heavy expense to an agricultural college outside the province. This resolution was ordered to stand over.

FARMERS AND DAIRYMEN.

The semi-annual meeting of the P.E.I. Farmers' and Dairymen's Association began at Middleton, Prince county, on February 8. President Simpson, Vice-president Gibson, and Secretary McInnes, besides a goodly number of delegates from the local associations all over the province were in attendance. The leading outside talent engaged for the meetings were Professors Robertson and Macoun, of the Experimental Farms.

Mr. W. Simpson opened the meeting with a paper entitled "Higher Education for Farmers," which brought out quite a lengthy discussion. The Association was then favored with a paper from Capt. Jos. Reid, M.L.A., on the enormous trade resources of the Argentine Republic. This paper brought forth quite a discussion in which it brought out the suggestion that the patrons of our cheese and butter factories were at the foundations of the whole dairying industries and must see to it that the milk is pure and sweet. The discussion was carried on by Prof. Macoun, of Ottawa; R. Robertson, of Nappan, N.S.; J. S. Clark, Bayfield; J. S. Ferguson, Marsfield; D. Arbing, Freetown; Walter Simpson, Bayfield; W. J. Gibson, Marshfield; L. A. Gibson, Marshfield, and C. A. Stevenson, New Glasgow.

A paper was presented by J.S. Clark dealing with the subject of Farmers'

Institutes and the desirabilities of farmers adopting some such system of this kind that has been so successfully carried on in Ontario for the last fifteen years. He showed that if we were ready the Dominion Government was ready to spend \$2,500 in the three provinces towards Farmers' Institutes. It was resolved that the Association express its willingness to adopt the Farmers' Institute system as they have it in Ontario, provided that the Government pay the necessary expenses.

Prof. Robertson gave a practical address, embodying many matters of interest to both farmers and dairymen. He urged more education so that farmers could grasp a better knowledge of the soil and methods of tillage. He was glad to find the P.E.I. farmers were learning that the old system of selling off the raw material, as the roots, grain and forage, was a most vicious practice, and that the only sensible method was to feed the raw material to good working animals. Farmers are fast learning that they could be manufacturers in the full sense of the word, converting the crude products into fine butter, cheese, bacon, mutton and poultry products. In his capacity of manufacturer the calling of the farmer presupposes a larger degree of skill than when simply giving the raw products for market. The animal mechanism is a more complex machine than may be found in any factory, and profitable management of these animated machines calls for the highest skill and business acumen. Adult farmers can only learn from each other, keeping their eyes open and learning from their own experience. The Farmers' Institute was primarily a school for the farmer and should be encouraged. It is the only school in which the farmer has the opportunity of learning. J.A.M.

Useful Horse Remedies.

The following are three good veterinary formulae, which are worth preserving, as they are sure to come in handy at some time or other. The first is a rubbing liniment, and is known in some parts as "Sherwood's," viz, gum camphor 3 oz., tincture of cantharides 3 oz., tincture of capsicum 3 oz., alcohol 1 pint, and tincture of arnica 1½ pint. For gasoline liniment, take of alcohol ½ pint, gasoline ½ pint, tincture of arnica ½ pint, and tincture of iodine 4 oz. For leg lotion take corrosive sublimate 1 oz., muriate of ammonia 2 oz., acetate of lead 3 oz., sulphate of copper 2 oz., ether 2 oz., alcohol ½ pint, and water 1½ gallon. These recipes are in use in certain hunt clubs and amongst polo pony breeders, etc. The first two are stimulating rubbing liniments for lameness and soreness, the second being the stronger of the two. The third, the leg lotion, is an astringent, antiseptic wash, applied after a hard run or race. It is used for the purpose of hardening the legs, and preventing "stocking up," or swelling of the legs after a hard go,



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and also to heal up all scratches, cuts, and abrasions that may have been incurred during the run.

The Market Classes of Horses.

In his address before the annual meeting of the Ohio Horse Breeders' Association at Columbus, Col. F. J. Berry gave the principal points of the five classes of market horses as follows:

Class 1.—The first-class roadster and speed-way horse. High bred, high finish, good conformity; 15½ to 16¼ hands high; fine head, broad between eyes; eyes large, bright and prominent; nostril large; nose thin; ear set on top of head, sharp, narrow; smooth neck, rather thin, crest arched; withers high and thin; throat well cut in; jowl wide (narrow jaws cause choking on checking up); back short, well ribbed up to hip; hip round and smooth; root of tail high; front legs close together; shoulders not so wide, but deep; breast full; limb flat-bone, not flat but tendon set well from bone, giving limb a flat appearance. Limb clean, no meat; pastern well shaped, giving good spread; good arm muscle; foot round, not too high at rear, nor too low. Hind limb should be straighter than the average; pastern same slope as in front limb, tendons well set away from bone, presenting a flat appearance for the limb (there are few spavins, except on small, round legs). Action must be straight away, no side motion. Without straight action you can not have a first-class horse. Color should be a fashionable bay, red, brown, chestnut, golden-sorrel, dark gray; black is passable; light no good, but pure white, with good points otherwise, brings a big price. Small horses no account in this class, and in no case must they be over 16¼ hands high. Horses sell largely on manners. Weight 1,000 to 1,200, best 1,100 to 1,150 pounds.

Class 2.—Of little value. The cab horse, weight 1,050 lbs., 15 hands high.

Class 3.—The omnibus or express horse. The former is 15½ to 15¾ hands high, and of blocky build. The express horse is one-half draft, active and quick. They are profitable to raise, as the farmer gets \$100 to \$150 for them, and gets a year's work out of them. They weigh 1,250 to 1,350 or 1,400, and must be "all horse."

Class 4.—The draft horse. This is the horse for the farmer to raise. He should weigh 1,700 to 2,000 lbs., nice shape, smooth and round, short back, good hip and bone, straight line movement. Must have all the good qualities. The farmers should raise drafters because it does not require such a specialized knowledge, nor so much time as the speed horse.

Class 5.—The American Trotter. He did not advise farmers to raise this class. If they do raise them, they should be raised for class 1 and not for the track.

Horses of the different classes were then brought into the ring, and Col. Berry designated the points of each. In examining a horse, have him trot away from you. See that he has the straight line movement and that you can see the frogs of the feet at every step. He should strike the ground with his toes and not with his heels. He should be full in the stifle, as that shows strength. Concerning markings, he said he would rather have no white. Solid colors are best.

Housing Hens.

Experiments at the Maine station showed that pens containing 20 birds did not give as much profit per bird as did pens of 15 birds, but the pens containing 20 birds gave a greater total net profit per pen than did those containing any greater or less number of birds. Pens with 25 birds gave slightly greater net returns than did the 15 bird pens. The pens that had 30 birds each gave very much less net returns than did any of the others.

When 20 birds were confined on 160 feet floor space, they yielded more profit than did 15 birds when kept in a similar room.

The Maine experiment station has undertaken an experiment which will require a long period of time—an attempt to establish families of hens that shall excel as egg producers. To do this, reliance upon the laws of inheritance and transmission must be coupled with selection. Selection will depend upon the actual production of the birds taken for foundation stock. From offspring of the foundation stock will be selected—by use of nest boxes—the greatest yielders of desirable eggs.

The male birds will be bred from dams of known capacity and quality. Only by use of nest boxes and leg bands can the work be controlled. Two hundred and sixty females, from three distinct breeds, are undergoing test for the foundation stock. One year's time will be required in the selection. From among them it is hoped may be found a few birds that are suited for the founding of the families. The breeds employed are Barred Plymouth Rock, White Wyandotte and Light Weight Light Brahma.

Extremes meet when a dinner includes calf's head and oxtail soup.

Roots and Other Succulent Food for Swine.

Ind. Station Bulletin 82.

Though previous feeding trials had shown no financial gain from feeding roots to swine, the use of sugar beets for swine by many feeders and the favorable comments of such feeders led to a trial of the sugar beets for winter fed pigs. Eight Chester White pigs were divided into two lots of equal weight, and fed from Nov. 8 to Feb. 14. One lot received cornmeal and shorts, and the other lot the same feeds with sugar beets. The lot fed no beets made an average gain of 4.52 lbs. daily; those fed beets only 3.89 lbs. The no-beets lot made a net gain over the other lot of 61½ pounds at a cost of 66 cents for the excess value of the grain ration over the beets and grain.

Rape was also fed to swine during summer, one lot being allowed as much as they would eat of this succulent food, freshly cut, with corn meal, shorts and skim milk. The other lot received no rape. Each pound of flesh of the rape fed lot cost 2.65 cents; of the other lot 2.47 cents; both economical rates of gain, but indicating no great value in the rape.

Artichokes, "pussley" and pumpkins as food for swine are also discussed, with some experiments. The author concludes as follows: "The real value of succulent food for swine cannot be measured by simple gains in weights of pigs given such food. Undoubtedly where animals are confined to a pure grain diet, the digestive tract is more torpid and sickness is more liable to occur than where more succulent food is given. Then the digestive organs are more active and natural in movement and the body is better prepared to resist disease than when pure grain is fed. The influence of this succulent food on sows in pig or sucking pigs cannot be measured by the scales, but the general testimony of practical feeders of experience is that such diet promotes easy parturition, a generous flow of milk and vigorous offspring. Pigs that are to be fattened in a short period of feeding do not perhaps need roots in their diet, though I believe it would be to their advantage; but breeding stock, both male and female, and suckling sows will certainly be materially benefited by summer pasturage and roots in winter. Swine should always be fed with discretion the first few days after turning on pasture to prevent bloat, but where roots are fed no especial danger is likely to occur."

