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THE FARMING WORLD

Address
THE FARMING WORLD

FOR FARMERS AND STOCKMEN

CONFEDERATION LIFE
TORONTO



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The **Atlantic Refining Co.** **NO COMBINE**
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TORONTO.

WORLD of September 3rd.

Always Mention THE FARMING WORLD when writing to Advertisers

Highest Award

CREAM SEPARATORS

Buffalo Exposition

Just as in the case of every representative exhibition or other contest since the invention of the Cream Separator twenty years ago, the De Laval machines have maintained their supremacy at the Pan-American Exposition, Buffalo, having received the Gold Medal on Cream Separators.

This is the highest and only award of its kind on Cream Separators. The Sharples machines received a Silver Medal. The Vermont Farm Machine Co. received a Gold Medal for its combined exhibit of cream separators, Babcock testers, churns and other apparatus, and A. H. Reid, a Bronze Medal, for a similar exhibit. With characteristic advertising honesty the Vermont Company is claiming this Gold Medal to be an award to its "U.S." Separators.

The jury of awards on cream separators consisted of Dr. S. M. Babcock, of the University of Wisconsin, the famous dairy authority and inventor of the test bearing his name, and Prof. H. W. Spangler, of the Franklin Institute, Philadelphia. This jury awarded the Gold Medal to the De Laval machines, a Silver Medal to the "U.S." machines (Vermont Farm Machine Co.), and a Bronze one to the Sharples machines. But after "pulling and hauling," which unsuccessful exhibitors always resort to in an exhibition contest of this character, finally resulted in the general award authorities granting awards as above announced.

In the Model Dairy at Buffalo the work of the De Laval machines was in keeping with their recognized superiority in ordinary dairy practice. Four makers of separators were offered opportunity to set in machines. Two of these, the Sharples and Reid, evaded doing so. Of the third, a prominent dairy expert writing under date of October 10th says: "I hear that neither natural gas nor soft coal would make enough steam, so that they had to use wood and coke to run the 'U.S.' machine, keeping water ready to put out the fires that had been started two or three times in the roof of the engine house by the heat from the smokestack,"—the machine being one of those "light" running "dairy" turbines of the make in question, which, like the other sizes of such separators run as easy "on paper" as the De Laval machines.

Other Great Expositions

The supremacy of the De Laval machines at Buffalo is a continuation of their triumphant record at all previous great expositions. At the World's Fair, Chicago, in 1893, they received the Gold and only medal awarded by the regular jury of awards, and were the only separators used in the Model Dairy. At Antwerp, in 1894, and at Brussels, in 1897, they received the Grand Prizes or highest awards. At Omaha, in 1898, they received the Gold Medal, and again at Paris, in 1900, the Grand Prize or highest award.

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The DE LAVAL SEPARATOR CO.

77 York Street,

TORONTO

The Farming World

For Farmers and Stockmen

Vol. XIX,

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No. 17

The Western Cattle Trade.

OUR Western correspondent this week deals with a most serious grievance in connection with the fat cattle trade of the West. People in Eastern Canada, unacquainted with Western conditions, can hardly understand what this means. The season for transporting all farm products in the West, be they live stock or grain, is necessarily short, and any delay in getting shipments under way and to their destination, may mean serious loss to both the producer and shipper. Where the hauls by rail are so long, the utmost despatch is necessary in getting products to the consumer.

Of late years there has been a very rapid development in the live stock industry of the West, which has been fostered in no small degree by the Canadian Pacific Railway in granting cheap rates for the transportation of pure-bred stock from Eastern Canada to that part of the Dominion. But all these past efforts of the railway company and others to develop this trade will be without avail unless the Western farmer and rancher has afforded him reasonable facilities and reasonable rates for transporting his fat cattle to the Eastern markets. According to our correspondent, these facilities are not being provided this season, and the cattle raiser of the West is face to face with a serious problem in that he has been induced to buy better breeding stock in order to grade up the quality of his cattle, and yet after doing so, finds his work seriously hampered because of insufficient and inadequate accommodation in getting his finished product to market. Should he decide to go out of cattle raising and to confine his attention to wheat growing, who could blame him? And yet such a decision would work injury to Eastern breeders who to-day find a very profitable market in Western Canada for a great deal of their pure-bred stock.

Where the haulage is so long the very best accommodation must be provided for watering and feeding cattle at sectional points. But it seems that very poor accommodation has been provided by the C.P.R. in this particular. What with lack of cars, poor accommodation etc., the cattle raisers' and the cattle shippers' position is not a very enviable one. But it is to be hoped that some remedy will be forthcoming at an early date. It would be a serious loss to the whole country to have the Western

cattle trade given a permanent set back, just at this juncture.

Buying Cattle for Feeding.

This is the season when cattle are bought for feeding purposes. And a word of advice at this juncture may not come amiss. The buying in of a lot of cattle for feeding is a work that should be done with the greatest amount of care and it is not every one who can make money out of the transaction. There are several things to be considered, such as the price of feeding stuffs, the prospective market prices, the age of the animals and their breeding and individual quality.

The price of feeding stuffs is likely to be higher this winter than usual, unless present indications are deceiving. Particularly is this so with the rough feeds and the coarse grains such as oats, peas and barley. The following table shows the prices per bushel of these commodities at Montreal on Oct. 2nd of last year and this:

	1901.	1900.
Oats	39c	29c
Peas	82c	67c
Barley	54c	47c

The main cause of this advance in prices as compared with a year ago is the big shortage in the American corn crop, which necessitates a greater demand for all kinds of coarse grains. Not only are prices for rough feeds higher on this side but there is a decided shortage in these lines in Great Britain. The price of feeding stuffs will therefore be of greater importance to the farmer contemplating buying cattle for feeding purposes. If feed is higher and there is no corresponding increase in the price of cattle the margin of profit will dwindle down to a pretty small compass if not altogether wiped out. Of course where the farmer has all the feeding stuffs on his own farm he is not running any great risk and if he understands the buying and fitting of cattle for market, should obtain good returns from the venture.

With cattle bought in at the present time for feeding it is hard to forecast what the price will be when they are ready for market. Just now, and it has been so for some months back, really first class shippers' and butchers' cattle are in demand and are mighty hard to get. In fact, at Toronto cattle market during the past few weeks there has not been nearly enough of this first quality to supply the demand, while the common and inferior stuff was all too

plentiful and a drug on the market. In figuring on a future market therefore the only safe plan is to feed only first-class quality, and these should not be bought at too high a figure. A safe rule which some successful feeders follow is to buy the cattle at least one cent per lb. less than there is a prospect of selling them for when ready for market.

The age of the animal put up for feeding purposes is of importance in estimating future profits. Young animals will make more increase in weight in a given time than those that are older and they will do it on relatively less feed. It is worth noting, however, that the heavier the animal is at the time of purchase the more will be the gain on the increase in value per pound made by the fattening process.

While the other factors we mention are important none are of greater importance than the breeding and quality of the animal itself. Perhaps more money is lost through selecting inferior or scrubby cattle for feeding purposes than through any other source. An animal of correct form for making beef and of the right quality will give a good account of itself in the feeding stall. And generally speaking, the best breeding and the best quality for feeding purposes go hand in hand. Breed exercises an important influence on quality. The first thing a good judge of feeders will do when inspecting an animal is to see how it handles. Good handling, which means a rich, soft and elastic condition of the skin, especially over the ribs, is a pretty good indication of good feeding quality. Then, in addition to good form and good handling, an animal should have good stamina or constitution. With these well developed in a young animal, and with other conditions favorable, the skillful, intelligent feeder should make good money on his investment.

The Exporters Advise Dairy-men.

We have received from Mr. J. Stanley Cook, secretary of the Montreal Butter and Cheese Association, the following for publication, addressed specially to Canadian dairymen:

"At a general meeting of this Association held on the 10th inst., it was resolved to issue a circular to the dairymen of Canada, strongly advising them to turn their attention to butter more generally, and to discontinue the manufacture of cheese entirely after 1st November, for the following reasons:—

Our Western Letter

Shortage of Cars for Cattle—More Farmers Elevators Needed

Winnipeg, Oct. 14, 1901.

1st. That fodder cheese hurts the consumption, thus diminishing the demand for grass goods and lowering its price.

2nd. That the outlet for cheese is limited, and everything depends on the quality to induce a large consumption.

3rd. That the consumption of cheese is not increasing, but diminishing, while the consumption of finest creamery butter is rapidly growing.

4th. That the price of butter is higher on an average all the year round than cheese, for the finest qualities.

5th. That the manufacture of butter is more profitable than cheese, not only in the comparative price, but in that the farm stock and the land are better sustained.

6th. That in order to maintain high prices, there must be a continuous supply of finest butter, and as the flow of milk is lessening now, it is most urgent that the quantity should be kept up as much as possible, and to divert the milk from cheese to this article is the only way to keep up the supply.

Butter should be shipped fresh weekly to command the best price.

GENERAL NOTES.

It is recommended that all factories should be fitted up so as to make either cheese or butter.

Cheese should be held three weeks at a temperature of 60 degrees to ensure proper curing. Serious complaints continue to come of cheese being shipped much too green.

Packages both of cheese and butter are still made of much too thin wood.

The general tenor of this communication is quite in keeping with what we have advised in connection with the cheese trade for several years back. In our opinion our dairymen would be money in pocket if they would close down every cheese factory at the end of October of each year, and not open them up again till the 1st of May of the following year. Such a policy would help to regulate the supply and demand and prevent any early and late fodder goods from being put up on the market. The statement in the above that the consumption of cheese is diminishing while that of butter is increasing, if it be correct, is the strongest argument that could be advanced in favor of curtailing the make of cheese and largely increasing the make of butter. The condition of the cheese market during the past month would seem to bear out this contention that the consumption of cheese is decreasing, though the make is short and stocks are not large, yet the market keeps dull. If there were the usual consumption of cheese we should have an active and firm market.

Will Locate at Berlin.

The Ontario Sugar Co. will locate their factory at Berlin, Ont. Particulars in Sugar Beet World next issue.

The farmer is apt to look upon the exporter as an enemy, fattening upon the result of another's toil. Recent developments here indicate that the exporter has a like opinion of the Railway Co., and past events indicate that the company consider that their employees get too large a share of the good things of this world. The worst feature of talking about one's troubles lies in the fact that it takes such a short time to reason things around the circle to the starting point. We sometimes think that the exporter and the railway company have a private agreement by which they pluck the farmer and partition the plunder. Whether or not it is a case of thieves falling out cannot be definitely stated, but certainly there is trouble between the stock exporters and the Canadian Pacific Railway Company.

Complaints have been quite general during the present season of shortage of cattle cars, and of delay in filling orders for same, of delays and unnecessary stoppages in transit, of loss through failure of the railway company to provide necessary and promised facilities for watering and of careless and dilatory manner in which stock trains are handled. From Medicine Hat and farther west to Montreal is a long journey by rail, and it is fully recognized that only by careful handling can cattle stand this trip. Finding that individual complaints were unattended with any result, concerted action was attempted by bringing the matter before the Board of Trade, which body appointed a committee to look into the alleged grievances. On the fifth inst. the committee held its first session, when evidence was presented by the larger firms on their own account and on behalf of the smaller concerns engaged in the cattle trade. As a result of that meeting the following telegram was despatched:

"To Sir T. G. Shaughnessy, President Canadian Pacific Railway:

"Large number of cattle held for shipment in Alberta. Your officials here give no information when cars will be available. Twenty-five hundred head should be shipped to-day and Monday to catch boat at Montreal. Not more than six weeks before close of shipping season, and large numbers of cattle cannot be marketed, owing to your company not furnishing cars. Serious complaints by shippers of great damage to cattle through inferior and delayed service. Interests of West seriously affected. Immediate relief absolutely necessary.

"(Signed) W. Georgeson, President Winnipeg Board of Trade."

Voluminous evidence, consisting for the most part of letters and telegrams relating to delays in

transit and failure of the company to provide cars when required is in possession of the Board. The lack of feeding and watering facilities at any point west of Winnipeg has also led to much loss. Mr. Gordon, of the firm of Gordon, Ironsides & Fares, says on this point:

"I have asked the C.P.R. for the last three years to provide suitable yards at Moose Jaw so that cattle coming from Alberta and Western Assiniboia could be unloaded and watered. Mr. Osborne promised me last season that this would be carried out this spring. But it has not been done. The C.P.R. have what they call yards there, with a stagnant pool in them. Mr. Cochrane, of the Cochrane ranch, sold his cattle to be weighed off the cars in Winnipeg, and to be watered in transit at Moose Jaw. He personally examined the yards at Moose Jaw and decided not to unload his stock, owing to the condition of the accommodation.

"There are no other yards suitable for unloading range cattle between Medicine Hat and Winnipeg. Mr. Cochrane's experience was that it took him about fifty hours to run from Lethbridge to Winnipeg. His cattle were more dead than alive when they arrived here, and sixteen head of the shipment were dead in the cars. I could give you other experiences similar to this."

Between Winnipeg and Montreal the delays in transit are almost equal to those west of Winnipeg. The railway company agreed on 22 miles per hour for stock trains instead of which 13 to 16 is the rule. The officials of the company say the shippers are grossly exaggerating matters, but promise to investigate the complaints. There are several thousand cattle now ready for shipment, but owners are afraid to ship under existing conditions. The shipments to date amount to 17,000 head compared with 32,000 last year. The fact that the season is two weeks or so later does not altogether account for this shrinkage when it is remembered that there are 50,000 cattle in the country which it was expected to ship this season.

Many of the local dealers say the treatment they are receiving will surely force them out of the business.