When a modiste sues a customer she expects redress.

Sheep Feeding Experiments.

Neb. Station Bulletin 66.

To induce Nebraska farmers to raise more sheep and thus dispose of the rough foliage which grows there so easily and avoid waste, the station fed 100 grade Shropshire lambs, using a variety of rations. Certain only of the conclusions are of interest in the East, but the splendid showing of alfalfa hay may be of value if it leads some feeders to try this great forage. The lambs fed alfalfa made 52 per cent. greater gains than the lambs fed prairie hay and the same grain ration; while the average profit on each lamb when alfalfa was included in the ration was \$1.97, as compared with a profit of \$1.39 when prairie hay was the roughage.

Preserving Newlaid Eggs

When attempting to preserve eggs it is advisable, says the *Family Doctor*, to only work upon those which are absolutely fresh, and it is as well to reject any which are soiled in any way. Wipe the selected eggs carefully with a clean, dry cloth, and then rub with the palm of the hand, which has recently been washed, dried, and moistened with a drop or two of boiled linseed oil. Care should be taken that no spot on the egg is left without a film of oil. The eggs are then placed on a cool, airy, but dust-free shelf until the oil has dried. This process takes some three days, but if a "dryer" (as painters call it) be added to the oil before it is used the process of drying is much shortened. Care must be taken not to employ either too much or too little oil. In the first case, the oil takes a long time to dry, and when packed away the egg is apt to stick, and thus is often broken when removed from the box; in the second case, the egg, of course, is not properly protected, and is sure to become stale. A little practice, however, soon enables anyone to find out how to carry out the process properly. It is as well to note that eggs prepared in this way are of no use for sitting purposes, although not injuriously affected for eating. It is as well to note that painters' "dryers" are generally compounds of lead.

She—Cruel to his boy, is he? He—Yes; he seems to think it's proper to pick up his son and heir as he would a popular air—by ear.

Sillicus—The average woman is a dismal failure when she tries to crack a joke. Cynicus—And yet she can break a man without an effort.

A Sprayer
for
\$2.00

Mechanically perfect in construction.
Does the work as well as more expensive ones.
Will cover tallies; fruit trees.
Sends out fine spray for field crops.
It works by air pressure—no pumping while operating.

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J. A. COOPER,

200 Wellesley St. TORONTO, ONT.

Provincial Sale at Guelph

Full Report of Sales Made and Prices Paid

NOTE—The first name given is that of the seller or contributor of the animal, and the second that of the purchaser.

SHORTHORN BULLS.

- John Bathgate, Armstrong's Mills, Crimson Chief 18901, calved Feb. 25, 1893. Alex. White, Guelph, \$110.
- R. Talbot & Son, Everton, Ont., Elmira Chief = 22535 =, calved Nov. 9, 1895. Alex. White, Guelph, \$115.
- Jas. Webb, Osprings, Ont., Alma Chief = 22534 =, calved February 24, 1896. Jas. Jackson, Rapid City, Mich., \$110.
- W. A. Jamison, Thornton, Ont., Karagan = 26195 =, calved December 20, 1897. A. Barber, Guelph, \$54.
- Jas. Speir, Brussels, Ont., Carlisle = 31869 =, calved March 23, 1898. Hugh Semple, Kerwood, \$67.
- A. Jarvis, Milton, Ont., Lord Roberts = 36327 =, calved September 15, 1898. A. Barber, Guelph, \$50.
- Wm. Grainger & Son, Lonsdale, Ont., Look at Me = 32229 =, calved November 10, 1898. T. L. Pardo, M. P. P., Cedar Springs, \$160.
- Frank Bolton, Morden, Ont., Nimrod 2 = 32858 =, calved November 15, 1898. Jas. Benham, Speedsides, \$100.
- H. C. Graham, Ailsa Craig, Dane 3rd = 36370 =, calved May 3, 1899. D. C. Black, Falmouth, N.S., \$65.
- John Armour, Blyth, Field Marshal = 34154 =, calved May 5, 1899. C. A. Archibald, Truro, N.S., \$60.
- E. Sutherland, Bennington, Royal Strathallen = 33959 =, calved May 15, 1899. Alex. Erskine, Dutton, \$65.
- D. DeCourcy, Bernholm, General Roberts = 36366 =, calved May 25, 1899. F. Stull, Guelph, \$45.
- Ignatius Hauser, Weisenburg, Lord Roberts = 33984 =, calved June 2, 1899. G. Raikes, Barrie, \$50.
- R. Talbot & Son, Everton, Jessamine's Chief = 41457 =, calved June 5, 1899. D. McDonald, Speedside, \$77.
- Geo. Fyfe-Gourcock, Paisley, Black Boy = 32188 =, calved June 10, 1899. Geo. Snell, Shelburne, \$90.
- Geo. Jackson & Son, Downsview, Banker of Northlya = 35323 =, calved June 20, 1899. J. A. Sellers, Breslau, \$45.
- Wm. Ramsay & Son, Eden Mills, Prime Eclipse = 33049 =. Jas. Caskey, Tiverton, \$85.
- Isaac Maltby, Mimosa, Oustie Chief 2nd = 35763 =, calved June 26, 1899. N. Dymnt, Barrie, \$55.
- R. Talbot & Son, Everton, Sir John = 31915 =, calved July 1, 1899. N. Dymnt, Barrie, \$55.
- Richard Laird, Thedford, Ont., Ravenswood Lad = 30780 =, calved December 24, 1898. A. A. O'Druskey, Trout Creek, \$67.
- E. Sutherland, Bennington, Ont., Strathallen Star = 33957 =, calved January 1, 1899. James Baker, Banninton, \$70.
- Peter McLaren, Osprings, Byron's Pride = 32497 =, calved January 30, 1899. John Rundle, Sparta, \$90.
- John Sockett, Rockwood, Dewet = 36282 =, calved February 7, 1899. R. Giesion, Aberdeen, \$68.
- J. M. Gardhouse, Highfield, Ont., Cavalier's Lad = 36377 =, calved February 28, 1900. C. Peterson, Guelph, \$60.
- H. C. Graham, Ailsa Craig, Winna's Chief = 36372 =, calved March 10, 1899. Jas. Green, Fergus, \$75.
- John Sockett, Rockwood, Kitchener = 36284 =, calved April 2, 1899. C. Peterson, Guelph, \$50.
- E. Sutherland, Bennington, Strathallen King, calved April 15, 1899. N. Dymnt, Barrie, \$72.
- J. F. Davis, Tempo, Ontario Chief, = 35049 =, calved April 15, 1899. C. Peterson, Guelph, \$52.
- John Sockett, Rockwood, General Botha = 30283 =, calved April 21, 1899. Walker Powers, Guelph, \$75.
- Wm. McDermott, Living Spring, King James = 33765 =, calved July 24, 1899. W. B. Thompson, Fergus, \$85.
- Robt. Jackson, Cunnock, Nero = 36268 =, calved August 1, 1899. Newton Bicknell, Arthur, \$94.
- Alex. McKinnon, Coningsby, Kitchener = 36349 =, calved August 14, 1899. C. Peterson, Guelph, \$62.
- S. Rankin, Fairview, Robin Hood = 36180 =, calved September 4, 1899. Arthur McQuillan, Guelph, \$42.
- Leslie L. Webb, Osprings, Wellington Chief = 36338 =, calved September 20, 1899. N. Dymnt, Barrie, \$47.
- Hon. John Dryden, Brooklin, Revealer = 34065 =, calved September 13, 1899. Jas. McQueen, Salem, \$125.
- Leslie L. Webb, Osprings, Napoleon = 36337 =, calved September 29, 1899. W. B. Chamberlain, Bayham, \$77.
- Adam Bone, Paris, Buller = 36218 =, calved Oct. 1, 1899. N. Dymnt, Barrie, \$44.
- Adam Bone, Paris, Boba = 36217 =, calved October 12, 1899. N. Dymnt, Barrie, \$64.
- R. Cosby, Belgrave, Captain Wallace = 36205 =, calved October 18, 1899. A. M. Todd, Kalamazoo, Mich., \$80.
- Chas. Rankin, Wyevale, Buller = 35702 =, calved October 20, 1899. N. Dymnt, Barrie, \$70.
- McDonald Bros., Woodstock, North Star = 36182 =, calved October 20, 1899. N. Dymnt, Barrie, \$64.
- George Jackson & Sons, Downsview, Baron of Northlynd = 35324 =, calved October 24, 1899. C. Peterson, Guelph, \$57.
- Alex. Moore, Greenwood, Village Boy = 32155 =, calved November 9, 1899. Geo. Raikes, Barrie, \$60.
- Wm. McDermott, Living Spring, General Roberts = 33764 =, calved November 10, 1899. John Black, Cainsville, \$107.
- John G. Chapman, St. Thomas, Kitchener = 56295 =, calved November 11, 1899. R. Scott, Marneek, \$72.
- Charles Rankin, Wyebridge, Roberts = 35700 =, calved November 15, 1899. N. Dymnt, Barrie, \$55.
- Henry Arkell, Arkell, Colonel Clyde = 36195 =, calved November 17, 1899. C. Peterson, Guelph, \$50.
- Thomas Scott, Sutton West, Prince John = 36269 =, calved November 23, 1899. N. Dymnt, Barrie, \$56.
- Thomas Scott, Sutton West, Royal Prince = 36270 =, calved November 29, 1899. C. W. Holmes, Amherst, N.S., \$50.
- Henry King, Byng, Dominion King = 34713 =, calved December 11, 1899. C. W. Holmes, Amherst, N.S., \$78.
- D. E. Webb, Osprings, Lord Roberts = 36186 =, calved December 18, 1899. J. A. Alexander, Brantford, \$42.
- R. Bert Harvey, Guelph, Gloster Boy = 32853 =, calved December 28, 1899. Edward Boyd, West Lu her, \$100.
- Charles Rankin, Wyebridge, Canadian Pride = 35701 =, calved December 24, 1899. N. Dymnt, Barrie, \$47.
- V. Ficht, Oriol, Roan Prince = 36250 =, calved January 9, 1900. Arch. McCrae, Tara, \$90.
- Thos. Coyte & Sons, Port Hope, Dominion = 32235 =, calved January 11, 1900. George Lamb, Arkell, \$47.
- McDonald Bros., Woodstock, Brilliant = 36181 =, calved January 6, 1900. A. R. Seacord, Homer, \$90.
- C. N. Blanshard, Appleby, Paulinus = 35794 =, calved January 8, 1900. Wm. Heath, Toronto, \$47.
- Ben Tolton, Etamosa, Crimson Duke = 33515 =, calved January 13, 1900. E. K. Weber, Snausburg, \$64.
- John J. Bathgate, Armstrong's Mills, Crimson Lad = 36324 =, calved January 14, 1900. John Cole, Belgrave, \$95.
- J. M. Gardhouse, Highfield, Chancellor Boy = 35722 =, calved January 14, 1900. W. H. Taylor, M. P. P., Parkhill, \$140.
- Richard Jackson, Alma, Greenway Chief = 36330 =, calved January 19, 1900. Hugh Norris, Cromarty, \$81.
- Robert Miller, Stouffville, Roger of St. Mary's = 36346 =, calved January 20, 1900. R. McClelland, Me z, \$77.
- John McCookindale, Guelph, Chilo = 36290 =, calved January 21, 1900. T. L. Pardo, Cedar Springs, \$112.
- V. Ficht, Oriol, Prince Albert = 36249 =, calved January 21, 1900. Wm. Mahon, Aberfoyle, \$92.
- John Dempsey, Fairview, Sir Harry = 36360 =, calved January 27, 1900. W. B. McGowan, Marsville, \$50.
- Wm. Ramsay & Son, Eden Mills, Strathcona = 36362 =, calved February 8, 1900. A. W. Todd, Kalamazoo, Mich., \$88.
- C. N. Blanshard, Appleby, Capone 2nd = 35793 =, calved February 10, 1900. Owen Heitman, Marden, \$50.
- Thos. Coyte & Sons, Port Hope, Sir Redvers = 34620 =, calved February 19, 1900. A. Bolton, Armstrong's Mills, \$40.
- E. Sutherland, Bennington, Highland Chief = 35922 =, calved March 10, 1900. Joseph McFarlane, Hutton, \$50.
- Samuel Lyons, Byng, General Buller = 34659 =, calved March 10, 1900. G. Mercer, Markdale.
- D. DeCourcy, Bornholm, Conqueror = 36365 =, calved March 10, 1900. N. Dymnt, Barrie, \$47.
- C. N. Blanshard, Appleby, Prime Prince = 33368 =, calved March 10, 1900. M. McNab, Cowa, \$80.
- Thos. Coyte & Sons, Port Hope, Kruger = 34619 =, calved March 15, 1900. J. Peddy, Arkell, \$38.
- Robert Miller, Stouffville, Lord Gay = 36343 =, calved March 15, 1900. A. Bolton, Armstrong's Mills, \$60.
- C. & G. W. Blyth, Warden, Rantin's Pride = 36289 =, calved March 16, 1900. G. O. Jamieson, Locknow, \$200.
- Robert Miller, Stouffville, Markham = 36345 =, calved March 16, 1900. Samuel Scott, Eden Mills, \$58.
- Alex. Moore, Greenwood, Lord Roberts = 36272 =, calved March 18, 1900. N. Dymnt, Barrie, \$315.
- R. Corley, Belgrave, Strathallen Chief = 36293 =, calved March 22, 1900. C. W. Holmer, Amherst, N. S., \$50.
- R. Corley, Belgrave, Orange Ribbon = 36207 =, calved April 19, 1900. Wm. Dewart, Newry, \$67.
- Colwill Bros., Newcastle, Robert of Newcastle = 36169 =, calved April 22, 1900. A. M. Todd, Kalamazoo, Mich., \$75.
- Wm. Hamilton, Bright, Lord Buckingham = 36302 =, calved April 24, 1900. Wm. Ramsay & Sons, Eden Mills, \$85.
- Chas. Rankin, Wyebridge, Sir Wilfred = 36568 =, calved May 10, 1900. A. Todd, Kalamazoo, Mich., \$40.
- R. A. Thompson, Thornton, Al. Brampton = 36192 =, calved May 14, 1900. E. Ferguson, Galt, \$50.
- Geo. Leslie & Son, Acton, Scottish Hero = 36373 =, calved May 20, 1900. John Tuck, Mosboro, \$25.
- John Brydone, Milverton, Yorick 2nd = 36252 =, calved June 2, 1900. M. Cowan, Guelph, \$142.
- Chas. Rankin, Wyebridge, Klondike 3rd = 35699 =, calved June 4, 1900. A. C. Tenyson, Bridgen, \$32.
- Jeffrey Bros., Whitby, Edward VII. = 36392 =, calved June 28, 1900. D. A. Campbell, Smith's Falls, \$125.
- D. E. Webb, Osprings, Canada Chief = 36335 =, calved July 1, 1900. A. M. Todd, Kalamazoo, \$36.
- Robert Miller, Stouffville, Lord of Fairview = 36344 =, calved August 4, 1900. C. W. Holmes, \$60.
- Wm. Ramsay & Sons, Eden Mills, Banker

= 36361 =, calved October 6, 1899. J. Hettle, Wilksport, \$67.

McNiven Bros., Ancaster, Wentworth Hero = 36353 =, calved October 10, 1899. C. Peterson, Prince Albert, \$59.

Hugh A. Potter, Caledon, Butterfly's Hero = 34623 =, calved October 16, 1899. Peter Anderson, Caledon, \$104.

H. J. Davis, Woodstock, Strathallan Knight = 36209 =, calved November 2, 1899. A. King, Lefroy, \$138.

The following animals, catalogued for the Ottawa sale, were sold at Guelph:

Rich. Brown, Orono, Ont., Millbrook Minister = 23730 =, Oct. 28, 1896. Wm. Hamilton, Guelph, \$75.

Albert Tamblin, Orono, Champion of Clarke = 26487 =, Jan. 12, 1897. Alex. White, Guelph, \$76.

Geo. Mitchell, Clarke, Ont., Indian Wave of Baltimore = 32788 =, Dec. 19, 1898. C. Peterson, Guelph, \$60.

Geo. Mitchell, Oxford Boy, = 33024 =, June 9, 1899. C. Peterson, \$64.

Geo. Mitchell, King Charlie, = 36494 =, March 20, 1900. A. M. Holmes, \$50.

SHORTHORN FEMALES.

Richard Laird, Thedford, Ont., Verona 3rd = 19602 =, calved March 2, 1899. H. Smith, Bridgeport, Ont., \$50.

Jno. McCorkindale, Guelph, Ona Blake = 22153 =, May 1, 1891. John Bathgate, Eramosa, \$61.

Robert Miller, Stouffville, Lady Gay = 26606 =, July 12, 1894. John Bathgate, \$87.

J. Rainie & Son, Wellman Corners, Ont., Minnie Warrior 4th = 29306 =, May 1, 1895, and calf. Edwin Battye, Gore Bay, \$160.

Robt. Miller, Lady Fairview 2nd, Vol. 17, May 14, 1895. W. Chalmers, Parkersville, \$68.

J. Rainie & Son, Daisy Elgin, and calf, = 32484 =, February 1, 1897. Edwin Battye, \$50.

W. A. Dickson, Eramosa, Maud Queen, Vol. 17, May 24, 1898. L. A. Armstrong, Falmouth, N.S.

J. Rainie & Son, Crimson Maud 8h = 34539 =, June 6, 1898. James Cowan, Seaford, \$166.

John McCorkindale, Zara, Vol. 17, August 2, 1898. Colin Campbell, Guelph, \$85.

A. Johnston, Greenwood, Victoria, Vol. 17, Oct. 15, 1898. A. M. Todd, Kalamazoo, Mich., \$177.

Richard Laird, Thedford, Ont., Queen of Golden Creek = 36069 =, November 3, 1898. Henry Smith, Bridgeport, \$70.

Arthur Johnston, Ina 3rd, Vol. 17, December 12, 1898. K. L. Wilkes, Gait, \$58.

Arthur Johnston, Bonnie Lass, Vol. 17, February 15, 1899. K. S. Wilkes, \$150.