As a result of the improved weather the elevators are again taking in wheat. They were closed for a period of about ten days. Operations were resumed on the 7th inst. The fact that the companies can thus at will shut up the wheat market is a tangible proof of the need of an increased number of fully equipped farmers' elevators, which seem to be the only safeguard against the monopoly. At the same time it is an indication that the buyer is not such a greedy monster as some imagine—since he makes such moderate use of his opportunity.

Correspondence

Raising Calves On the Cow.

Editor The Farming World:

Having read so many articles in different papers from time to time on the raising of calves, many of which strongly condemned the plan of raising them on the cow, and as I never raise them any other way, or have not done so for some years, I would like to say a few words in my own behalf. Some say that this plan makes too much work. Well it does make a little extra work after dinner. A farmer said some short time ago: "We send all our milk to the cheese factory and raise the calves too." To judge by the large number of cattle in our section of the country, both in the fields, but more so on the public highway, they have never received feed or milk and are almost unsaleable eight months of the year.

It should be remembered that I am not giving farmers a lot of advice. There is sometimes too much free advice as to how this and that should be done. I am simply giving my plan as I do it myself, leaving the reader to form his own conclusions. In the first place my cows have been well brought up and are all quiet and kind. As soon as the first calf arrives we take it right away from the cow and feed it new milk in a pail till the next calf comes, then we put them both on the cow that has to raise them. It may be difficult at times to convince a cow that she has had two calves when she is sure she only had one, but for the first two or three times keep her own calf in front and the other behind on the same side and it can always be done. The same plan is followed with the second cow and so on till the calves are all started. If we have an even number all the better but this year we had an odd calf and put it on the cow giving the least milk. Then we milk the remaining cows. We keep the calves in the stable during the first summer, clean them out and bed them every day after dinner, turn the cows in the stable, tie them up and let the calves suck morning and night.

At about ten days old we begin to feed the calves hay, and at about three weeks old chop once a day just after dinner. If they do not start at the chop readily I put some in their mouths and they will soon do so. A little later on we turn them out in the yard while we are at dinner. The calves that have been started on the pail know how to drink and the others soon learn. In about a week they stand along the water trough in a row but a sucking calf will drink very slowly. When we begin to wean them we let the calves suck once a day and milk the cow the other time until about a month before we want to turn them all out in the yard together we wean them entirely, feeding them three times a day.

The reader will think perhaps that they will start to suck again.

But it is a curious fact that a lot of calves that have always sucked cows tied up in a stable and then weaned for a month, when turned out again into a yard generally become so bewildered that they don't know what cow they belong to. At any rate I have never had but one calf give me any trouble and it was quickly cured by long nails driven through the nose piece of a small halter which was put on when it was turned out.

Just a few words more. By keeping calves in the stable the first summer one can keep the flies off so much easier; they are cooler on the hot days and warm and dry through the chilly fall. They learn to eat so much quicker, are always in good health, and being used to dry feed such as chop, hay and roots, come into the winter without a check; in fact are as far ahead at two years of age as our cattle years ago used to be at three that were raised in the old way. Thanking you for what is I fear too much of your valuable space,

I am, yours sincerely,
H. A. Holdsworth.

Precious Corners, Ont., Oct. 10, '01

Pan American Model Dairy Notes.

Editor The Farming World:

At the end of the twenty-first week, ending September 25th, the relative standing of the four leading dairy breeds is practically unchanged as far as the total profit on butter is concerned. The contest, however, is becoming more interesting as the end draws near, and the past week has developed some unexpected features. The Guernseys as a herd are showing signs of weakening and stand fourth for the week on profit for estimated butter. The Jerseys are again in the lead with a profit of 7.41; Ayrshires second with 7.36; Holsteins third, 7.28; Guernseys fourth, 7.26; Shorthorns fifth, 6.51, and French Canadians sixth, 6.34.

The Guernsey cow "Medora Fern", is falling off badly in her milk, and seems to be going out of business, which is the principal cause of the set back of the Guernseys. It is doubtful if they can be overtaken by any other herd even if "Medora Fern" dropped out of the race altogether, and if she drops down below the profit line before the contest is over, she will be fed very cheaply. This particular cow was purchased in New Jersey at a high price, especially for this test, and she replaced another cow of less promise, but which would probably have proven much more profitable in the end.

Nearly all the cows are doing well, and the increase of fat in the milk has been very marked during the past week in several of the breeds, and some of them have made more estimated butter than at any time during the past six weeks or two months. The Holsteins stand first for quantity of

butter with 55.59 lbs. to their credit, an increase over last week of 1.63 lbs.; Jerseys second with 51.74 lbs., an increase over last week of 1.5 lbs.; Shorthorns third with 50.84 lbs., an increase of 2.88 lbs.; Ayrshires fourth with 50.64 lbs., an increase of 3.71 lbs.; Guernseys fifth with 50.30 lbs., an increase of 1.35 lbs.; Red Polls sixth, 44.64 lbs., no change; Brown Swiss seventh, 44.01 lbs., small increase; French Canadian eighth with 41.83 lbs., increase 3.89 lbs. The other two breeds are practically unchanged.

It will be noticed that the French Canadian have made the greatest gains, and they have again produced their butter at the least cost. Below will be found the average cost per pound of butter of each breed for the week ending September 24th, also the lowest and highest cost in the herd.

NAME.	AVERAGE COST.	LOWEST COST.	HIGHEST COST.
French Canadian.....	9.8	9.2	11.06
Ayrshires.....	10.44	9.2	12.48
Guernseys.....	10.53	9.18	17.05
Jerseys.....	10.64	10.15	11.16
Polled Jerseys.....	10.64	10.16	11.08
Red Polled.....	11.3	9.75	12.88
Holsteins.....	11.9	11.5	14
Brown Swiss.....	12.04	10	13.05
Shorthorns.....	14.18	9.34	14.23
Dutch Belted.....	13.64	10.16	20

Taking the total production and the cost of feed since May 1st, it will be found that the Guernseys have been the most economical producers, and below will be found the cost of producing a pound of butter and the value of the butter produced from \$1.00 invested in feed, the butter being valued at 25 cents per pound.

Guernsey.....	9.	\$2.77
Jersey.....	9.2	2.72
Ayrshire.....	9.5	2.62
Polled Jersey.....		
French Canadian.....	9.7	2.58
Red Polled.....	9.9	2.52
Holstein.....	10.7	2.34
Brown Swiss.....	10.9	2.30
Shorthorn.....	11.13	2.11
Dutch Belted.....	13.	1.92

It will be seen from the above table that the French Canadian have produced their butter at practically the same cost all through the term, and it now looks as if they are persistent producers, and four of them are doing better now than they have done since the beginning of August. The fifth cow, "La Bouchette", is far gone in calf and gives less than 15 lbs. of milk per day.

It has again been demonstrated that a temperature of from 65 to 70 is the most conducive to a good flow of milk. A temperature at 70 seems about right to enable the cows to maintain a comfortable bodily temperature, and the flies are less active and troublesome than they are at a higher temperature. A cool atmosphere also gives the cows greater digestive vigor and they seem to assimilate their food to better advantage.

The question of variation in a cow's milk from milking to milking is an interesting one. The fact has been very prominently brought out by these tests, that the higher the nervous system of a cow is developed, the greater will be the va-

riation on the fat content of the milk. Tests have been made to prove or disprove the correctness of the composite sample test where a sample of each milking is added to the composite sample bottle, and a test made from the accumulated milk at the end of a stated period. The total milk for the period is multiplied by the test, and the produce represents the amount of fat contained in the milk for that period. The results show that a cow's milk is never constant in the amount of fat it contains, and it may be up one week and down the next without any apparent cause but which many factory patrons refuse to believe possible.

The following is the amount of total solids produced by each herd up to October 1st: Holsteins, 4,050.67; Ayrshires, 3,591.23; Shorthorns, 3,530.37; Brown Swiss, 3,439.39; Red Polled, 3,283.73; Guernsey, 3,293.21; Jersey, 3,252.65; French Canadians, 2,839.23; Dutch Belted, 2,612.62; Polled Jersey, 2,461.68.

J. Stenhouse,
Testing Department,
Pan-American Exposition.

The Holstein-Friesian Test at the Pan American.

Editor The Farming World:—

The idea of a public test illustrative of official testing as practiced by the Holstein-Friesian Association of America for the last six years, originated at a meeting of a committee of this association held at Syracuse, N. Y., the 9th of July last. It was just sixty-seven days to the week to be devoted to the cattle exhibit at the Pan-American, and on which this test must be held if held at all. It was evident that cows for such a test should be in fresh milking condition. No cows had been bred with object in view. And it is well known that all the breeders avoid having their cows fresh during the period commonly called "dog days," (from July 25 to September 5.) except for some special exhibit. Notwithstanding these forbidding conditions it was decided to make a trial to obtain the necessary cows for this purpose.

The committee employed Mr. W. C. Hunt, under the direction of the Secretary of the Association, to search for them. On July 29 he reported that he had found fifteen, four of which had already dropped their calves. These cows were described by him as of "middle grade." He then proceeded to secure a suitable place in which to gather and care for them. He obtained a small horse-barn and an open yard of perhaps an acre in extent near Buffalo. Here the remaining calves were dropped. In calving, two of the cows retained the "afterbirth" which had to be removed by artificial means. It was a period of extreme heat. Innumerable flies swarmed in the barn and over the premises. In spite of every means devised for protection, the cows suffered se-

riously from their attacks. Under these conditions they were kept until September 9. On that day nine were selected and driven to the Pan-American grounds and quartered in the barn appropriated by the authorities of the Exposition for their use. This barn was roomy and comparatively free from flies. "Every cow," says Mr. Huat, "with one exception, began to gain on flow of milk." Here under the usual conditions of a cattle show the public test was made.

Prof. H. H. Wing, of Cornell University, and Prof. J. Fremont Hickman, of Ohio Agricultural Experiment Station, with two assistants, began officially testing the cows on the 14th, but on account of the late arrival of cows from N. Y. State Fair, that had been entered, it was decided to begin the formal test of all on the morning of the 15th. On the second day one was taken seriously ill, and by the consent of Mr. Powell, Chairman of the committee, she was withdrawn by her owner. Another was withdrawn on the night of the 20th, but fortunately she was tested on the 14th, and thus a full week's test was obtained of her and is reported herewith.

The cows and their products were as follows:

NAME OF COW	LBS. MILK	% OF FAT	TOTAL FAT.
Pauline De Kol	24.10	2.61	15.019
Goshule Lunde Artis	47.33	3.27	13.358
Piehe Queen	419.80	3.14	13.067
Shady Brook Gerben			
Parthena	450.35	2.86	12.923
Pauline Whitney	374.10	3.43	12.901
Floa 3rd	436.80	2.86	12.332
Kate Spray	441.23	2.67	11.786
Dirk 3rd von Hollinger			
3rd	295.55	2.93	11.626
Bodora 2nd De Kol	275.9	3.91	11.130
Lynj's De Kol	358.45	2.93	11.114
Altauna Fietzer A.	302.40	2.86	11.239
Orleans Maid	375	2.94	11.028
Woodland Iowa	353.55	2.88	10.24

The cows generally gained in amounts of products throughout the test.

The aggregates of the first and last days were as follows:

First day of test—
751.3 lbs. milk; 22,140 lbs. fat;
63.72 lbs. solids not fat.
Last day of test—
784.8 lbs. milk; 23,165 lbs. fat;
66.41 lbs. solids not fat.

That they have maintained an equal production during a second week, or during a longer period cannot be reasonably doubted.

Doubtless the first and most important query of the ordinary reader is this: How do these results compare with those of other similar tests? The conditions under which this test was made more nearly approach those of the first test at the Chicago World's Fair in 1893, commonly called the cheese test. That was for fifteen days, from May 12 to May 26, inclusive. Twenty-five cows of each of the three breeds produced as follows per cow per day:

	Butter-fat.	Solids, not fat.
Leading breed	1.695 lbs.	2.983 lbs.
Second "	1.302 "	2.708 "
Third "	1.164 "	2.854 "

In this test only thirteen cows were tested for seven days. Their products per cow per day are as follows.

Holstein-Friesian breed, 1,739 lbs. butter fat, 5,003 lbs. solids not fat.

It will be seen by this comparison that the Holstein-Friesian breed maintains the position claimed for it, notwithstanding the unfavorable conditions under which this test was made.

S. HONIE,
Superintendent of advance registry
Holstein-Friesian Ass. of America.
Yorkville, N. Y., Oct. 10, 1901.

Shorthorn Breeders Meet.

The Board of Directors of the Dominion Shorthorn Breeders' Association met at the Parliament Buildings, Toronto, on Friday last. There were present Robt. Miller, President; Hon. John Dryden; F. W. Hodson, Dominion Live Stock Commissioner; Henry Wade, Secretary; E. B. Elderkin, Canadian Superintendent of Live Stock at the Pan-American; Wm. Linton, C. M. Simmons, Arthur Johnston, W. J. Biggins, John Isaac, James Russell, W. D. Flatt, T. E. Robson, M. P. P., J. M. Gardhouse, N. Dymont, E. Jeffs, Thos. Russell, H. Smith, James Tolton, W. B. Watt, H. Cargill, M. P., W. G. Pettit, and Geo. Raikes. Among other important business dealt with was the report of the Association's representative to Great Britain in reference to securing some change in the registration of Shorthorns in the English Herd Book, and the advisability of the Association's taking some action with a view to securing the reorganization of the Dominion Veterinary Department. In connection with this latter subject a committee, composed of the Hon. John Dryden, Robt. Miller, Arthur Johnston, H. Cargill, Capt. Robson and W. D. Flatt, to draw up a petition was appointed to the Government asking for such reorganization. It is intended in this matter to secure the co-operation of the other Cattle Breeders' Associations and the Live Stock Associations of the other portions of the Dominion, and to have the matter come before the proper authorities in as strong a form as possible.