Alex. McKinnon, Coningsby, Ont., Kallie Hamilton, August 20, 1898. A. M. Todd, \$75.

H. K. Fairburn, Thedford, Grace Maxwell, Vol. 17, September 23, 1899. A. M. Todd, \$70.

H. K. Fairburn, Jessamine, Vol. 17, Oct. 3, 1899. A. M. Todd, \$75.

H. K. Fairburn, Golden Crown, Vol. 17, October 7, 1899. Malcolm McDougall, Tiverton, \$70.

Henry Arkell, Jewel Clyde, Vol. 18, November 23, 1899. James Hurley, Guelph, \$27.

John McCorkindale, Lygia, Vol. 18, Dec. 1, 1899. L. A. Armstrong, \$46.

Geo. D. Fletcher, Binkham, Ont., Verbena Languish 2nd, Vol. 18, December 3, 1899. A. M. Todd, \$200.

Colwill Bros., Norwich, Lucy of Newcastle, Vol. 18, March 15, 1900. P. C. Black, Falmouth, N.S., \$80.

John McCorkindale, Eunice, Vol. 18, June 20, 1900. L. A. Armstrong, \$50.

Thos. Scott, Sutton West, Lenore 5th, Vol. 17, July 22, 1900. A. M. Todd, \$75.

HEREFORD BULLS.

O'Neill Bros., Southgate, Beau's Giant, = 1216 =, March 5, 1900. H. Wright, Guelph, \$90.

O'Neill Bros., Prince Jubilee = 1332 =, April 6, 1900. H. Wright, \$125.

R. & J. Stutt, Forest, Lord Roberts = 1322 =, May 20, 1900. H. Wright, \$85.

HEREFORDS—FEMALES.

R. & J. Stutt, Countess = 1407 =, May 15, 1900. H. Wright, \$42.

R. & J. Stutt, Dililah 4th = 1736 =, January 20, 1900. A. F. O'Neill, Maple Grove, \$60.

GALLOWAYS—BULLS.

David McCrae, Guelph, Dominion Day = 14839 =, July 1, 1898. R. Shaw, Brantford, \$72.

ABERDEEN ANGUS—BULLS.

I. W. Burt, Coningsby, Ont., Orphan Boy of L.S. = 39497 =, Dec. 5, 1899. J. McNeill, Valores, \$85.

James Bowman, Guelph, Blyth Boy 2nd = 4266 =, January 1, 1900. Alex. White, Guelph, \$51.

J. W. Burt, Milton 3rd = 41853 =, April 15, 1900. H. McDougall, Guelph, \$51.

ABERDEEN ANGUS—FEMALES.

James Bowman, Marguerite of Brandon 2nd = 42262 =, Feb. 7, 1900. Ontario Agricultural College, \$72.

AYRSHIRES—BULLS.

Walter Nichol, Plattsville, Methuen = 11186 =, July 20, 1897. Geo. Fulton, Fullon's Falls, \$52.

Walter Nichol, Dewey = 11185 =, November 20, 1898. W. L. Dixon, Dromore, \$34.

AYRSHIRES—FEMALES.

R. S. Brooks, Brantford, Daisy Bell = 2490 =, September 15, 1893. John Phillips, Arkell, \$45.

W. E. H. Massey, Coleman, Eva = 2608 =, April 20, 1894. Ontario Agricultural College, \$75.

R. S. Brooks, Lady of the Lake = 8955 =, September 16, 1894. S. J. Godliffe, Sussex, N.B., \$60.

R. S. Brooks, Lady Brant = 2966 =, February 19, 1895. S. J. Godliffe, \$68.

R. S. Brooks, Daisy of Tutilla Heights, September 1, 1896. W. F. McGuffin, Thorndale, \$59.

R. S. Brooks, Miss Canada = 9401 =, March 3, 1897. R. Shortreed, Guelph, \$44.

McNiven Bros., Ancaster, Ont., Highland Lassie of Rozelle = 12882 =, September 12, 1898. John Graham, Guelph, \$36.

McNiven Bros., Beauty of Rozelle = 12880 =, November 6, 1898. John McGill, Eramosa, \$33.

HOLSTEINS—FEMALES.

Wm. McCrae, Guelph, Zelena = 1343 =, calved April 30, 1894. O. Heffernan, Morden, \$46.

Conrad Gies, Heidelberg, Ont., Carrie = 1786 =, calved June 16, 1896. J. E. Berthour, Burford, \$87.50.

Wm. McCrae, Zelena 2nd = 3058 =, calved March 1, 1899. Louis Schweitzer, Bridgeport, Ont., \$22.

Wm. McCrae, Zelena 3rd = 3059 =, calved March 3, 1899. Louis Schweitzer, \$27.

JERSEYS—BULLS.

W. E. H. Massey, Toronto, Birn of Dentonia = 52011 =, calved Jan. 16, 1898. Sold privately after sale to J. G. Clark, Norval, \$125.

JERSEYS—FEMALES.

B. H. Bull & Son, Brampton, Ont., Snelgrove's Belle = 140073 =, calved April 2, 1896. Private sale to A. D. McGuigan, Rodney, \$100.

BERRKSHIRES—BOARS.

D. McCrae, Guelph, Villiers = 8414 =, 3 month's old. A. Hales, Guelph, \$5.

D. McCrae, Vanilla = 8413 =, 3 month's old. A. Hales, \$5.

TAMWORTHS—BOARS.

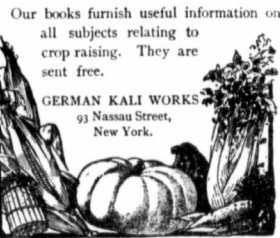
Colwill Bros., Newcastle, Newcastle Prince = 2094 =, 6 months. C. W. Holmes, \$10.

Colwill Bros., Newcastle General = 2093 =, 6 months. J. S. Shantz, Hespeler, Ont., \$9.

Colwill Bros., Newcastle Councillor = 3092 =, 6 months. R. H. Grundy, Guelph, \$8.

Choice Vegetables

always bring high prices. To raise them successfully, a fertilizer containing at least 8% Potash should be used.



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93 Nassau Street,
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LONDON, ONT.

Our market reports are reliable and up-to-date. They are written specially for The Farming World and are of inestimable value to every farmer.

YORKSHIRES—HOARS.

Brethour & Saunders, Barford, Oak Lodge Shylock 5th = 5706 =, 18 months. D. Burley, Guelph, \$10.

Brethour & Saunders, Oak Lodge Shylock 6th = 5707 =. C. W. Holmes, \$8.

Scanlon Bros., Ennotville, Ennotville Chief = 5642 =, 6½ months. James Cowan, Guelph, \$10.

Scanlon Bros., Bobs = 5643 =, 6½ months. H. Lindsay, Fergus, \$9.

Brethour & Saunders, Oak Lodge, King David 2nd = 5777 =, 6 months. F. W. Hodson & Co., Myrtle, \$25.

YORKSHIRES—SOWS.

Brethour & Saunders, Oak Lodge, Cinderella 45th = 5776 =, 18 months. F. Bolton, Marden, \$36.

Brethour & Saunders, Oak Lodge, Novice 11th = 5676 =, 14 months. J. McGill, Eramosa, \$30.

Brethour & Saunders, Oak Lodge, Cordelia 2nd = 5675 =, 11 months. R. Nichol, Brussels, \$20.

Brethour & Saunders, Miss Hollingworth 5th = 5703 =, 10½ months. D. Stewart, Hampstead, \$30.

Brethour & Saunders, Miss Hollingworth 6th = 5704 =, 10½ months. H. Semple, \$36.

G. B. Hood, Guelph, Guelph Constance = 5526 =, 10 months. A. W. Blythe, Marden, \$36.

G. B. Hood, Guelph, Connie = 5525 =, R. Shortreed, Guelph, \$30.

Brethour & Saunders, Clarissa 15th = 5678 =, 9½ months. Samuel Peart, Winchelsea, \$27.

G. B. Hood, Jean = 5527 =, 8½ months. Samuel Harris, Rockwood, \$23.

"Live Dressed Turkeys" ?

The *Beacon* tells the following story, which is somewhat of a reflection, however, on the commission merchant:

"A story is told of a commission merchant who is an extremely close buyer. When he receives a consignment he never fails to claim an allowance for something alleged to have spoiled on the way. This habit is well known to the trade, and has led to many complaints from shippers, but the merchant has always managed to come out on top. During Christmas week, as the story goes, he received several barrels of fat, dressed turkeys from a poultryman in the Northwest. Heretofore he had dealt exclusively in live fowls, and probably the correspondence clerk got things mixed. At any rate, the shipper was astonished to receive a letter by return mail, running about as follows: 'Dear Sir: We regret to advise you that four of the turkeys in your consignment of December reached here dead. Please make deduction for same and return correct amount. Yours truly.' The poultryman communed with himself and replied thus: 'Dear Sir: I am sorry to say I find it impossible to make concession requested. I have established a rule requiring all customers who desire live dressed turkeys to notify us in advance, so we can send them in heated cars. Turkeys without feathers and in crates are liable to catch cold if shipped in the ordinary manner. The mortality among dressed turkeys was very large this year. Yours mournfully.'

"Vegetable Gardening" Free.

Used as a Text-book in all the Agricultural Colleges.

No book ever published on Gardening has proved to be more popular or of more practical value than "Vegetable Gardening," written by Prof. S. B. Green of the University of Minnesota. We have received a special addition of this book, issued for the Ames Plow Company, which contains 240 pages, more than 120 illustrations and treats of the cultivation of every variety of vegetables grown in America. While the regular price of the book is \$1.25, the Ames Plow Company is offering it free to every purchaser of a Matthews New Universal Seeder in any of its various styles. These seeders are unsurpassed by any implement used by the gardener and truck grower. We trust that our readers will avail themselves of this opportunity to secure free, so valuable a book. Look up the advertisement on page 668; and write them to-day, mentioning this paper.

"My father died with his boots on!" cried the Arizona girl, triumphantly. "Too lazy to take them off, eh?" said the caustic man.

Up With the Times...

Progressive Cheese and Butter makers use : : : :

Windsor Salt

because they know it produces a better article, which brings the highest price.

THE WINDSOR SALT CO. Limited

WINDSOR, : : : : ONT.



Elgin Watches

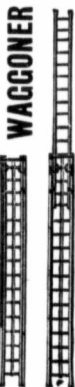
are carried in the pockets of over eight million people—are known everywhere as

The World's Standard because of their mechanical perfection, accuracy and durability.

Genuine Ruby Jeweled Elgins are sold by Jewelers everywhere in various sizes and styles.

An Elgin Watch always has the word "Elgin" engraved on the works—fully guaranteed.

Booklet Free. ELGIN NATIONAL WATCH CO. ELGIN, ILL.



Extension Ladder

Light, Strong, Convenient and Cheap.

Port Colborne, April 10, 1900. Dear Sir:—Have you an agent down here for your goods? The ladder I got from you seems to take with the public, and I wish you would send agents' prices so if I can do anything I will take it up or let them know who your agent is.

L. TURNBULL. (See our ad. in last and next week's issues.)

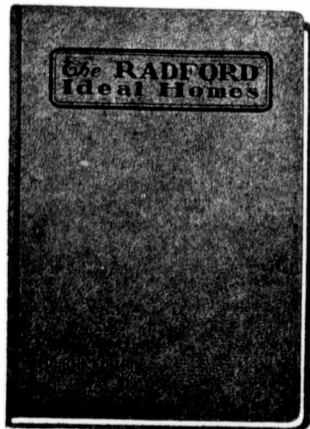
For stacking, or for picking apples, and for general use about the farm the WAGGONER LADDER is unequalled. Made in all lengths.

Ask your local Hardware Merchant for our goods. Or write for catalogue (free) to

The Waggoner Ladder Co., Limited, LONDON, ONT.

Plans of Ideal Homes

Are you interested in moderate-priced cozy homes? Get "Ideal Homes," containing 36 plans of medium prices, besides plans of four good, sensible barns, one store building, and two club plans; 34 of these houses range in cost from \$500.00 to \$1,500.00, the others from \$1,500.00 up. This cloth bound book of 72 pages, 8½x10½ inches in size, sells for 50 cents; but we have made special arrangements with the publishers so that we can furnish this book of House Plans free to anyone sending us one new subscription to THE FARMING WORLD. Any present subscriber, not in arrears, may have a copy for 50 cents. You cannot afford to miss this opportunity to save money when you are ready to build. In remitting, send post office or express order to—



THE FARMING WORLD Confederation Life Building, Toronto

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.

Horses.

Special attention is called to the forthcoming sale of Thoroughbreds at Grand's sale stables on March 12, 1901. Particular mention may be made of the Thoroughbred stallion, Sentinel, consigned by Major Dent, Malton, Eng. He is about 15.3 hands, quite seal brown, on good, short legs, clean hocks, good flat bone, deep, round chest, with full lung capacity, loins and back to carry any weight, very kind and gentle. In short, he is just such a horse as, crossed with our Canadian-bred mares, will produce stock of exceptional value that is sure to command high prices. Catalogue, containing full description of this splendid stallion and a number of others, may be had on application to Walter Harland Smith, Toronto.

As showing the interest in Shire horse breeding in England, the stud book records 5,000 mares and only 900 stallions. There are about 4,000 geldings to each 1,000 stallions. Only the best are kept for breeding, and the Shire geldings are sure of a good price. Many of the farmers breed only for geldings. The Shire mares sell for extremely high prices, \$500 to \$5,000 and more for the best breeding, and geldings sell up to \$500, and even higher. American farmers are just awakening to the value of breeding pure-bred draft mares. The prices of these mares are much below their breeding value on the farm, as they are as good as any other horses on the farm and raise a colt every year. A mare colt is worth as much at maturity as the mare and the stallion colts are worth double, while in England the mares are selling higher than the stallions.

Cattle.

The dispersion sale of the Spring Valley herd of high class Jerseys presents an opportunity for dairymen and breeders to secure some good animals either for the dairy showing or foundation of a herd. Mr. Reid states that the milk and cream from this herd have been disposed of in the town of Berlin during the last eight years. The herd never averaged less than 4.8 per cent. of butter fat, and one year as high as 5.2 per cent.

The cows are all young and in good condition. None of the cows over four years old, average less than 6,500 lbs. per year, as this is the owner's standard, and all under this amount being weeded out.

Mr. Reid has sold cattle to Maryland, New York, Michigan, and many parts of Canada with the most satisfactory results.

The following noted butter-makers were raised and developed in this herd:

Leonora of Canada, 22 lbs. 11 oz.; Esther Reid of St. Lambert, 19 lbs. 12 oz.; to 386 lbs. milk in 10 months, averaging 4.5 per cent. butter fat; Heiness of Canada, 16 lbs. 5 oz.; Sapphire, 17 lbs. 2 oz.

Heir of Berlin, the bull at the head of the herd, is a typical Jersey of the dairy type, which would be hard to equal and harder yet to supercede. His dam, Heiness of Canada, 16 lbs. 5 oz., was sold to Herr M. H. Olin, Remy, N.J., at a long price.

The oldest cow in the herd is Lucy of Glen Range, 8 years old, fresh Jan. 15, 1900, and gave in one day since then 18 quarts of milk; there are three of her daughters by three different bulls in its sale list.

There are two full sisters that are now averaging 16 quarts per day. The other cows are all equally good, both as performers at the milk-pail and individual merit as showing animals. There are a number of calves and yearlings, promising daughters of Heir of Berlin.

All breeders and farmers wanting to add to their herds should send for catalogue and make an effort to attend this sale.

About four miles out of the flourishing town of Galt is situated the fertile and well tilled 300 acre farm of Messrs. A. C. Elliott & Son. At the time of our call Mr. A. C. Elliott had not returned from his Institute trip, and we were shown around by the junior member of the firm, Mr. W. Elliott, who is a graduate both in the regular course and also the dairy department of the Ontario Agricultural College.

The farm is of a rolling nature, with a soil of a clay loam inclined to be light. The rotation followed is as follows: Corn or roots on sod, oats or barley seeded to mixed seeds, mostly red clover; one crop taken fall wheat, root crop, and oats or barley, and seeded down. Under this management, and with the manure of 30 cows, besides other stock, the farm is steadily increasing in fertility. The cows are mostly registered Jerseys, selected for their milking qualities. The best cow in the stable is a cross between a Jersey and a Shorthorn. For the year 1900 the 30 cows averaged 290 lbs. of butter, six or seven of which were heifers milking for the first year.

Their stock bull was bred from one of the first prize winners at the Toronto Industrial.

Ensilage is the chief stand-by for feed, as they have a large double silo, and they feed ensilage more or less all the year. In the farm they use a tread power for cutting straw and dry corn to mix with the ensilage. Their favorite varieties are the Leamington and Salzar, North Dakota.

They have a most complete dairy outfit, including a six-horse power engine and boiler, Alexandra separator, vats, churns, etc. The separator milk is conveyed through a pipe directly to the hog and calf pens. They have a standing contract with the leading grocers of Galt, who take all their make at a good figure. The butter-milk is also all sold in town. Last year their receipts from this source alone amounted to three hundred dollars.

In Tamworths they have some choice individuals, all of the lengthy type so desired by the packers.

Their stock boar is of their own breeding, and was second at Toronto and first at London a year ago, and second last year by A. C. Hallman, of New Dundee.

In one pen we noticed three choice sows; one was second at Guelph under fifteen months, the other first for sow under nine months; another, a full sister of the latter, was not placed, but has greatly improved, and is her equal, if not superior.

In Shropshires he has a nice herd of twenty five ewes, headed by an imported ram from the flock of Hamner & Son.

Sheep.

Professor Wrightson, in his report in the *Journal of the Royal Agricultural Society*, says: "The Merino sheep may be said to occupy all the sheep stables of Hungary if we except a few Southdown crosses, seen upon the estates of the Archduke Albrecht and Count A. Erdody. They are housed in sheep-stables every night in summer, and day and night in winter. In summer they are also housed during the hot hours of the day. They graze on the natural pastures, and are never folded on forage crops as in England. Neither must they ever be out in the rain, and on the approach of a shower the shepherds hurry them home. They follow the shepherds like dogs both in and out of their stables, and he leads them to the pastures in true Oriental style."

Swine.