President Robert Miller, Hon. John Dryden, W. D. Flatt, Arthur Johnston, Capt. T. E. Robson, M. P. P., and H. Wade were appointed a committee to confer with the directors of the American Shorthorn Association at their annual meeting in Chicago, in regard to having the standard of both associations changed, so as to admit pedigrees of animals recorded in the English Herd Book up to and including Vol. 32.

At the request of Mr. Elderkin, who spoke very highly of the good work done at the model dairy by the Shorthorn cows which would come about fifth in the test, it was decided to grant \$50 each to the three gentlemen who had entered cows in the Shorthorn dairy test at the Pan-American.

It was also decided that the next annual meeting should be held in Toronto.

President Miller and Secretary Wade were appointed delegates to the National Live Stock Convention in Chicago in December.

Studies in Nature

A Review of Insect and Bird Life on the Farm

Edited by C. W. Nash

Already the trees are beginning to assume their brilliant autumnal tints, making the woods appear a mass of scarlet and gold, with here and there a blotch of green, where some sturdy oak stands, still retaining its color in spite of chilling winds and frosty nights.

It is a curious phenomenon, this annual fall of the leaves from the majority of the trees in cold climates. Yet we are so accustomed to it that we rarely think of it except as a sign that summer has gone, and the cold days of winter are coming. In tropical countries the trees do not suffer any regular periodical loss of their foliage, but with us, only the native coniferous trees are evergreen; these with their tough needle-like foliage being able to withstand the force of the winter winds and the severity of the cold. In the case of the deciduous trees as autumn comes on, all the living material in each leaf is gradually withdrawn into the bark and branches, where it is stored up during the winter, ready to provide for the growth of the young leaf buds of the following spring. When the absorption of this material is accomplished, the special cells at the base of each leaf stalk dry up, and let go their hold upon the branch, when the leaf falls away, leaving a clean scar through which no sap escapes. It is to the absorption of the green coloring matter and other living principles from the dying leaves that we owe the rich tints of autumn. Some of the colors are produced by the oxidation of the green chlorophyll; others were always present in the leaf itself, though completely hidden during the period of growth by the overpowering green. These bright colors may at times become visible even in summer, in spots and blotches, on leaves where the chlorophyll and other living principles have been destroyed by insects.

BIRD NOTES.

The first rush of waterfowl and shore birds is now over, and there is a lull in the flight; in fact I never saw so few birds of this class along the shores of Lake Ontario as there are at present. This is perhaps partly owing to the continual shooting which drives away the flocks that would remain here for a time on their way south, and partly to the fine autumn weather we are having, the birds taking advantage of the absence of frost to remain on their rich feeding grounds in the north. When the next cold weather comes there will be another rush, and I hope then to see our marshes for a short time visited by a lot of plump, well fed birds, such as sportsmen love to

bring to bag. Farmers who have water upon or adjoining their land can with but very little trouble encourage the visits of waterfowl in the fall by sowing wild rice, which is a favorite food with all our ducks. It should be sown in the fall in from six inches to four feet of water, where the bottom is soft and somewhat muddy. It makes an exceedingly valuable forage plant and cattle are very fond of it. It also makes good hay when cut early.

With the exception of some straggling flocks of our native sparrows, which are now haunting the scrub and weed grown fence rows, and the kinglets and creepers that are foraging for minute insects through the orchard, all our migrating land birds have departed or in the case of the robins and bluebirds, are gathered into large flocks drifting always southward, though they may at times make short halts, where they find an



•M. W. DOHERTY, M.A., B.S.A.,
President Wellington Field Naturalist Club

abundance of food and convenient roosting places. Some time ago I called attention to the peculiar habit the robins have of resorting in vast numbers year after year, to some favorite roosting place. There is one such place near Toronto, which I make a point of visiting once or twice every autumn. To this spot I went a few evenings ago, and was amazed at the number of birds that gathered in there to spend the night. Where they all came from, I cannot guess. I saw very few about during the day, and I supposed that the bulk of them had gone, but just before dark they came in from every direction, more, I believe, than I ever saw before. But on the following day there were again but very few about the neighborhood. They must wander far and wide in search of food and return to this favorite spot to roost at night.

Fattening Chickens for Market.

Prof. Robertson, in his evidence before the Agricultural Committee last spring gave an interesting account of a visit made by him to the poultry fattening establishment of Mr. Samuel Taylor, near London, England. The following extracts from this account will be found of interest at this season:

Mr. Taylor had on an average four hundred dozens of chickens fattening at his place. In approaching his house, I may say that I went down a lane which was lined on both sides with coops, in which there were chickens, and around the stackyard and in a few open sheds there were some more. The special buildings required for this purpose were cheap and not at all large. Two-thirds of the fattening was done in the open air. Mr. Taylor did not rear one-tenth of all the chickens he fattened. He had a man who went around on certain routes every fortnight, collecting chickens from the farmers who were, in a sense, his patrons. The farmers and cottagers brought them up to about 3½ lbs. live weight, and then sold them as they ran. The chicken-fattener collected them and paid on an average one and nine-pence apiece for these chickens—42 cents each in our currency. He sent around and collected them from his customers regularly every fortnight. Those who raised the chickens were sure of a regular market and good prices.

The coops in which the chickens were put for fattening were about 6½ feet long and about 16 inches square inside. Each coop was divided into three compartments, and in each compartment there were five chickens, making fifteen chickens in each coop. The coops were constructed by using sticks or rods, such as we would call slats; and in some cases small hazel rods such as are used for heavy basket making. A little sliding door in front of each compartment gave a chance for the chickens to be taken out when that was required. The chickens were fed for about three weeks, sometimes a little less, sometimes a little longer, according to the condition of the chickens when received and the activity or dullness of the market. The chickens were fed on oats ground very fine, the hulls being pulverized until they were almost like dust, mixed with skim milk either sweet or sour, preferably sour. The mixture had a consistency about as thick as thin porridge, so that from the end of a wooden spoon it would drop off but not run.

It was fed raw. In front of each coop was a small wooden V-shaped trough. The chickens could put their heads through between the slats of the coop and eat out of it.

Q. Was it fed just as it was mixed or was it allowed to stand for a time?

A. Both ways. Sometimes in the morning it was mixed for a day's supply; and sometimes it was fed just after it was mixed. That made

no difference. The meal was ground fine; it did not require much soaking to make it soft. The chickens were fed a small allowance of the mixture three times a day at first. A man took a pail and a wooden stirrer, such as would be made in the country from part of a shingle, and spread the mixture along the "V" trough, three times a day. The chickens were kept hungry during the first week. After that they were fed twice a day as much as they would eat. During the last ten days they were fed a small quantity of tallow in the mixture. The tallow was melted and mixed with a small portion of meal. That was readily mixed with the bulk of the food. A pound of tallow per day was allowed to 70 chickens at the beginning of the 10 day feeding time, and by the end of that the quantity was increased to a pound of tallow for 50 chickens per day.

Some time during the feeding period, in his case just before the killing time, the chickens were taken out and a pinch of sulphur rubbed under each wing and under the tail. That he said, was a sure means of killing all the vermin on the chickens. I tried that on chickens covered with vermin and did not see a single insect on them after the treatment was applied twice. The sulphur seemed also to give a rather nicer appearance to the skin of the chickens when plucked.

After feeding the chickens for about a week on the thin mixture three times a day, they were fed for about a week on a thicker mixture twice a day only; and then they were fed during the last week of the fattening period with what is known as a crammer."

Raising Winter Lambs

Though the market in Canada for winter lambs is somewhat limited it is a subject worthy of some attention. During the late winter and early spring well fitted lambs bring extravagant prices in some of the American centres. A great many Canadian lambs find their way to the Buffalo market in the fall of the year. And there is no good reason why a similar trade could not be carried on in the early spring when lamb flesh is dear. The duty is no greater than in the fall and it does seem as if a profitable trade could be worked up in this line.

To raise winter lambs successfully, however, much attention is necessary and one should have a thorough understanding of the business. The following from the Orange Judd Farmer on this point deals with the subject in a practical way:

Much attention is necessary to raise lambs successfully for the winter and early spring trade. In the first place secure ewes of a good lamb-producing strain, preferably belonging to one of the muton breeds. There is some difficulty in having the lambs come at the

right time. They should be dropped from the beginning of October to the middle of November. This gives them an opportunity to get a start before very cold weather sets in. The ewes also give milk much more freely than later. If the weather is fine the lambs may be allowed to run in the yard or pasture a few hours every day. If some green feed such as rye, rape or mustard can be provided they will do well. The lambs must not be allowed to remain out in cold or wet weather.

The ewes should be provided with an unlimited supply of good feed, especially when confined in the barn. Silage and clover hay with an occasional feed of shredded cornstalks should comprise the roughage. As a grain ration use a mixture of linseed and cottonseed meal, with whole or cracked corn and bran. Oats are fine feed, but as a rule are too high in price in this part of the country.

I like a basement barn with a southern exposure for sheep. This can be kept at an even temperature but must be well ventilated and free from drafts, with a thoroughly dry floor. The floor must be well bedded and kept perfectly clean. The ewes should be divided into small lots of not more than twenty so they will not crowd at the trough. They should also have plenty of trough and rack room. Those with twins should be placed in a separate inclosure, as they will require more feed than the others. The lambs should have a separate pen where they can go to be fed, and should be given corn, linseed meal, cornmeal and beans, with plenty of good clover hay.

Sheep should always have plenty of water and salt. It is best to have this where they can get at it at any time. Winter lambs require a great deal of attention, and unless this can be given do not attempt to raise them. However, they usually sell for high prices and fully pay for all the effort expended.

Kansas Hard Wheat.

Forty years ago the acreage of wheat grown in Kansas amounted to only 10,000 acres. To-day the acreage is fully 5,000,000 acres and the annual yield about 80,000,000 bushels. But the interest in Kansas wheats is not so much in the large acreage and big yields as in the quality of a great deal of the wheat grown there for milling purposes. In an admirable article dealing with "Kansas and her wheats," Mr. F. D. Cobourn, Secretary of the State Board of Agriculture, says:

"Kansas is virtually the only portion of America producing the famous hard, red wheat in considerable quantities, in which, as in many other things, the state is unique. The seed of this wheat was introduced about twenty-five years ago, being brought hither by Mennonite immigrants coming from Southern Russia near the

Black Sea, who, apparently, understood much better than Americans its hardy productiveness and real value. For years following its introduction it was disparaged by American millers and grain-buyers, who claimed that its flinty character made it so difficult to grind as to materially lessen its market value. The farmers, however, persevered in sowing it and the production steadily increased, although they were compelled to accept in the markets from 10 to 15 cents per bushel below what buyers and millers were willing to pay for the softer and much better known varieties which yielded considerably fewer bushels per acre. They persistently argued that it was more profitable to raise a wheat that would reliably yield them, one year with another, from 18 to 40 bushels per acre, even though selling for but 70 cents per bushel, than to raise a crop selling for 80 or 85 cents per bushel, and yielding perhaps only 12 to 15 bushels. This, in the course of a few years, compelled millers to devise ways and means for more successfully and economically converting this hard wheat into flour, and there were brought into use processes for softening the grain by steaming and moistening before grinding; these are now in general use and are considered indispensable wherever wheats of this class are floured.

This has required a general remodeling of such mills as were already built, and the construction of the later mills on plans in some respects entirely different from the old, and now, out of all this, results the Kansas hard wheat flours, which have become famous in the world's most exacting markets as superior to nearly all others wherever made in America, and are conceded equal to the flours made in Hungary from wheats grown in that country and in Bohemia. This is true either for use alone or for blending with and giving quality to other pretentious makes represented as peculiarly choice because made from extra fancy grades of spring wheat grown elsewhere."

Capt. Rolph Dead.

Breeders in all parts of Canada will learn with regret of the death of Captain Wm. Rolph, Markham, Ont., who was conveyed to his last resting place on Thursday of last week. Captain Rolph was one of the best known of Canadian Jersey breeders, and by his energy and zeal in the Jersey cause, did much to bring that noted dairy breed into prominence in this country, and to make the good quality of Canadian herds known to lovers of the breed in the United States. He suffered from a lingering illness for several months before his death, and for some time had not been able to give his usual attention to the branch of the live stock trade in which he was most interested.

The Sugar Beet World

Devoted to Sugar Beet Culture in Canada and Allied Industries. Specially
Representing the Farmers' Interests

Edited by JAMES FOWLER

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Sugar Beetles

The farmer and manufacturer must work together.

If a sugar factory should be a failure it will be due to a want of a supply of the raw material.

If the farmer will not grow the beets it will be actually necessary for the factories to cultivate the beets they require for a full season's work and the farmer will be the loser.

If the yield falls short it is generally the fault of the farmer through neglect or want of knowledge of the proper methods of cultivation.

There are very few soils that will not yield 12 tons of beets to the acre and in some cases double that amount. Fifteen tons would be a fair average in Ontario.

Beet syrup manufacture may be an industry of the future. It is possible to obtain a superior syrup to that furnished by the sugar refiner.

The refuse molasses from a beet sugar factory mixed with bran that was previously boiled in water makes an excellent cattle food and is very valuable on account of the cost.

There are some sections of California where beets have been cultivated successfully for ten years upon the same soil, and the soil is not yet exhausted.