Mr. T. A. Cox, Brantford, reports business as brisk. He will have fifteen of his choice exhibition Berkshire sows to farrow in March

Shorthorns

SHORTHORN BULLS

Two choice bulls about a year old

FOR SALE

JOHN McNAB,
Rockwood, Ont.

SHORTHORN BULL

—for sale—

Also a few Heifers

ALEX. BURNS, Rockwood, Ont.

TWO SHORTHORN BULLS

—FOR SALE—

Also a few heifers

T. D. WATERS,
Rockwood, Ont.

SHORTHORN BULLS

Four **Bulls**, eleven months old, and a few **Heifers** for sale. All eligible for registration in American Herd Book. Also 25 **Yearling Grade Rams**, and 6 registered **Cotswold Lambs**.

JOHN SOCKETT, Rockwood, Ont.
P.O. and Station.

AUCTION SALE

BATES' SHORTHORN CATTLE

and

LEICESTER SHEEP

Wednesday, March 13, 1901

Eleven cows and heifers and five bulls. Good milky strain of Princess and Duchess families.

Thirty-five ewes, descended from the flock of Mr. Thomson, Elora. Catalogues on application. All trains met.

WM. COWAN, V.S., Galt, Ont.

ARTHUR JOHNSTON,

GREENWOOD P.O., Ont.

Offers for sale at Moderate Prices:

11 Imported Bulls and Bull Calves.

36 Imported Cows, Heifers and Heifer Calves.

45 Home-bred Cows and Heifers.

13 Home-bred Bulls.

CATALOGUES ON APPLICATION.

R.R. Stations:

Claremont on the C.P.R.

Pickering on the G.T.R.

22 Miles East of Toronto



ROCK SALT for horses and cattle, in ton and car lots. Toronto Salt Works, Toronto

Shorthorns



**SHORTHORNS
FOR SALE**

These Registered Bulls were sired by Brave Baron; he by the noted imported Indian Chief.

- 2 Bulls, 16 Months old, Roan color.
- 1 Bull, 13 " " "
- 2 Bulls, 11 " " Fancy "

Terms on Application.

YOUNG BROS.,
Whitby Main, Ont.

**Lake View Farm
OSHAWA, ONT.**



- 1 Bull, 11 months, Color Red.
- 1 Bull, 12 months, Color Red.
- 1 Bull, 10 months, Color Red.

All Shorthorns. These Registered bulls were sired by Grand Sweep, an imported bull and half brother to the

noted British statesman. He was got by Royal James. Terms on application.

THOS. ALLIN & BROS.
Lake View Farm, OSHAWA
ONT.

J. A. RICHARDSON, South Marsh, Ont., Breeder of Holsteins, Dorset Horned Sheep, Tamworth Swine.

**ALVA FARM
GUERNSEYS**



THE
TYPICAL
DAIRY
BREED.

Good Animals of both Sexes for Sale.

Sydney Fisher,
KNOWLTON, QUE!

YORKSHIRES and BERKSHIRES

Boars and Sows both breeds, three months old. Boars fit for service. Sows ready to breed. Sows safe in pig. All stock of the large lengthy smooth type, and registered. Correspondence Solicited.

JAMES A. RUSSELL,
Precious Corners - Ontario

Man Wanted

WANTED a good reliable man to represent THE FARMING WORLD. One with a horse and rig preferred. A good income guaranteed to the right man. References required. A chance for farmers' sons during the winter months. Address at once:

THE FARMING WORLD
Confederation Life Building
TORONTO.

and April. He will have a few to spare from the first-prize aged sow and also the first-prize yearling at Toronto.

All his sows are bred to Norbees Duke, imported, who headed the first-prize herd in Toronto. He has since been wonderfully improved. He has made a few good shipments to British Columbia, and also to several points in Ontario this last month. His stock has been fairly successful at all the winter shows at which he has exhibited.

Mr. D. J. Gibson, Bowmanville, Ont., writes: "I appreciate THE FARMING WORLD very much indeed. I send you the following list of recent sales of swine: Tamworth boar to Mr. A. E. Canefield, Mount Forest, Ont.; Tamworth boar to Mr. W. M. Merkle, Ivera, Ont.; Tamworth sow to Mr. John Wilson, Beeton, Ont.; Tamworth boar to Mr. Richard Walsh, Hastings, Ont.; three Tamworth sows to Mr. Andrew Corry, Fernbank, Ont.; Tamworth sow to Mr. Marshall, Stella, Ont.; Tamworth boar to Mr. A. Galbraith, Kenmore, Ont.; Tamworth boar to Mr. T. M. Greer, Springville, Ont.; Tamworth boar to Mr. Jas. Patterson, Beeton, Ont.; two Tamworth boars to Mr. Edwin Beacock, Powles Corners, Ont.; Tamworth sow and boar to Mr. John Heydon, Nicolson, Ont.; Tamworth boar to Mr. W. G. McGuire, Edy's Mills, Ont.; Berkshire sow to Mr. Wm. Bragg, Bowmanville, Ont.; Berkshire sow to Mr. Robert Holme, Aberfeldy, Ont.; Berkshire sow to Mr. Wm. Anderson, Auburn, Ont.; Berkshire sow to Mr. R. H. Brownlee, Aughrim, Ont.

Poultry.

We had a pleasant call recently at Orchard Grove Poultry and Fruit Farm, the home of Mr. John McLean, Woodstock. Mr. McLean was the man who was selected to carry on the Government's experiments in feeding fowl.

Mr. McLean buys largely off the farm, and fattens on his own account, and frequently having as high as twelve or thirteen hundred fowl on hand at a time. He thinks that farmers should feed their own fowl—for farm use he would not advise the small single-feeding pen, but rather the feeding of fowl in larger pens of from fifteen or twenty birds in a bunch, as taking much less labor, and being more convenient for their circumstances, and the results practically the same. Before putting up to feed the poultry must be in good condition.

FRIPPLEY'S COOKERS.
Sells from \$10.00 to \$45.00. Made of boiler steel. No flues to rust or leak. Can't blow up. Guaranteed to cook 5 bu. feed in 3 hours, and to heat water in stock tanks 200 feet away. Will heat dairy rooms. Cast aluminum and prices marked free.
FRIPPLEY HARDWARE CO., Box 218
(U.S. Factory, Graston, Ill.) London, Eng.

"Nether Lea"



Ayrshire Cattle, Yorkshire Swine, Rough-Coated Collies.

3 Choice young Bulls by the noted bull "Matchless." 2 by the "Wee Earl Imp." A few choice young Berkshire Boars and Sows, also young Sows to farrow in April, a litter of pups now ready by "Rosenath" and out of "Perfection's Queen Imp." Write for prices.

T. D. McALLUM, Danville, Que.

E. PANNAECKER, Fairview Farm, Hespeler, Ont., breeder of reg. Holsteins. Stock for sale.

DAVID McCRAE, Jansfield, Guelph, Canada, Importer and Breeder of Galloway Cattle, Clydesdale Horses, and Cotswold Sheep. Choice animals for sale.

MAPLE CLIFF DAIRY AND STOCK FARM

FOR SALE:

Breeders of—
Ayrshires—4 yearling bulls; females any age.
Berkshires—3 young boars; a number of sows.
Tamworths—40 boars and sows of different ages.

R. REID & CO., HINTONBURG, ONT.
(1 mile from Ottawa.)

**JERSEYS AND
TAMWORTHS**

Young Stock For Sale

**A. ELLIOTT & SON, Inglewood Farm
GALT, ONT.**

FOR SALE

Registered Jersey Bull (Canada Bobs, No. 57327) two years old past. Also 3 pairs Pea-fowls.

WM. B. SCOTT,
Milford, Ont.

Cheap

**Cattle and
Hog Feed**

Oat dust, Barley Dust, Meal Seeds, etc. Can load either Grand Trunk or Canadian Pacific Rys. Quotations furnished on application to—

JAMES WILSON,
Fergus, Ont.

Operating Monkland Mills, Broomfield Mills and Fergus Elevator.

DISPERSION BY AUCTION

of a high-class herd of **thirty**

REGISTERED JERSEY CATTLE

at "Spring Valley Farm," Berlin, Ont.,

FRIDAY, MARCH 15th, 1901

Being the entire herd of Mr. R. Reid.

**Thos. Ingram, Guelph } Auctioneers.
J. W. Davey, Berlin }**

**R. REID, Prop.,
Berlin, Ont.**

The farm is one mile from the centre of the town. Catalogues will be mailed on application.

OAK LODGE YORKSHIRES



are acknowledged to be the best type of bacon hog to produce the ideal carcass for the best English trade. **CHAMPIONSHIP HERD AT TORONTO INDUSTRIAL EXHIBITION FOR NINE YEARS** also sweepstakes on Dressed Carcass at Provincial Winter Show. We have on hand now a large herd of different ages. Our prices are reasonable and the quality is guaranteed to be choice. Write

BRETHOUR & SAUNDERS,
Burford, Ontario

Sheep

FARNHAM FARM

OXFORD DOWN SHEEP

All ages and sexes for Sale. Can spare a few ewes in lamb to imported Bryan.

HENRY ARKELL, - Arkell, Ont.

OXFORD DOWN SHEEP

Durham Cattle, "Milking Strains"; Yorkshire Pigs; Plymouth Rock Poultry.
John Cousins & Sons,
Harriston, Ont.