The farmer is sure of his money in advance at a stipulated price for his beets if he will only grow the crop. This is not so with any other crop.

A practical test in the field is the only way to demonstrate how much profit there is in growing beets.

The most important by-product of the beet sugar industry, particularly from the standpoint of the farmer, is the exhausted beet pulp, which forms a most excellent stock food, either in a moist or in a dried condition.

positively secured they will be able to make much better terms with the promoters or some other company.

Wallaceburg

The factory at this point is now under way and work will be pushed actively as long as the weather keeps so men can work. The foundations will be put in before winter, and as much work as possible will be done. The entire structure and machinery will be placed upon the ground before April next, in order to take advantage of the Dominion Government Act, allowing all machinery and structural iron to be brought in free of duty until that time.

Dresden.

Acree contracts are being rapidly secured for a factory at this point, and everything points to the erection of one of the finest factories that money can furnish at an early date. The Michigan parties interested express themselves as very much pleased with the way farmers are taking hold of the project.

Michigan.

The Saginaw News says:

"The outlook for the sugar industry the present season is so encouraging that farmers all through this section are considering the question of further increasing beet cultivation during the next season. It is expected that large profits will be realized this year and it is the intention of those engaged in the industry to push the business for all there is in it. It is said there is no other crop grown that will yield the income that is secured from the sugar beet. Hundreds of acres of comparatively waste land will be broken up next year and planted to beets. The farmers are also coming to realize the necessity of strictly scientific farming and are now studying drainage and fertilization in order that they may more intelligently cultivate the crop.

Better Prices in Ontario

The following, clipped from the Beet Sugar Gazette, shows the prices paid by one of the largest beet sugar factories in California:

The company makes contracts with the farmers for supplying beets at the following prices:

Beets containing 12 per cent. of sugar \$3.25 a ton.

Beets containing 13 per cent. of sugar \$3.50 a ton.

Beets containing 14 per cent. of sugar \$3.75 a ton.

Beets containing 15 per cent. of sugar \$4.00 a ton.

Berlin

A deputation consisting of Mr. Williams, president of the Board of Trade, H. L. Janzen, ex-mayor, W. V. Utley, editor of News Record, L. Koehler, J. S. Shantz and W. Stantz visited Bay City recently to look into the beet sugar industry and the advantages it would be to the town of Berlin and surrounding district. The party visited the different factories, and interviewed a great number of farmers, reporting upon their return that no effort or expense should be spared to secure the Ontario Sugar Co., with whom the town is negotiating, to locate their factory in Berlin. Acting upon this report, great efforts are being made to close negotiations and work of securing the necessary acreage will be commenced at once.

Guelph

The Board of Trade and City Council jointly are engaged in securing acreage contracts for beets, with a view to offering them as an inducement for the location of a sugar factory in their vicinity. When sufficient has been secured to warrant further proceedings, they will then take up the question of other inducements, such as a free site, water, etc. Work is proceeding vigorously and the prospects are encouraging.

Galt.

Representatives of the Board of Trade are engaged in writing up contracts with farmers for the growing of sugar beets for a factory to be erected in the town for the season of 1902. American capitalists have made a proposition to erect a factory under certain conditions, one of which is the securing contracts with farmers for 5,000 acres. While the proposition has not been definitely accepted by the people on account of some of the features contained in it, still, it is thought that with the acreage

Beets containing 16 per cent. of sugar \$4.25 a ton.

Beets containing 17 per cent. of sugar \$4.50 a ton.

Beets containing 18 per cent. of sugar \$4.75 a ton.

Twenty-five cents additional is paid for every per cent. of sugar above 18. A beet containing 11½ per cent. is considered as one of 12 and one containing 12 1-3 as 13. If it shows less than 11½ a deduction of 50 cents a ton is made for each degree less."

The Ontario Government Act in regard to bounty on sugar compels the factories to pay \$4.00 per ton for beets containing 12 per cent. of sugar and 33 1-3 cents per ton additional for each per cent. of sugar over, after the first year. On the basis of 14 per cent. beets which we expect will be the average in this country the price would be \$4.67 per ton, a difference of nearly \$1.00 per ton in favor of the Ontario farmer.

An Expert's Opinion

Mr. James Wilson, Secretary of Agriculture for the United States, one of the greatest authorities on Sugar Beets, says:

"Our American farmers will this year harvest beets enough to make something like 200,000 tons of refined granulated sugar. Look at the many sugar factories in Michigan, in other sections of the central west, and all over the semi-arid and coast region!

"I expect to see one or more sugar factories running in Iowa next fall. The average farmer is slow to take hold of this new crop, but there is a hitherto neglected factor about it that is going to make the sugar beet one of the most popular money crops in the dairy and corn belt of the west. All through that country our corn and forage crops are rich in starch and grape sugar, but we have to buy heavily of bran, cottonseed, meal, etc., to furnish protein or flesh-forming food to our live stock. Now the factory extracts only the sugar from the beet, leaving all the protein and other food elements in the pulp or cake, which the farmer has back free of cost. In other words, our farmers can get money enough for the sugar in each acre of beets to pay good wages for all the time and labor bestowed on the crop, and afford a handsome profit, and on top of that will have the entire crop (less only the sugar) for stock feeding. Beet pulp or cake is one of the best feeds for dairy cattle, and means a big saving in bought feeds.

"A great development of dairying and stock feeding is to go hand in hand with the beet sugar industry's developments."

The Feeding of Beet Pulp.

The prospects for a sufficient crop of winter food are this year in many localities of our state not very encouraging with many farmers, especially those in the dairy business, how to make up this deficiency in their feed supply. Those living within a 50 mile radius around the

factory at Menomonee Falls and not beet growers will have an opportunity to augment their feed supply by buying the surplus beet pulp from the factory. The sugar beet growers, as is well known, are this year getting their proper share of beet pulp back free of charge if they choose to take it, having to pay the freight charges only. To those that wish to feed pulp this winter, it will be interesting to know how to preserve and feed it to the best advantage.

To get along with the least losses possible, it will be best to dig a trench and proceed with the siloing of the pulp in the following manner.

Choose a somewhat elevated place for your silo, near the stable, so that the pulp need not be transported too far. Then dig a trench about three to four feet deep. If possible have the silo run north and south so that it can be opened at the south end when the pulp is usable. The walls should be perpendicular so that no air spaces can ensue when the pulp settles, whereby the same in such places might spoil.

If you have to do with a heavy clay soil your walls will stand all right, but in lighter soils they may cave in later on unless lined with boards. The length of the silo depends upon the quantity of pulp you wish to preserve, but two feet by six feet wide by four feet deep should be sufficient for one ton of pulp. The corners of the silo should be rounded, and if you line it with boards nail short boards across them, so that no air spaces will ensue in the settling of the pulp. The south end of the silo or the end near the stable, should be slanting so that one can get into the silo with a wheel-barrow, whereby the high pitching of the pulp will be avoided. So much about the digging or construction of the silo.

After you have spread a layer of straw over the bottom of the silo, and in the case of clay walls have lined them with stiff straw, the siloing may begin. The pulp is unloaded, spread out evenly and tramped down well, then follows the next load and so until the silo is filled and well packed. Then load after load is added in the same manner above ground with the exception that the pile is given a triangular roof-like shape. After the pile is completed the same is smoothed down by beating it all around with a flat shovel. Then cover it with some straw, put on about twelve inches of dirt and smooth it down with the shovel. From now on see to it that cracks, which might form in the dirt mantle through the settling of the pulp, are immediately closed so that no air can reach the same and spoil it thereby. Later on, when frost comes, cover the dirt mantle with loose manure, which will keep it from freezing in this wise rendering the uncovering easier later on.

The pulp should be soiled when fresh as speedily as possible, so that no acetic acid fermentation

can take place. The farmer will therefore do well to have a few neighbors helping him in hauling the pulp from the factory or from the car. If the pulp is siloed when in a fresh state, butric acid fermentation will take place, rendering the food very palatable to the stock and the nutrients contained therein entirely digestible. The main fermentation of the siloed pulp will be ended in about two months, after which time the silo may be opened and the pulp fed out. If a farmer should not want to go to the trouble of digging a silo, he may preserve his pulp by piling it above ground and covering it with straw and dirt in the heretofore described manner, but he will have to do more covering and uncovering so that on the whole a dug out silo, especially if lined with boards, will be more satisfactory, as it may be used again.

Here we should like to draw the attention of the farmers to a form of siloing the pulp, which will give them a larger amount of feed and will be interesting to them, especially this year. This refers to the siloing of the pulp in conjunction with cut or shredded corn stalks (stover). If the corn stalks are fed by itself there ensues a loss of about 13 per cent. (according to Prof. Henry's statement), which is not eaten by the stock and consequently goes to the manure pile, from which time on it is more of a nuisance than anything else. But if the corn stalks are run through a shredder or feed cutter and siloed in layers together with beet pulp it becomes an entirely different matter. The surplus moisture from the beet pulp, which contains nutrients and otherwise escapes into the soil constituting a loss thereby, is absorbed by the cut corn-fodder, which in turn becomes just as juicy and palatable as the pulp itself and will be eaten very readily by the stock, every bit of it. Here we wish to remark that it is not necessary to tile-drain the silo, but it should be free from ground water.

As soon as the silo is opened uncover but enough for the day's ration, cutting down from the top to the bottom of the silo with a sharp spade, then close it again with several bundles of straw, so as to keep the pulp from freezing, as the eating of frozen pulp does not agree well with any kind of stock, especially with milk cows.

E. H. DYER & CO.
 Builders of
SUGAR
MACHINERY
 Cleveland, Ohio

Will contract to build complete beet sugar plants, including all machinery and buildings; also furnish the necessary technical and skilled help to operate them.

The beet pulp constitutes a valuable feed for cattle and sheep, but no matter whether fresh or siloed pulp is fed, it will be well to begin with a small ration, say to pounds a day per head of cattle, and gradually increase the amount to 30 and 40 pounds; for sheep from 2 to 8 pounds. To feed too heavy rations of pulp is not advisable, as this might have a scouring effect upon cattle, wherefore the salting of the pulp when being siloed should be also avoided. From 30 to 40 pounds of pulp a day per head of milk cattle should be a sufficiently heavy ration.

As the beet pulp is especially rich in carbohydrates, it will be well to feed some nitrogenous food besides, like clover hay, bran, ground oats or oil cake. It must also be born in mind that sufficient roughage must be provided. This year when hay is scarce and high priced, well harvested and stacked barley or oat straw may be substituted. That it is necessary to keep the troughs clean is a foregone conclusion and every good dairy man does know that.

The feeding with pulp, of which every particle is digestible whether in the fresh state or siloed, aids digestion and assimilation of the nutrients contained in the by-feeds, enlarges the flow of milk immediately and if stopped at once, reduces the same. It will therefore be good policy to silo enough pulp so it will last well into the month of June, so that it may be fed in reduced rations until the pasture is rich enough to sustain the flow of milk. The siloed pulp loses in weight through the process of fermentation, but if we figure with 50 pounds a day per head for, say six months from the 1st of December on, and feed from 30 to 40 pounds, our pulp supply should last us well into the summer.—Wisconsin Sugar Beet.

Beet Vs. Cane.

It is quite generally believed that granulated sugar made from sugar beets does not possess the sweetening power of the corresponding product made from sugar cane. When the granulated sugar from the two sources has in each case been skillfully made by modern processes, the product, for all practical purposes, is precisely the same, whether it comes from sugar beets or from sugar cane. It consists of more than 99.5 per cent. of pure cane sugar mixed with less than one-half per cent. of other materials, which consist of small amounts of moisture, mineral matter, and other substances which do not essentially alter the character of the product. Chemists have never been able to detect any difference between the thoroughly purified sugars from the two sources, and this sugar, when separated in pure form, is called cane sugar, whether it comes from beets or sugar cane, because it was originally found in the latter and manufactured therefrom for commercial purposes. Therefore, as the commercial products are rendered more

and more pure by the use of good manufacturing processes, the difficulty of telling the source from which the sugar is obtained (beet root or sugar cane) becomes greater and greater. Poorly made granulated sugars obtained from beet roots possess to a greater or less extent a characteristic odor which can best be observed by placing the sugar in a bottle or other receptacle that can be tightly closed, and noting the odor of the air surrounding the sugar in the bottle immediately after the cork has been removed and after the sugar has been closed up in the bottle for one or more days. When proper skill and the most improved processes are used for the manufacture of sugar from beets, this characteristic of the product becomes much less and, for all practical purposes, disappears. Therefore, statements that the sweetening power of sugar made from sugar beets is essentially different from that made from sugar cane are erroneous.—Beet Sugar Gazette.

Some Practical Experiments in Molasses Feeding.

In certain districts of northern France recently visited by the writer, molasses has been given some practical tests in horse and cattle feeding. The horses had previously been fed with 26.4 lbs. of oats per diem; this was worth 41 cents. At the present time each horse consumes 22 lbs. of oats, worth 34 cents, and 6.6 lbs. of molasses, worth about 4.8 cents, which means a saving of about 2 cents per diem upon each animal fed, besides which it was noticed that horses under the molasses ration were in a far better condition, had better appetites and were entirely free from intestinal complications. The molasses is always combined with two or three times its volume of water. In fattening oxen it was found that molasses offered an economy of 1½ cents per diem as compared with other rations. The 13 oxen fed with pulp and molasses gave a total weight of 14,630 lbs.; 13 other oxen fed upon residuum pulps and oil cake, weighed 22 lbs. more; this was after first weighing. But when weighed twenty-two days later, it was found that the molasses fed

had gained 143 lbs. over the others, the weight of residuum pulp fed in both cases having been the same. The method of feeding the molasses offers special interest. The residuum molasses was simply poured on the cosettes prior to each feeding, three times a day. When chopped straw was mixed with this ration, the cattle did not eat it with the same avidity as they did the molasses and cosettes. It is important also to note that in direct contradiction to what is generally supposed, the excrements of oxen fed upon molasses is not more liquid than when fed upon other fodders. Butchers of the locality had no hesitation in declaring that the resulting meat was equal in every way to that obtained with the standard rations.—Sugar Beet.

Minnesota

MINNESOTA IS A SUGAR BEET STATE.

Gustave Theden, president of the Minnesota Sugar Company, stated yesterday that the sugar beet crop this year will more than double any previous year. Over 50,000 tons of beets will be harvested before September 1. In no other year has more than 22,000 tons been harvested. Speaking of the remarkable success of the sugar beet venture, Mr. Theden said:

"The industry is a success. We now know that to a certainty because we have taken time to find out and have gotten past the experimental stage. Farmers all over the state would do well to raise sugar beets, particularly in the southern part. The north is all right, too, for that matter. There are many places along the railroad lines to the lakes where the beets can be raised to advantage. I think it is only a question of a few years when the beets will form one of the staple products of the Northwest. We have the climate and the soil and all the necessary facilities.

"The Minnesota sugar factory has begun operations for this year and will run for five months steady, day and night. We intend to do a very big business, though I cannot say just how much sugar 50,000 tons of beets will produce. Our beets come from Hennepin, Ramsey, Carver, Sibley, Dakota, Douglas and Dodge counties

The Kilby Manufacturing Co.

FOUNDERS AND MACHINISTS

Corner Lake and
Kirland Streets,

Cleveland, Ohio

New York Office:
220 Broadway.

Builders of Complete Machinery for Beet, Cane and
Glucose Sugar Houses and Refineries.

The Agricultural Gazette

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

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

Annual Membership Fees:—Cattle Breeders', \$1; Sheep Breeders', \$1; Swine Breeders', 50c.
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 sheep 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 10,000 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 potato 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.

The 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 30th 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.

"It's a great comfort to be left alone," said an Irish lover, "especially when your sweetheart is wid' you."

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. It 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 Institute that has carried on the work.

G. C. CREELMAN,
Superintendent Farmers' Institutes.

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.

Wanted early in November, a young man to work on an 80 acre farm, in connection with a summer hotel. Must be a good milkman, ploughman and kind to stock. Salary \$200 a year and board; to a first-class man perhaps a little more. No. 854. a.

Situations Wanted.

Position wanted, by a married man aged 27 years, with a wife and two young children, to work on a farm. Has not had very much experience but willing to work and learn. No. 953. a.

Three young men willing to work, with but little experience, want employment on a Canadian farm together or separately. Kindly state terms. No. 952. b.

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

Regular Meetings to be held in November and December, 1901.

DIVISION 7A.

Henry Glendenning, Manilla.—"Cultivation of the Soil, and Rotation of Crops"; "Underdraining"; "Weeds, and How to Destroy Them"; "Grasses for Pasture"; "The Growing of Red and Alsike Clover for Seed"; "Breeding and Feeding of Hogs for Market"; "Feeds and Feeding"; "Poultry on the Farm." Evening Subjects.—"The Farm Water Supply"; "The Farmer's Fruit and Vegetable Garden"; "Spraying for Insects and Fungus Diseases."

Miss Laura Rose, Guelph.—"Science in Butter Making"; "Food Value of Milk, Butter and Cheese"; "Milk, Its Secretion, Composition and Management"; "Difficulties in Dairy Farming and How to Overcome Them"; "The Making of Bread and Buns"; "A Chat With Housekeepers on Housekeeping"; "One Eye in the Field, the Other in the Town"; "As Others See Us"; "A Three Months' Drive Through Cape Breton."

1. Bronte (Town Hall).....	Halton	Nov. 21st
2. Kilbride (Town Hall).....	Halton	Nov. 22nd
3. Hornby (Town Hall).....	Halton	Nov. 23rd
4. Ballinafad (Town Hall).....	Halton	Nov. 25th
5. Cheltenham (Orange Hall).....	Peel	Nov. 26th
6. Streetsville (Town Hall).....	Peel	Nov. 27th
7. Woodbridge (Orange Hall).....	W. York	Nov. 28th
8. Weston (Dufferin Hall).....	W. York	Nov. 29th
9. Wexford (Methodist Hall).....	E. York	Nov. 30th
10. Agincourt (Temperance Hall).....	E. York	Dec. 2nd
11. Bowmanville (Good Templar's Hall).....	W. Durham (afternoon)	Dec. 3rd
12. Courtice (Sons' Temperance Hall).....	W. Durham (evening)	Dec. 3rd
13. Orono (Town Hall).....	W. Durham (afternoon)	Dec. 4th
14. Newcastle (Town Hall).....	W. Durham (evening)	Dec. 4th
15. Millbrook (Town Hall).....	E. Durham	Dec. 5th
16. Bethany (Town Hall).....	E. Durham	Dec. 6th
17. Blackstock (Town Hall).....	W. Durham	Dec. 7th

DIVISION 7B.

Duncan Anderson, Rugby.—"Soil Cultivation"; "Root Growing"; "Management of Manure"; "Cattle Raising"; "Green Crops as Fertilizers"; "The Bacon Hog." Evening Subjects.—"Poultry on the Farm"; "Advantages of Farm

Life"; "The Farm as a Financial Investment."

Miss Blanche Maddock, Guelph.—"Domestic Science"; "Dairying"; "Bread Making"; "Bacteria"; "Women's Institutes"; "Mission of Flowers and How to Grow Them."

1. Pickering (Fire Hall).....	S. Ontario	Nov. 21st
2. Brooklin (Masonic Hall).....	S. Ontario	Nov. 22nd
3. Manchester (Town Hall).....	S. Ontario	Nov. 23rd
4. Zephyr (Town Hall).....	N. Ontario	Nov. 25th
5. Cannington (Town Hall).....	N. Ontario	Nov. 26th
6. Oakwood (Township Hall).....	W. Victoria	Nov. 27th
7. Lindsay (Town Hall).....	W. Victoria	Nov. 28th
8. Fenelon Falls (Dickson's Hall).....	E. Victoria	Nov. 29th
9. Bobcaygeon (Town Hall).....	E. Victoria	Nov. 30th
10. Peterboro (Council Chamber).....	W. Peterboro (afternoon)	Dec. 2nd
11. North Monaghan (Town Hall).....	W. Peterboro (evening)	Dec. 2nd
12. Lakefield (Town Hall).....	E. Peterboro	Dec. 3rd
13. Keene (Town Hall).....	E. Peterboro	Dec. 4th
14. Norwood (Town Hall).....	E. Peterboro	Dec. 5th
15. Stirling (Music Hall).....	N. Hastings	Dec. 6th
16. Madoc (Masonic Hall).....	N. Hastings	Dec. 7th

Special Notice to Directors and Officers of Farmers' Institutes.

Another Institute season is about to commence and I desire to call your attention to a few matters connected with the work.

In the first place the Institutes are becoming more popular each year, as indicated by the increased attendance. Those attending are getting more out of the meetings each year, as indicated by the intelligent questions asked the delegates and the demand by the members for the reports and bulletins published by the Department.

So far, then, everything is running smoothly. Where must we look for expansion in the future? We must by persistent effort endeavor to get out to our meetings those farmers who need the instruction most. I realize that this class, the ones, who from ignorance of the best farm methods, are poor farmers indeed, are the very ones who most need instruction and are also the hardest to reach. Personal canvass is no doubt the best way to secure their attendance.

A WORD TO DIRECTORS.

Are you helping your secretary? Have you spoken to all of your neighbors about attending the nearest Institute meeting? Have you secured a large membership in your township and sent the names and fees into your secretary? Have you thought over what you are going to say at the next meeting you attend? Have you taken any notes on your work since the last meeting that would interest your neighbors and serve to bring out a discussion at the coming meeting?

If you have not done these things you have fallen short of the standard set for a director of a Farmers' Institute.

TO THE PRESIDENT.

Are you thinking of any plans by which you can make your meetings more interesting and instructive? Have you yet arranged in your mind or on paper a few suitable remarks for opening each meeting? Have you consulted with your secretary as to any new features you propose to introduce, or have you picked out and conferred with him about certain men who might read papers or deliver addresses at the meetings?

If you fail to think of these things you are not a model president and your Institute will not make the progress that it should during your term of office.

TO THE SECRETARY.

To you must fall the heavy share of the work. You are probably the most concerned as to the success of the year's work. What have you done by way of preparation for this winter's meetings? Have you spoken to any of the men or women in your district about helping at the meetings? Have you thought about any new features that might be introduced to help your attendance and increase your membership? Have you written to each of your directors asking their co-operation and advice?

DIVISION 8.

R. McCulloch, Snelgrove.—"Dairy Farming and its Relation to Soil Fertility"; "Improving Our Dairy Herds"; "Cow Foods, Their Effect on Butter Flavor (Illustrated)"; "Milk and Cream for City Trade." Evening Subjects.—"Farm Houses"; "The Prosperity of Our Country Depends on the Prosperity of the Farmer."
G. R. Cottrell, Milton.—"Poultry for Profit on the Ordinary Farm";

"How to Build a Poultry House and Keep the Poultry Healthy"; "The Different Breeds of Poultry and Their Characteristics"; "The Preparation of Poultry for Home and British Market." Evening Subject.—"Poultry Production for Boys and Girls."

Miss Laura Linton, Guelph.—"Our Daily Bread"; "Dairying on the Farm"; "The Comfortable Home."

1. Harwood (Boyle's Hall).....	W. Northumberland.....	Nov. 25th
2. Graton (Town Hall).....	W. Northumberland.....	Nov. 26th
3. Warkworth (Town Hall).....	E. Northumberland.....	Nov. 27th
4. Brighton (Opera House).....	E. Northumberland.....	Nov. 28th
5. Ameliasburg (Centre School House).....	Prince Edward.....	Nov. 29th
6. Demorestville (Town Hall).....	Prince Edward.....	Nov. 30th
7. Frankford (Sweetman's Hall).....	W. Hastings.....	Dec. 2nd
8. Wallbridge (Town Hall).....	W. Hastings.....	Dec. 3rd
9. Newburg (Finkle's Hall).....	Addington.....	Dec. 4th
10. Centreville (Town Hall).....	Addington.....	Dec. 5th
11. Tweed (Town Hall).....	E. Hastings.....	Dec. 6th
12. Cannifton (Township Hall).....	E. Hastings.....	Dec. 7th

DIVISION 9A

C. W. Nash, Toronto.—"Chemistry of the Soil"; "How Plants Grow"; "Evolution of Domestic Animals"; "The Value of Our Birds"; "The Enemies of the Wheat Plant"; "Our Insect Pests"; "Nature About the Farm"; "The Enemies of the Pea Crop and How to Deal With Them."

D. Drummond, Myrtle.—"Bacon Hog and Pork Production"; "Selection, Breeding and Care of Dairy Cattle"; "Cultivation of the Soil"; "Corn for Silo Varieties and Cultivation"; "Notes on Chicken Feeding"; "Summer Care of Dairy Cows, or Soiling."

1. Napanee (Town Hall).....	Lennox.....	Nov. 25th
2. Selby (Town Hall).....	Lennox.....	Nov. 26th
3. Emerald (Cheese Factory).....	Amherst Island.....	Nov. 27th
4. Stella (Town Hall).....	Amherst Island.....	Nov. 28th
5. Westbrooke (Westbrooke Hall).....	Frontenac (afternoon).....	Nov. 29th
6. Cataragui (Town Hall).....	Frontenac (evening).....	Nov. 29th
7. Inverary (Orange Hall).....	Frontenac (afternoon).....	Nov. 30th
8. Sunbury (Town Hall).....	Frontenac (evening).....	Nov. 30th
9. Newboro (Town Hall).....	Leeds S.....	Dec. 2nd
10. Newdowne (Town Hall).....	Leeds S.....	Dec. 3rd
11. Mallorytown (Oddfellows' Hal).....	Brockville.....	Dec. 4th
12. Addison (Ashwood Hall).....	Brockville.....	Dec. 5th
13. Maitland (Workman's Hall).....	S. Grenville.....	Dec. 6th
14. Shanly (Orange Hall).....	S. Grenville.....	Dec. 7th

DIVISION 9B.

Andrew Elliott, Galt.—"How to Retain Fertility and Moisture in the Soil"; "Corn and the Silo a Necessity"; "Clover and Clover Hay"; "Economic Feeding"; "Improved Methods Necessary to Success in Dairying"; "The Dairy Cow"; "What we Gain by Keeping Sheep"; "The Bacon Hog"; "Concrete on the Farm." Evening Subject.—"Our Farm Homes."

R. S. Stevenson, Ancaster.—"The Selection and Breeding of Dairy Cows and How to Feed Them Economically"; "The Breeding and Feeding of Beef Cattle"; "Corn-growing and the Silo"; "The Breeding and Care of Sheep"; "The Advantages of the Cream Separator in Butter-making." Evening Subjects — "Farmers and Farm Life."