SHAWANOO HILL FLOCK

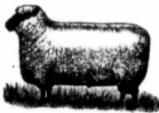
We breed for Mutton and Wool
Have for Sale

40 ram lambs, 20 ewe lambs, a few breeding of Cotswolds ewes.

JOHN RAWLINGS,
Forest, G.T.R. RAVENSWOOD P.O.
ONT.

SMITH EVANS, GOUROCK, ONT.

Breeder and Importer of registered Oxford Down Sheep. Selections from some of the best flocks in England. Stock for sale at reasonable prices. Inspection invited.



SMITH EVANS, : GOUROCK, ONT.

The Modern Way to Destroy Sheep Ticks

IS BY THE USE OF INSTANT LOUSE KILLER

It is not a dip, but a powder, that can be applied in zero weather. No slop, no muck, no danger.



There is no profit in letting ticks sap the life out of your sheep during winter, and there is no longer any call for it. With INSTANT LOUSE KILLER the weather cuts no figure.

Examine your sheep at once, and you will probably find ticks and lots of them.

Don't wait on the weather, wait on the sheep with a package of Instant Louse Killer. Guaranteed.

Put up in one-pound packages, with perforated top, ready for use, very convenient.
PRICE, 35 CENTS. Sold by dealers generally, or address

The Greig Manufacturing Co.,
Canadian Agents, Montreal

Dr. Hess' Stock Food

Is a guaranteed flesh producer. It makes animals eat well, do well and pay well.

It produces that sleek, glossy coat that commands the fancy price.

Cows fed DR. HESS' STOCK FOOD give more and richer milk.



Make a test—your money back if it don't do what we claim.

7 lb. Sack.....\$.65
12 lb. Sack.....1.00

Sold by dealers generally, or address,

The GREIG MFG. CO.

Canadian Agents,
Montreal.

For two-cent stamp we will mail you our 64-page veterinary book. Address,

DR. HESS & CLARK,
Ashland, Ohio., U.S.A.

Poultry

BARRED PLYMOUTH ROCKS SILVER SPANGLED HAMBURGS

Cockerels and Eggs for sale.

RICHARD RENNELSON,
Galt, Ont.

BARRED PLYMOUTH ROCKS

(Exclusively)

Pens mated for pullet and cockerel breeding.

Eggs \$2 per setting.
J. W. PORTEOUS,
Queen Street Poultry Yards. Galt, Ont.

CRYSTAL SPRING POULTRY YARDS

ELIAS SNYDER, Prop.,
Burgessville, Ont.

Barred Rocks exclusively.
A few choice cockerels for sale.
Eggs from prize-winning stock.
Correspondence invited.

MR. JOHN G. HAMILTON

Breeder of
Barred Plymouth Rocks
and
Black Minorcas.
Winners at the leading exhibitions.
Poultry and eggs for sale.

J. G. HAMILTON,
Galt, Ont.

MASHQUOTE WHITE WYANDOTTES

Ideal Poultry For the Farm.

Eggs for hatching, \$2 per setting of 15. Chicks, newly hatched, each 25 cts. Breeding and Laying Stock at special quotations.
L. E. BALDWIN,
Mashquote, Deer Park P.O., Ont.

FOR SALE

Barred Rock Cockerels,
Rosecomb White Leghorns and
Rosecomb Black Minorcas
Cockerels and Pullets. Also
English pheasants.

Pheasants' Eggs, \$3 per 13. Other fowl, \$1 per 13.
R. M. LEA,
Box 323. Oakwood Farm, Galt, Ont.

WHITE PLYMOUTH ROCKS

(The best general purpose fowl.)

I am headquarters for this best of all breeds, having won my share of prizes at all the leading shows in this country for the last ten years, including the great World's Fair, Chicago, 1893. I will sell eggs from two of the best breeding pens in this country at the much reduced price of \$1 per 13 for two months only. Circulars and testimonials free. Address

R. J. TAYLOR Box 437, Brantford, Ont.

SHOEMAKER'S POULTRY BOOK ON . . .



and Almanac for 1901. two colors, 160 pages, over 100 illustrations of Fowls, Incubators, Breeders, Poultry Houses, etc. How to raise Chickens successfully, their care, diseases and remedies. Diagrams with full description of Poultry houses. All about Incubators, Breeders and thoroughbred Fowls, with lowest prices. Price only 15 cents.

C. C. SHOEMAKER, Box 199, Freeport, Ill.

When writing to advertisers please mention THE FARMING WORLD.

Market Review and Forecast

Office of THE FARMING WORLD,
Confederation Life Building,
Toronto, March 4, 1901.

[An improved feeling is reported in wholesale lines at Montreal, showing that buyers are getting in goods for spring trade. There is also an improvement in remittances. Money keeps steady, with a good business in call loans at 5 per cent., private funds being reported offered at 4½ per cent. Discount rates are steady at 6 to 7 per cent. as to name and nature of account.

Wheat.

There is nothing new to report in the wheat situation. Old Country markets have fluctuated somewhat during the week. Markets on this side have ruled steady at about last week's quotations. The growing crops in the Western States are reported in good condition, with the average above a year ago at this time. There are some reports of cold weather, with lack of snow protection. The local markets have ruled steady, quotations here being: Red and white, 65 to 65½c. middle freights, goose at 65½ to 66c. east for No. 1, and 65½c. west for No. 2. Spring wheat is reported firmer at 68 to 68½c. east. On Toronto farmers' market red and white bring 68 to 69c., spring wheats 70½c., and goose wheat 65c. per bushel.

Oats and Barley.

Cable quotations for Canadian oats are slightly lower owing to larger receipts of Russian. A fair local demand continues, Montreal quotations being 32 to 32¼c. for No. 2, and 31¼c. for No. 3 in store. Stocks are reported light and prices are steady. Here prices are firm, with No. 1 quoted at 29½c. east, and No. 2 white at 28½c. middle freights, and 28c. west. On the farmers' market here oats bring 33½c. per bushel.

No. 1 malting barley is selling at Montreal at 52 to 53c. in a wholesale way. Here barley is quoted firm at 40 to 42c. middle freights, as to quality. On Toronto farmers' market barley brings 45 to 46c. per bushel.

Peas and Corn.

The market for peas is rather quiet, owing to lower values in England. Montreal quotations are 72c. alfalfa. Prices are steady here at 64c. east and 63½c. middle freights. On the farmers' market peas bring 65c. per bushel.

The movement of corn in the west is slow, and farmers are firm holders. At Montreal, car lots of Canadian are quoted at 49 to 49½c. and American mixed at 50 to 51½c. per bushel. No. 3 American yellow is quoted at 45½c. Toronto.

Bran and Shorts.

At Montreal, Ontario bran in bulk, in car lots, sell at \$17 to \$17.25 per ton on track, and shorts at \$18 to \$18.25. Manitoba bran, in bags, in car lots, is quoted at \$17 and shorts at \$18. City mills here sell bran at \$17 and shorts at \$18 in car lots f.o.b. Toronto. Buyers here quote bran at \$14 to \$14.50 and shorts at \$15 to \$15.50 in car lots at points west.

Eggs and Poultry.

The total shipments of eggs for the past season from Canada, via Montreal, St. John, N.B., and Portland, from May 1 to date were 302,541 cases, as compared with 245,525 cases for the corresponding period last year, showing an increase of 57,016 cases. Canadian pickles and glycerines are well liked in the English market, and the business therein will no doubt largely increase, as well as in fresh stock, which appears to give satisfaction, both as regards color, size and weight.

The total value of eggs imported into Great Britain during the year ending Dec. 31, 1900, was \$27,030,705, against \$25,222,010 for the year previous, showing an increase of \$1,808,695.

Some English buyers claim that they have lost money on Canadian eggs bought up last summer at too high figures. There are reported to be a great many cold storage eggs in market just now. The cold weather has lessened the supply of new laid eggs somewhat at Montreal, where quotations are 19 to 21c. in case lots. Here an easier feeling prevails, and new laid are now plentiful at 17½ to 19c. per dozen in job lots. On Toronto farmers' market new laid bring 20 to 25c. and held stock 18 to 20c. per dozen.

The steady cold weather has improved the demand for dressed poultry at Montreal where quotations are: choice turkeys, 9 to 9½c.; geese, 6 to 7c.; ducks, 7½ to 8c. and young chickens 8 to 8½c. per pound, in a jobbing way. On Toronto farmers' market chickens bring 50c. to \$1.25 and ducks 90c. to \$1.25 per pair; turkeys 11 to 14c. and geese 8 to 10c. per lb.

Potatoes.

Car lots of Ontario potatoes are quoted at Montreal at 40 to 42c. Car lots are reported sold at points west of here at as low as 22½ to 25c. per bag f.o.b. Quotations here are 29 to 31c. per bag for car lots on track. On Toronto farmers' market potatoes bring 30 to 35c. per bag.

Hay and Straw.

A good export demand continues for Canadian hay in Great Britain and the United States, and considerable ocean-vessel space has been contracted for lately, for hay. The Trade Bulletin of last week has the following to say on the subject:

"Quite a lot of new business has been put through of late for Glasgow and Leith account, as well as for American account, the markets in the Eastern States having been bare of good to choice qualities, which have sold well, the continued cold weather being a great aid to consumption. A New York firm is buying hay in this province for our Government, and has paid \$9 to \$9.50 per ton for good to choice No. 2, and \$10 to \$10.50 for No. 1 f.o.b., around Louisville, P.O. Clover mixture has commanded \$8 f.o.b., and plain No. 2 \$8.50. A few lots are still going forward to Antwerp. The imports into the United Kingdom have recently increased, but they seem to be readily absorbed, and prices there are fairly steady."