1. Vernon (Town Hall).....	Russell.....	Nov. 25th
2. Vars (Town Hall).....	Russell.....	Nov. 26th
3. Moose Creek.....	Stormont.....	Nov. 27th
4. Maxville (Public Hall).....	Glengary.....	Nov. 28th
5. Dalkeith (Public School).....	Glengary.....	Nov. 29th
6. Vankleek Hill (High School).....	Prescott.....	Nov. 30th and Dec. 2nd
7. North Branch (School House).....	Corwall.....	Dec. 3rd
8. South Branch (Patrons' Hall).....	Corwall.....	Dec. 4th
9. Aultsville.....	Stormont.....	Dec. 5th
10. Morrisburg (Music Hall).....	Dundas.....	Dec. 6th
11. Iroquois (Town Hall).....	Dundas.....	Dec. 7th

DIVISION 10.

Major James Sheppard, Queens-ton.—"The Packing and Sale of Apples"; "Planting and Care of Orchards"; "Propagating Fruits, Grafting, Budding, etc."; "Forty Years' Experience in Growing Corn"; "Tomatoes for Home and Market"; "Ensilage and the Round Silo"; "The Export Bacon Trade." Evening Subjects.—"Four Reasons Why We Till the Soil"; "Three

Historical Days on the Niagara River"; "Birds in Relation to the Fruit Grower."

Prof. R. Harcourt, Guelph.—"Economic Cattle Feeding"; "Soil Moisture in Relation to Plant Growth"; "Soiling and Soiling Crops"; "Milk Production"; "The Care and Handling of Milk for Creameries and Cheese Factories"; "Flour and Bread Making."

Have you consulted with your president as to a plan of work for your series of meetings?

Attendance. Membership, etc. 1900 1901

The year 1900-1901 has been a very satisfactory one from every standpoint. The attendance at the meetings has increased, and the interest has been kept up throughout the entire season. We are pleased to note that the membership ending June 30th, 1901, is 20,387. The number of meetings held was 730, with an attendance of 131,653 persons.

The Institutes holding the largest number of meetings during the year ending June 30th, 1901, are:—

Hastings, N.	22
Ontario, S.	18
Waterloo, S.	15
Durham, W.	14
Halton	14
Haldimand	14
Middlesex, N.	12
Peel	12
Huron, W.	11
Ontario, N.	11
York, E.	11
Grey, N.	10
Prince Edward	10

The following is a list of the Institutes having the largest attendance at their meetings during the season:—

	No. of Meetings.	Attendance.
Halton	14	5,490
Bruce, S.	7	5,110
Norfolk, N.	8	3,790
Waterloo, S.	15	3,589
Huron, W.	11	3,260
Bruce, W.	8	2,915
Hastings, N.	22	2,781
Northumberland, E.	7	2,580
Middlesex, N.	12	2,545
Renfrew, S.	6	2,434
Huron, S.	8	2,275
Grey, S.	7	2,250
Victoria, E.	7	2,225
Waterloo, N.	9	2,195
Perth, N.	8	2,155
Peel	12	2,035
Leeds, S.	7	2,020

The Institutes having the largest membership to July, 1901, are:—

Halton	748
Hastings, N.	578
Waterloo, S.	533
Peel	525
Wellington, C.	404
Lambton, W.	401

1. Merrickville (Town Hall)	N. Leeds and Grenville	Nov. 25th
2. Kemptville (Town Hall)	N. Leeds and Grenville	Nov. 26th
3. South March (Town Hall)	Carleton	Nov. 27th
4. Stittsville (Green's Hall)	Carleton	Nov. 28th
5. Stewartville (Town Hall)	S. Renfrew	Nov. 29th
6. Renfrew (Temperance Hall)	S. Renfrew	Nov. 30th
7. Beachburg (Town Hall)	N. Renfrew	Dec. 2nd
8. Osceola (Town Hall)	N. Renfrew	Dec. 3rd
9. Almonte (Town Hall)	N. Lanark	Dec. 4th
10. Carleton Place (Town Hall)	N. Lanark	Dec. 5th
11. Smith's Falls (Town Hall)	S. Lanark	Dec. 6th
12. Perth (Town Hall)	S. Lanark	Dec. 7th

Ontario, S.	385
Norfolk, N.	375
Ontario, N.	373
Middlesex, N.	367
Huron, W.	363
Perth, N.	362
Haldimand	361
Huron, E.	357
Lanark, N.	339
Waterloo, N.	337
Oxford, S.	324
Oxford, N.	314
Northumberland, E.	303

The following list shows the Institutes having the smallest membership:—

Port Carling and Bala	19
Amherst Island	44
Muskoka, C.	51
Cornwall	59
Nipissing, W.	70
Braut, N.	73
Addington	78
Renfrew, N.	79
Carleton	79
Braut, S.	87
Prescott	90
Algoma, C.	92
Essex, N.	97

Institute Workers as Expert Judges at Fairs.

(Continued from last week.)

PERFORMANCE AS AN ESSENTIAL IN REGISTRATION.

The conversation then turned towards dairy matters in general, with special reference to some points brought out at the Pan-American. Speaking of Superintendent Hoxie's suggestion that no Holstein cow should be eligible for registry until she has made a certain record as a milker, Mr. Drummond said: "I do not exactly like that idea, unless the standard is made low enough. In the first place, some of these exceptional records are made by cows that never afterwards make any great showing. Either records are not fairly

kept or else the animals are overstrained during the short period covered by the test, and to make the testing period cover a year would cost too much. Some of these big milkers, again, are not at all right in conformation, and would be wholly unsuitable for this reason for breeding purposes."

"Are you not," Mr. Drummond was asked, "placing too much stress on type and too little on performance?"

"No," answered Mr. Drummond. "Some of these that do produce largely, year after year, are merely what we call 'sports,' and in breeding they wholly fail to transmit this quality to their offspring."

SOMETHING IN TYPE, TOO.

Dealing in a still broader way with breeding matters in general, Mr. Drummond added: "There is something in type, too. There is, possibly, no breed showing such variety as the Jersey. While you find exceptional performers in Jerseys, you find an unusually large proportion of culls as well. This is, probably, owing to the fact that the breed has been kept pure for such a long period, there has been a great deal of inbreeding. The Ayrshire, on the other hand, has been created within a few years; fresh blood has been introduced within that time; but Ayrshire breeders have had constantly before them a type, or standard, to breed to, and the result is a breed remarkable for uniformity—alike in appearance and performance."

"That test at Buffalo," added Mr. Stevenson, "is a good thing. It is not a victory for any breed, as it shows there are greater variations in individuals than there are in breeds."

(To be continued.)

A mother down east was so kind that she gave her child chloroform before she whipped it.

Pan-American Model Dairy

Report of Herds for Week Ending October 1st, 1901.

Name of Cow.	Date.	Weight of Milk.	Per cent. Fat.	Total Butter.	85 Per cent. of Butter.	Value of Butter.	Solids.	Hay.	Silage.	Bran.	Corn-meal.	Oats.	Gluten.	Linseed Meal.	Cotton Seed Meal.	Grain Total.	Cost of Food.	Cost of Proff.
Holsteins	1356.7	48.35	57.42	14.33	173.54	210	2125	146.8	21.0	70.0	175.0	52.8					6.77	7.56
Jerseys	898.6	44.91	52.84	13.20	161.11	105	2046	24.6	36.0	40.12	78.12	25.0					5.74	7.46
Guernseys	798.6	42.16	49.62	12.41	118.43	210	1612	182.10	34.8	28.12	3.14	21.10					5.32	7.09
Ayrshires	1058.1	41.73	49.12	12.28	140.61	110	2045	215.10	74.10		99.0						5.44	6.84
Red Polled	867.4	37.52	44.16	11.03	119.68	135	1965	192.10	7.0	56.8	94.8	5.4	5.4				5.11	5.92
Shorthorns	1012.1	41.09	48.32	12.07	138.41	300	1615	212.0	67.8		157.8	7.14	10.8				6.25	5.82
Brown Swiss	976.9	39.11	46.02	11.50	130.88	171	1870	238.8	47.4	45.0	77.0	5.2	4.14				4.69	5.81
French Canadians	781.5	32.53	38.28	9.57	106.16	140	1770	210.0			52.8	10.8					4.13	5.44
Polled Jersey	638.7	32.40	38.13	9.32	92.83	200	1656	172.0	3.8	14.4	42.8	1.12					4.28	5.24
Dutch Belted	832.3	30.30	35.68	8.91	103.95	200	1506	193.8	18.0	37.0	64.8	7.14	12.6				4.84	4.07

The Farm Home



Jack's History

A pumpkin vine in a garden grew,
A vine that was fair to behold;
And on its stem a blossom came,
A blossom yellow as gold.

And when the blossom faded,
A little green head peeped
through,
A little head so smooth and round,
And all summer long it grew.

It grew so big and it grew so fat,
That it had to lie on the ground.
The sun then changed its green to
gold,

And none so fair as it was found.

One day in autumn a little boy
Espied with joy this pumpkin
fine.

"Ah, ha!" cried he, "'Tis what I
want,
A Jack-o'-lantern will be mine."

So Hallowe'en this pumpkin grand
By happy children was made
king.

Its beaming face carried aloft,
A fine and glorious thing.

Fun for Hallowe'en.

The revival of many of the old Hallowe'en sports is doubtless due to increased country living, and to the house parties that linger in the country houses until winter time.

The country house, of course, is preeminently suited to such parties but many ingenious devices can be adopted which will make a Hallowe'en party a success, even in a city flat. Crepe tissue paper will provide all the typical favors needed, Jack-o'-lanterns for light and decoration, pumpkins for fruit dishes, chrysanthemums, fruits, nuts,—all may be made useful.

If the party must be held wholly indoors, if possible, let it be where a large open fireplace is available, for many of the tests of divination are accomplished only by aid of fire.

TEST OF NUTS.

Each guest is given three nuts of one kind, and these are placed in a row on the hearth and named. Those which burst will prove faithless lovers, while the one that burns out with a steady glow will be forever true.

Or the nuts are tried in pairs, named for a man and a maiden, placed side by side at the fire, and their behavior will indicate the course of courtship, a quick bright blaze meaning true affection and happy marriage, but inconstancy is

evident if they jump away from each other.

"The auld gude wife's well-hoordit nuts

Are round and round divided,
And mony lads' and lasses' fates
Are there that night decided;
Some kindle, couthe, side by side,
And burn thegither trimly;
Some start awa' wi' saucy pride,
And jump out-owre the chimly
Fu' high that night."

"Nutcrack night" was one name for this evening in the "north country," and in Scotland and the north of England was the home of many of these customs which have been described for us by Robert Burns. Where an open fire is out of the question, similar tests can be made in the blazer of the chafing dish, and corn can be popped over the oil or gas stove.

A barn or an attic affords many odd corners for the Hallowe'en revelers.

The cellar, also, is an appropriate place for the ghostly ceremonies of this evening, and especially fortunate is that hostess who has a cellar which can be entered through the old-fashioned "bulk-head," and by which there is direct communication with a cabbage patch in the garden.

PULLING THE KAIL

"Kailing" is one of the first ceremonies in the Scotch celebration of Hallowe'en. The party may go singly, or hand in hand, and blindfolded or walking backward into the cabbage field, where each must pull the first stump touched. The amount of earth clinging to the roots indicates the fortune or dowry to come with the future life partner. The stalk itself, big or little, tall or short, straight or crooked, foretells the physical appearance of the future husband or wife, while the taste of the stem will show the natural temperament.

The stump may be reserved to hang over the door, and the first comer under it, if not the future husband or wife, will at least bear the same Christian name.

HEMPSEED.

Sowing hempseed is another old Hallowe'en love test. If the seed were not actually sown, at least the motions of the sower were imitated. Looking over the left shoulder, the future spouse appears harrowing or gathering the crop.

THE LOOKING GLASS.

On the stroke of midnight, one by one, the bravest guests will walk backward down the cellar stairs, with a looking-glass in one hand, a candle in the other, or into some deserted room where is a mirror, and the face of the future spouse will appear beside one's own.

Or a "fairy mirror" may be provided for each guest, on which a name has been written previously with French chalk, and lightly

brushed off with a silk handkerchief. Each one is instructed to breathe on the mirror, when the names will again appear. All such tests are much more effective if tried in dimly lighted rooms, and candles and Jack-o'-lanterns should be the only illumination allowed. A real ghost story well told may precede these orgies if no excessively nervous guests are present.

THE BALL OF YARN.

Freshly dyed yarn, especially blue, is supposed to be efficient in drawing knowledge of the future. One end of the yarn is held in the hand, while the ball is thrown through the window of an empty house. The yarn is then re-wound, while the wind repeats again and again—"I wind, who holds"—and before the end is reached the future mate appears, or a name is whispered in one's ear.

"THE LUGGIES THREE"

Three saucers are placed in a row: one filled with clear water, one with milk or colored water, and one empty. Blindfolded each member of the company in turn puts out the left hand. If it touches the clear water marriage is foretold, if the colored water the future partner will be a widow or widower, while if the hand falls on the empty dish a life of single blessedness is prophesied. This may be varied by more dishes, one containing earth which signifies wealth one with blue water meaning a literary career, etc.

Apples are inseparably connected with Hallowe'en sports, but the bobbing or ducking for apples in a tub of water is a trifle too energetic exercise for a parlor game. It does not look difficult to catch an apple with the teeth, but it is. A modification of this is to stick the apples with forks or to attempt to do so.

An apple can be suspended from a string from the ceiling, and with hands tied behind, some luckless mortal attempt to eat it, but few will secure more than one bite.

Each guest should pare an apple without breaking the paring and throw it over his or her head, when it will form the semblance of a letter, the initial of the name of the future husband or wife.

An apple race is another game feasible only where there is plenty of room.

Fate apples may be hung on a small tree, from which each member of the company can choose one; appropriate quotations or small gifts must first be inserted in each. This can be done by removing the core from the blossom end without disturbing the stem; the article can be inserted and a section of the skin or a few leaves tucked in to fill the opening.

Nuts, apples, and candies with mottoes distributed among them can be put in a large, fairly strong paper bag hung in the center of a

wide doorway with a table cloth spread beneath. Some one is chosen by lot, blindfolded and turned around several times, then armed with a cane let him try to strike the bag hard enough to scatter its contents. When the shower comes all scramble to secure as much as possible, and a prize is awarded the largest winner.

Hints by May Manton.

Woman's Fancy Waist Closing at the Back, No. 3919.
To be made with or without the fitted lining.

The waist that closes at the back remains in favor and is promised extended vogue. The very charming model shown has the merit of being simple of construction, at the same time that it is



3919 Fancy Waist,
32 to 40 Bust.

sufficiently elaborate in effect to be appropriate for afternoon and informal evening wear. The original is of louisine silk, with cream guipure lace, and is made over the fitted lining, but all waist and gown materials are suitable, silk, wool and cotton, and the lining can be omitted whenever desirable. Silks and wools are better and more serviceable made over the foundation, but washable fabrics are preferable unlined.

The fitted foundation is snug and smooth and closes at the back, together with the waist. The fronts proper are tucked to yoke depth and gathered at the waist line, but the backs are plain across the shoulders and show only slight fullness at the belt. The lace is applied over the material on indicated lines, the scalloped edge making an admirable effect over the plain waist. The sleeves are in bishop style, with pointed cuffs, and the neck is finished with a plain stock, to which are attached turn-over portions of lace.

To cut this waist for a woman of medium size, $3\frac{1}{2}$ yards of material 21 inches wide, 3 yards 27 inches wide, $2\frac{1}{2}$ yards 32 inches wide or $2\frac{1}{4}$ yards 41 inches wide will be required, with $1\frac{1}{2}$ yards of lace $7\frac{1}{2}$ inches

wide, and $\frac{1}{2}$ yard of narrow edging to trim as illustrated.

The pattern 3919 is cut in sizes for 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.

Hoe Your Own Row.

As up the hilly growth of life,
Through maze and mart you go,
Do not demean yourself to lean,
But squarely take your row.

Kill all the weeds that are your own,

Keep clean and pure your path,
And if you yet would stronger get,
Kill weeds some other hath.

For thus to us has life been given,
To grow with toilsome road;
And he whose share is hard to bear
Is honored by his load.

Then stir the soil about the work,
Make life more upright grow;
Do not demean yourself to lean,
But squarely meet your row.

Hints to Housekeepers.

A simple cure for a felon is as follows: As soon as the parts begin to swell, get the tincture of Iodine, and wrap the part affected with cloth saturated thoroughly with the tincture, and the felon is dead. An old physician says that he has known it to cure in scores of cases, and it never fails if applied in season. A cure for bone felon is much the same. As soon as the disease is felt, put directly over the spot a blister of Spanish fly about the size of the thumb nail, and let it remain for six hours, at the expiration of which time, directly under the surface of the blister may be seen the felon, which can be instantly taken out with the point of a needle or a lancet.

To prepare grape juice, cover the grapes with water and let them boil until the skins crack open. Then put them into jelly bags and allow them to drip over night. In the morning dissolve thoroughly in the juice, sugar in the proportion of a pound to every gallon of juice. Seal carefully in jars.

Stained brass may be cleaned with whiting and ammonia.

Hominy croquettes are delicious for breakfast. Soften one cupful of cold cooked hominy with a little hot milk. Add the beaten yolk of an egg. Salt the mixture to taste and when it is cold form into croquettes. Fry in deep fat.

Phosphorous is found in eggs, fish, oysters, lobsters, game, cheese and potatoes, and these should be freely eaten by the brain worker. Another element that enters into body building is sulphur, which is required for growth of hair, nails, bones and cartilage. Of

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this there is so much found in eggs that silver is darkened by contact with them. Curd of milk and cheese are also rich with sulphur. Iron is also present in the blood and is found in most articles of food, being most abundant in the juice of beef, in eggs and in milk. Lime and salt are also needed for the body, the lime making bone, while salt aids digestion. Lime is found in all grains, in wheat and in milk. Nothing is more healthful for growing children than bread and milk.

A simple remedy for warts is a dram of salicylic acid with an ounce of collodion in a bottle which has a tiny brush run through the cork. Apply this mixture to the warts twice a day and in a few days they will dry up and fall off.—October Ladies' Home Journal.

Whatever work a boy undertakes he should do it heartily for the work's sake. The boy who rises to the top is the boy who does more than he is obliged to do, who is all around in his intelligence, and who thinks of something besides the end of the day and his weekly wage.—October Ladies' Home Journal.

To make good tea and coffee the water should be taken at the first bubble. Remember, continued boiling causes the water to part with its gases and become flat. This is the cause of much bad tea and coffee.—October Ladies' Home Journal.

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Editor, . . . J. W. WHEATON, B.A.

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QUESTIONS AND ANSWERS

Curing Wiltshire Bacon.

C. J. H., Vancouver, B. C., writes: "I would like, if possible, to learn the method of curing Wiltshire bacon and hams as they are cured in England?"

ANSWER.

The following method for curing Wiltshire bacon is given in his Agricultural Note-Book by Primrose McConnell B. S. C., of Ongar Essex, England: "For a pig of 200 lbs. When the meat is cold and cut up, have it salted lightly and left on the stones for the night. Next morning brush off the salt, and well rub in a layer of salt and half a pound of saltpetre for each side of bacon of this weight, and have the saltpetre mixed with 1 lb. of coarse brown sugar for each side. Have it rubbed every day for three weeks, and then wash it all off, and have it sent to be smoked for a week or a little more. It is then fit for use. A pickle is generally made for the head, legs, etc., and any other small bits. Six lbs. of salt, 1 lb. of saltpetre, 1 lb. of treacle, boiled for half an hour in six gallons of water, when cold to receive the pieces."

The Ontario Veterinary College.

The opening lecture of this well known institution was delivered in the lecture room of the college by Prof. Andrew Smith, F. R. C. V. S., the principal, on Wednesday, Oct. 16. A large number of students, consisting of undergraduates and freshmen, were present, thus testifying to the well-sustained popularity that the teachings of this college have obtained.

\$1,000,000 for Live Stock.

A large delegation of live stock breeders assembled at St. Louis on Oct. 10th last to discuss ways and means for the big live stock display that it is expected will be held in connection with the World's Fair at St. Louis in 1903. The delegates represented seventy-six National Breeders Associations. As a result of this conference the live stock interests of the United States will undertake to raise \$500,000, and will ask the Exposition to appropriate a like sum, making \$1,000,000 to be offered in prizes in the live stock department. This committee will meet again at St. Louis on December 2nd.

Some Winners at Buffalo.

The following are some of the winners in the recent horse competition at Buffalo. Canadian exhibitors did exceedingly well in several classes, especially in Clydesdales, Shires, French-Canadian and Hackneys.

CLYDESDALES

Stallion, 3 years and over—1st, Graham Bros., Claremont, Ont., 2nd and 5th; H. G. Boag, Churchill, Ont., 3rd and 4th; R. Ness, Howich, Ont.

Stallion, 2 years and under 3—1st, Graham Bros.; 2nd, Thos. Skinner, Mitchell; 3rd, Robt. Ness.

Stallion, 1 year and under 2—1st and 3rd, Graham Bros.; 2nd and 4th, Slack & Whelihan, St. Marys.

Mare, 3 years and over—1st, Graham Bros.; 2nd, Hodgkinson & Tisdale, Beaverton, Ont.; 3rd and 4th, A. G. Gormally, Unionville, Ont.

Filly, 2 years and over—1st, Hodgkinson & Tisdale; 2nd, Robt. Ness.

Filly, 1 year and under 2—1st, Hodgkinson & Tisdale; 2nd, Robt. Ness.

Brood mare with foal at foot, by registered sire—1st, Hodgkinson & Tisdale.

Sweepstakes stallion, any breed, (Percheron)—McLaughlin Bros., Columbus, Ont.

Sweepstakes mare, any breed (Clydesdale)—Hodgkinson & Tisdale.

SHIRES.

Stallion, 3 years and over—1st, 2nd and 3rd, Bawdon & McDonald, Exeter; 4th, Bell Bros., Wooster, Ohio.

Brood mare with foal, by registered sire—Bawdon & McDonald.

HACKNEYS.

Stallion, 3 years and over—1st and 3rd, Fred. C. Stevens, Attica, N. Y.; 2nd and 4th, Robt. Beith, Bowmanville, Ont.; 5th, Glassy & Co., Truro, N. S.

Stallion, 1 year and under 2—1st and 2nd, Fred. C. Stevens.

Stallion, 2 years and under 3—1st, 2nd and 3rd, Fred. C. Stevens.

Mare, 3 years and over—1st, 2nd

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	2	15 "	2 to 3 "
	3	20 "	3 to 4 "
	4	25 "	4 to 5 "
	5	30 "	5 to 6 "
	6	40 "	6 to 8 "
	7	50 "	8 to 10 "

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and 3rd, Fred. C. Stevens; 4th, Robt. Beith.

Filly, 2 years and under 3—1st and 3rd, Fred. C. Stevens; 2nd, Robt. Beith.

Filly, 1 year and under 2—Fred. C. Stevens.

Brood mare with two of her product, Fred. C. Stevens.

In thoroughbred stallions Canadians won all the awards as follows:

1st and 4th, Telfer & Climie, Montreal; 2nd, W. W. Fleming, Exeter; 3rd, A. Frank & Son, The Grange, Ont.

As would be expected, Canadians won everything in the French-Canadian classes, and stood up well in the standard breeds, winning about one-third of the prize money. The most notable winning in this class by a Canadian was that of Geo. W. Kennedy, Ilderton, first place for stallion, one year and under two.

Right giving always means having—October Ladies' Home Journal.



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PURE-BRED STOCK

NOTES AND NEWS FROM THE BREEDERS

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

Cattle.

The largest and most valuable exportation of pedigree Hereford cattle from England for nearly twenty years was that which was consigned by special train from Barr's Court Station, Hereford, on Friday evening, by Mr. W. E. Britter, secretary of the Hereford Herd Book Society, en route to Liverpool, whence they were shipped on Saturday evening by the new cattle ship Rowanmore, of the Johnson line, to Baltimore, for Mr. Kirk B. Armour, president and general manager of the Armour Packing Company, of Kansas City. There were over 220 animals, and they made one of the most costly collections of purchases ever sent for by Mr. Armour, who is one of the largest breeders and importers of Herefords in the United States, and was intended to have been larger if it had not been for the drought and shortness of keep in the Western States. The animals were in fine, fit condition when they entrained at Hereford, and Mr. Britten had just cause for pride in his selections, every one having successfully passed the tuberculin test under the inspection of Dr. Geddes, the veterinary expert appointed by the Washington Government.—Mark Lane Express.

Sheep.

Mr. W. R. Bowman, Mount Forest, Ont., has decided to dispose of his entire flock of sheep numbering close on to 100, on Oct 24th next. His Suffolk Downs are imported or from imported stock, and are in excellent breeding condition.

The bulls he is also offering are well bred, useful animals not in high condition.

His Yorkshires are strong in Flatt and Brethour blood and are good specimens of the ideal bacon hog. Every accommodation will be provided for visitors if he is notified in time. Mt. Forest is situated on the C. P. R. and G. T. R., 40 miles north of Guelph. Mr. Bowman's farm is 2½ miles from the town.

Poultry.

The Pan-American poultry exhibit bids fair to eclipse all previous shows of the kind. The entries call for 2,000 large poultry.

There are 550 bantams, 140 turkeys, 110 ducks and 25 pheasants, which are all single birds. In addition there are 185 breeding yards and three displays which contain 950 birds, making a total of about 4,000 birds; besides 1,865 pigeons. When you add to this more than 500 pets such as hares, rabbits, cats, canaries, cage birds, etc., it makes a very complete and important show. Besides the number exhibited, the different classes are very complete, representing the best of every important breed.

Animal Breeding.

The above is the title of a new work just issued by The Orange Judd Company. The author is Thomas Shaw, professor of animal husbandry at the University of Minnesota. It contains 400 pages and retails at \$1.50 post paid.

This is the first book of the kind ever given to the world which has systematized the subject of animal breeding. The leading laws which govern this most intricate question the author has boldly defined and authoritatively arranged. The chapters on the more involved features of the subject, as sex and the relative influence of parents, should go far toward setting at rest the wildly speculative views cherished with reference to these questions.

Even a hasty examination must convince the reader that the author has handled a difficult and complex subject in a way that brings it down to the level of the comprehension of everyone. A careful reading impresses one still more with the notable character of this work. The book is intended to meet the needs of the teachers of animal husbandry, the students of agricultural colleges and all persons interested in the breeding and rearing of live stock. "Animal Breeding" is the one book upon this all-important subject. To practical farmers and stock breeders it will be worth its weight in gold, by enabling them to breed their stock more profitably.

The 30 chapters in this book are as follows, the list giving some idea

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W. B. BOWMAN, Mount Forest, will dispose of his entire flock of registered Suffolk Down and Shropshire sheep, numbering close to 100. Also 5 Shorthorn and Polled Angus Bulls, along with a number of Yorkshire Sows and Boars of various ages. Sums of \$10.00 and under, cash; over that amount 9 months' credit will be given on approved notes, or 6 per cent. off for cash. Write for Circular.

of this magnificent work, each chapter being in fact a comprehensive monograph on its subject: Breeding live stock, a standard of excellence, the law that like produces like, the law of principle of variation, the law of atavism, heredity of normal, abnormal and acquired characters, heredity of disease, the law of correlation, prepotency, in-and-in breeding, line breeding, fecundity, the relative influence of parents, the influence of a previous impregnation, uterine influences, influences that affect the determination of sex, nutrition, quality in live stock, the coat and influences which affect it, the influence of artificial conditions, early maturity, pedigree, animal form as an index of qualities, selection, cross breeding, improvement through grading, forming new breeds, the influence of environment, castration and spaying, matings.