The market here is steady and active, and prices are unchanged at \$10 to \$10.50 for No. 1, and \$9 to \$9.50 for No. 2 baled hay in car lots on track, Toronto. Baled straw is quoted at \$5 to \$6 per ton in car lots. On Toronto

farmers' market hay brings \$13.50 to \$14.50, sheaf straw \$9.50, and loose straw \$7 per ton.

Seeds.

The demand for seeds keeps good and prices are steady. Quotations at Montreal to dealers are \$7 to \$9 per bushel for red clover, \$7 to \$9 for alsike, \$2.50 to \$3 for timothy, and \$2 to \$2.25 for flax seed.

Apples.

There has been a good local demand at Montreal for apples. A car of Spies and Bellflowers sold during the week at \$3.25 per bbl., and a car of mixed varieties at \$2.25. A car of straight Baldwins sold at \$3.25 per bbl. At Ontario points during the week sales are reported at \$2.50 to \$2.75 f.o.b. The export season is now pretty well over. On Toronto farmers' market apples bring \$1.50 to \$3.50 per bbl., as to quality.

Cheese.

Cable quotation declined 1s. during the weeks, but at the decline there is a steadier feeling with more enquiry. The Montreal market is reported quiet, but there has been more enquiry for the lower-priced article, and sales are reported at 9½ to 9¼ up to 10c. for the better qualities, though some holders are asking 10½ to 10c.

Buyers are anxious this year that no fodder cheese should be made. If they would quit buying it altogether there would be none of it made.

Butter.

The English market keeps steady though there is very little Canadian offering there. On this side the market keeps steady under a gradually increasing demand for creamery. The Trade Bulletin sums up the trade of the week at Montreal as follows:

"Holders are keeping up the prices of finest creamery pretty well, but for all other grades there seems to be an undertone of weakness that has become quite perceptible during the past few days. Finest creamery is quoted steady at 22½ to 23c., although it is difficult to realize the outside figure. Seconds have sold at 20½ to 21½c. A lot of Manitoba creamery is offered on this market at 21c. Western dairy is quiet at 18 to 18½c., and Manitoba dairy at 15 to 17c., a lot of 1,500 lbs. selling at under 15c."

The demand for creamery here is active and the market firm at 23 to 24c. for prints, and 20 to 22c. for tubs or boxes. There seems to be a

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good supply of dairy here and quotations are lower at 17 to 18c for pound rolls, and 16 to 17c. per lb. for large rolls in a jobbing way. On Toronto farmers' market lb. rolls bring 20 to 23c. each.

Cattle.

American cattle markets as a rule have ruled weaker during the week with desirable lots barely holding their own. On Friday cable quotations were lower at 10 1/2 to 11 1/2c. for live cattle at Liverpool and 11 1/4 to 12 1/2c. per lb. at London. At Toronto cattle market on Friday the last market day of the week, there was only a moderate supply of live stock, consisting of 591 cattle, 1828 hogs, 711 sheep and 15 calves. There were very few well finished cattle on hand as compared with the number of unfinished animals. Trade was dull, though very few lots were left unsold as dealers thought it better to sell than hold for higher prices. Prices for shippers showed little change. One or two dealers had to send to Chicago for their loads of choice cattle to supply their export orders, there not being nearly enough of the right quality here. Very few milch cows of the right quality are being marketed and which would find ready sale at good prices. Too many of the medium or common classes are offered for which prices are not brisk. To many "bobs" and skim-milk veal calves are offered and good well-fed new milk calves are scarce and would command good prices.

Export Cattle.—Choice loads of these are worth from \$4.60 to \$5 per cwt. and light ones \$4.00 to \$4.50 per cwt. Heavy export bulls sold at \$3.85 to \$4.25 and light ones at \$3.40 to \$3.60 per cwt.

Butchers' Cattle.—Choice picked lots of these, equal in quality to the best exporters', weighing 1,000 to 1,100 lbs. each, sold at \$4.25 to \$4.35 per cwt., good cattle at \$3.40 to \$3.75, medium \$3.15 to \$3.30, and inferior to common at \$2.40 to \$3 per cwt.

Feeders.—Heavy, well-bred steers, from 1,000 to 1,150 lbs. each, sold at \$3.60 to \$3.80 and other quality at \$3.40 to \$3.60 per cwt. Light steers, weighing 800 to 900 lbs., sold at \$3.35 to \$3.50 per cwt.

Stockers.—Yearling steers, 500 to 600 lbs. each, sold at \$3 to \$3.25 off colors and inferior quality at \$2.25 to \$2.50 per cwt. Yearling bulls, 600 to 900 lbs. each, sold at \$2 to \$2.50 per cwt.

Calves.—These are in fair demand at Buffalo, choice to extra bringing \$7 to \$7.25 per cwt. At Toronto market calves bring \$3 to \$10 each.

Milch Cows.—These sold at from \$25 to \$45 each. Those offered on Friday, with a few exceptions, were a pretty poor lot.

Sheep and Lambs.

There was a large run of sheep and lambs on Friday and trade was dull with prices lower. Sheep were easier at \$3 to 3.30 per cwt. for ewes and \$2.50 to 2.75 for bucks. Grain fed lambs sold at \$4.25 to 4.60 per cwt. and ordinary stock at \$3.50 to \$4 per cwt. Buffalo market is easier at \$5.50 to 5.65 for choice to extra lambs and \$4.50 to 4.75 per cwt. for choice to extra sheep.

Hogs.

Prices for hogs advanced a shade during the week and ruled steady at quotations which are \$6.87 1/2 for select bacon hogs and \$6.50 per cwt. for light and thick fats.

The Wm. Davies Co., Toronto, will pay \$6.50 per cwt. this week for select bacon hogs and \$6.00 for light and thick fats.

At Montreal prices have ruled firm at \$7 to \$7.12 1/2 per cwt. for select bacon hogs and \$6.75 to \$6.85 for heavy coarse hogs. The *Trade Bulletin's* Lord in Cable of Feb. 28, re Canadian bacon, reads thus: "The market for Canadian bacon is firm; stocks are light, and holders are not offering very freely."

On Toronto farmers' market dressed hogs bring \$8 to \$8.65 per cwt.

Horses.

The *Trade Bulletin* gives the following, re the horse situation at Montreal: "There has been a fairly good trade in horses all winter, but business has of late been checked by farmers demanding too much money. Consequently trading is quiet at present. Light roadsters have sold all the way from \$75 up to \$125, and heavy draught horses are quoted at \$150 to \$225. A light bay heavy draught horse sold this week for \$185, and a pair of dark brown carriage horses brought \$375. Common animals for carters' use have sold all the way from \$20 to \$45. There was a report that the Government were going to ship a lot of horses on the steamers engaged to carry hay from St. John, N.B., to South Africa, but we failed to get the rumor confirmed."

Very little business was done at Grand's Repository, Toronto, last week and the bulk of those sold lost money to the dealer, as he did not begin to get what the horses cost him in the country. Good general purpose horses and useful drivers sold at \$85 to \$115, which cost considerably more in the country. Mr. W. H. Smith, of Grand's, went to the country on Friday and Saturday to buy two carloads, but as farmers wanted higher prices than the horses would sell for here he returned to the city without buying.

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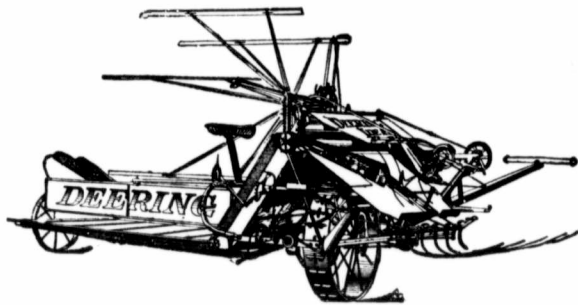
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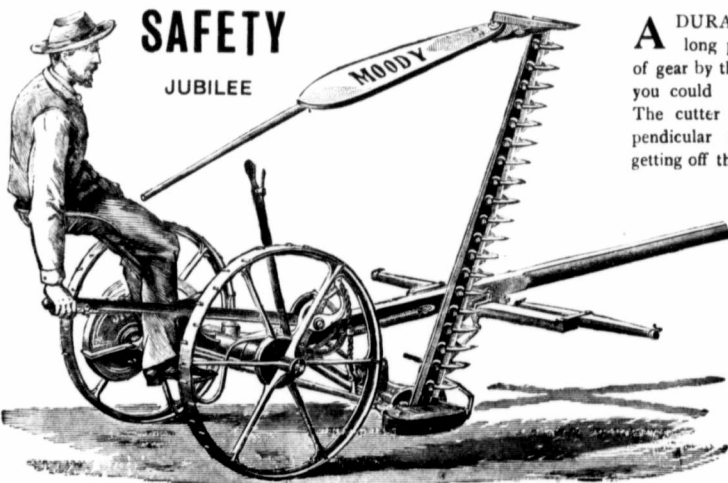
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