San Jose Scale at Work

According to the report of Mr. Geo. E. Fisher, Ontario Government Inspector, more trees are dying in the province from the ravages of the San Jose Scale than ever before. This is due in Mr. Fisher's opinion to the apathy of the people who have not yet realized the great danger there is from this pest. If the scale is in any locality every tree is likely to become infested sooner or later. Not only peach and pear trees, but apple trees, which were thought to be comparatively safe are dying from it. The treatment with whale-oil soap and crude petroleum has not been very successful, being too severe for peach trees and Japan plum trees. The only hope for these is in fumigating with hydrocyanic acid gas. Mr. Fisher has under preparation a feasible tent apparatus to be used for fumigating. Spraying of any kind has to be done at the right time, or the buds will be killed.

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1 Imported aged Ram
4 Good Sireling Rams
15 Good Ram Lambs
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The above are all sired by Imp. Rams.
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On the C.P.R. and G.T.R. Railways. Special bargains on young bulls of superior merit and select Scotch breeding. Also thick young heifers at the right prices.
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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

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Bears fit for service.
Boars and Sows 8 weeks to 4 months old; all stock registered of the lengthy even deep type. Write
JAS. A. RUSSELL,
Precious Corners, Ont.

FOR SALE

Pure Bred Improved Yorkshire Pigs.
ANNANDALE FARM,
TILSONBURG, ONT.

Market Review and Forecast

Office of The Farming World,
Confederation Life Building,
Toronto, October 21, 1901.

On the whole the state of general trade may be considered fairly satisfactory. As a rule farmers are settling up well and in many instances are paying cash, and consequently country store keepers are not asking for so many renewals of paper. Money keeps in good demand on call at about 5 per cent. A fair amount of commercial paper is being taken at the banks at from 6 to 7 per cent. discount.

Wheat.

On the whole the wheat situation is stronger than a week ago, though there has been little advance in prices. Reports from the United States indicate moderate marketing of wheat and considerable quantities are being fed. Crop quotations are responsible largely for the advance. Canadian trade has been a little more active, there being a little more doing in Manitoba wheat. Millers are complaining of not being able to secure sufficient supplies for grinding purposes, owing to the difficulty of securing cars. Locally the market has ruled steady at 66c for new red and white, and 66c to 67c for old middle freights, goose at 58c to 60c, and spring at 66c for No. 1 east. Manitoba wheat is firmer at 82c for No. 1 hard and 79c for No. 1 northern, grinding in transit. On Toronto farmers' market new red and white bring 62c to 68c, old, 70c to 72c, goose 65c to 66c, and spring fine 62c to 70c per bushel.

Oats and Barley.

The good inquiry for Canadian oats in Great Britain keeps up. A firmer feeling has been experienced on this side, owing to good local demand and the gradual reduction of stocks. Prices on this side are too high for exporting. No. 2 white oats are in demand here at 35½c east, 35c middle freights, and 34½c north and west. On the farmers' market oats bring 40c to 43c per bushel.

The barley market keeps firm. Quotations here are 43c to 52c middle freights as to quality. On Toronto farmers' market malt barley brings 54c to 58½c and feed barley 49c to 53c per bushel.

Peas and Corn.

While the English market for Canadian peas continues strong there is a quiet feeling on this side, owing to prices being too high to do business for export. The market here is firm at 71c north and west, and 72c middle freights. On the farmers' market small peas bring about 70c per bushel.

The corn market keeps about the same with little, if any, American corn coming in. American No. 3 yellow is quoted here at 63½c Toronto. Old Canadian is quoted at 54c to 55c and new at 49c west.

Bran and Shorts.

The bran market is firmer and

higher, Ontario bran being quoted at Montreal at \$16.50 to \$17, and shorts at \$18 to \$19 in car lots. City mills here sell at \$15 for bran and \$17.00 for shorts in car lots f. o. b. Toronto.

Potatoes and Beans.

The potato market has a stiffening tendency. Montreal quotations are 62c to 65c in car lots. Some sales have been made at Eastern Ontario points at 40c per bag in car lots f. o. b. A few car lots are coming in here and sell rapidly at 55c per bag. On Toronto farmers' market, potatoes bring 60c to 70c per bag.

Montreal quotations for beans are \$1.50 to \$1.55 per bushel in car lots, and \$1.60 to \$1.65 in smaller lots. A steadier feeling is reported in the American bean market. On the local market here beans bring \$1.40 to \$1.60 per bushel.

Hay and Straw.

The good local and export demand for hay continues. There is good enquiry at some country points for No. 1 quality for American markets, sales of which have been made at eastern points at \$8.75 to \$9.25 f. o. b. There is a fair delivery here and the market for baled hay keeps steady at \$8.50 to \$9.00 for car lots on track. Baled straw in car lots brings \$5 to \$5.50. On Toronto farmers' market hay brings \$11 to \$13, clover \$8 to \$9, loose straw \$8 and sheaf straw \$11.50 per ton.

Eggs and Poultry.

The egg market continues firm. New laid case lots are selling readily at Montreal at 17c to 18c. Though choice laid stock is offering more plentifully here prices keep firm at 17c for selected stock and 14c to 16c for ordinary. On Toronto farmers' market new laid brings 19c to 23c per dozen.

Dealers are beginning to make preparations for the exporting of dressed poultry. It is expected that from 6c to 7c per lb. will be paid at country points for live turkeys. Montreal dealers are counting on getting young and large fat chickens properly dressed delivered there about the end of November at from 10c to 10½c per lb. There is a strong demand here just now for well fattened, dry picked young turkeys at from 10c to 12c per lb. and 9c to 10c for old gobblers. Chickens are offering more liberally and sell at 45c to 50c for choice dry picked, 35c to 50c for scalded, and 35c to 50c per

pair for live chickens in a jobbing way. On Toronto farmers' market live and dressed chickens bring 35c to 80c, ducks 50c to 90c per pair, and geese 6½c to 7c, young turkeys 10c to 12c, and old 8½c to 10c per lb.

The Canadian Produce Co., 36 and 38 Esplanade East, Toronto, will pay up to Oct. 24, for spring chickens, 6c per lb. For hens (including last year's birds) 3c per lb. For ducklings 5c per lb. Crates supplied free and express paid up to 50c per 100 lbs. of birds. These prices are for live weight.

Fruit

Late cable reports show a steady market on the other side for Canadian apples. Prices at London range from 12s to 17s as to quality. On Toronto fruit market apples bring \$2 to \$3 per bbl.

Cheese.

It seems pretty clear that the falling off in consumption of cheese in Great Britain is the main cause of the dullness of the market at the present time. For the same reason there has been a large accumulation of stocks on both sides of the Atlantic. There is more favorable weather throughout England for dairying, and these facts have induced dealers there to continue in their policy of only buying from week to week. The lower prices, however, have caused a little more disposition to do business. Several Ontario cheese factories have already changed from cheese to butter-making, and if the present unsatisfactory condition of the market is maintained others will change also before the season closes. Late cable reports show a steadier feeling in the English market. There is also an improved feeling on this side though there were not many signs of it in the prices paid early in the week. Later, however, some advances were made, and the ruling prices were from 9c to 9½c with 9 5-16 paid at Brockville on Thursday. The situation therefore is considerably stronger than a week ago.

Butter

There is a good consumptive demand for Canadian creamery in Great Britain with an advance of 1s per cwt. There is a large fall make of creamery butter, and many dairymen consider it more profitable to make butter than cheese. The Trade Bulletin gives the report of last week's Montreal market:

OUR PRICE FOR CHICKENS HAS GONE UP

Our demand has doubled. Deal with a reliable firm; be careful of strangers. See our prices on this page.

THE CANADIAN PRODUCE CO., TORONTO

"The market is quiet but firm for choice late made creamery, with latest sales reported of that class at 20½c to 21c, special saltless creamery commanding more money. To-day there was a little more enquiry for choice grades of creamery over the cable at steadier prices. The proportion of qualities below finest, however, is too large. Cables from London show an improved feeling with an inclination to come up a little on limits."

Choice creamery keeps in fair demand here at 18c to 20c for tubs and 21c to 22c for prints. Choice fresh dairy butter sells readily here at 17c to 18c in round lots. Other quality is not so brisk. On Toronto farmers' market lb. rolls bring 18c to 23c and crocks 17c to 19c per lb.

Cattle.

Cable quotations for cattle are a little lower and this has affected the market for exporters somewhat. There was a large run of live stock on the Toronto cattle market on Friday, comprising 897 cattle, 1,937 hogs, 1,527 sheep and lambs and 50 calves. There was little change in the quality of the fat cattle offered, the bulk of it being generally not good. Good cattle, especially choice butchers' cattle, are scarce and command good prices, while other grades are easier. The market for exporters was not very brisk with prices easier. The quality was, however, not good, and with a few excep-

tions were little better than short-keep feeders. Good, well bred feeders and stockers are scarce while there seems to be too many of inferior quality offered and these are easier. Milch cows sold at from \$30 to \$47 each.

Export Cattle—Choice loads of these are worth from \$4.60 to \$4.75 per cwt., and light ones \$4.25 to \$4.50 per cwt. Heavy export bulls sold at \$4.00 to \$4.25 and light ones at \$3.60 to \$3.75 per cwt., choice export cows sold at \$3.25 to \$3.75 per cwt.

Butchers' Cattle—Choice picked lots of these, equal in quality to the best exporters, weighing 1,075 to 1,150 lbs. each, sold at \$4.25 to \$4.40 per cwt., good cattle at \$3.85 to \$4.00, medium at \$3.25 to \$3.65, and inferior to common at \$2.50 to \$3.00 per cwt.

Feeders.—Heavy, well-bred steers from 1,100 to 1,200 lbs. each, sold at \$3.80 to \$4.00, and other quality at \$3.50 to \$3.75 per cwt. Light steers, 900 to 1,000 lbs. each sold at \$3.25 to \$3.50 per cwt. Feeding bulls for the byres 1,000 to 1,300 lbs. each sold at \$2.75 to \$3.25 per cwt.

Stockers.—Yearling steers, 500 to 800 lbs. each, sold at \$2.75 to \$3.00 off colors, and inferior quality at \$1.75 to \$2.00 per cwt. Light stock bulls 500 to 800 lbs. each sold at \$1.75 to \$2.50 per cwt.

Calves.—These are about steady at Buffalo. Good to choice veal brings \$7.00 to \$7.50 per cwt. At Toronto market ordinary calves bring \$2 to \$10 each.

Milch Cows.—Milch cows and springers sold at from \$30 to \$47 each.

Sheep and Lambs.

Sheep continue easy at \$3 to \$4.15 per cwt. for ewes and \$2 to \$2.50 for bucks. Lambs were firmer at \$2.50 to \$3.00 each and \$3.25 to \$3.65 per cwt.

Erick Bros., East Buffalo, in their weekly circular of Oct. 17 give the following regarding Canada lambs:

"The supply this week has been very light so far; due no doubt to the rainy weather that we have been having the past three or four days, and with prices strong at \$5.15 to \$5.25. At any rate, don't buy these best ewe and wether lambs to sell at over 5c here in the market, and buy the buck lambs so you can sell them here at \$4.50, and you will be on the safe side. I don't think the market will work any lower than that. I look for a good demand all fall on export lambs—it is just a little bit early for them as yet because the lambs are not quite heavy enough.

"Exporters are wanting lambs to weigh here in the market 100 lbs. and upwards and all ewes and wethers, and it is a little bit early in the season to get them of these weights."

Hogs.

The hog market shows another drop and on Friday all hogs not contracted for beforehand only sold at \$6 for select bacon hogs and \$5.75 per cwt. for lights and fats.

Remainder of the Year Free!

Our Programme

for the coming season is a most attractive one. THE FARMING WORLD will in the strictest sense be a money-making Farmers' Paper.

The FARM HOME DEPARTMENT will be improved.

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THE FARMING WORLD,

CONFEDERATION LIFE BUILDING, TORONTO

Dear Sir,—Please send THE FARMING WORLD every week from the present date to 1st January, 1903, for which I enclose \$1.00.

NAME

POST OFFICE

Unculled car lots sold at \$5.90 per cwt. It is expected that these prices will prevail this week.

The Wm. Davies Co., Toronto, for the week ending Oct. 26th will pay \$6.00 per cwt. for select bacon hogs, and \$5.75 for heavy hogs, and \$5.75 for lights.

The Trade Bulletin's London cable of Oct. 17th, re Canadian bacon, reads thus:

"A steadier feeling has supplanted the depressed market cabled you last week, and at the lower prices there is a good demand."

Horses

There seems to be a good export demand at Montreal for horses, chiefly for remounts. Local trade there is reported dull. The following are the quotations for the different classes:

Carriage horses	\$175—\$300
Heavy draughts	125— 225
Light roadsters drivers and saddles	100— 250
Remounts	110— 140

A large number of horses were sold at Grand's Repository last week, principally light drivers. On Tuesday 96 were sold at prices ranging from \$40 to \$120 each. These were remounts that had seen service here during the Royal visit and as they were sold without reserve, did not bring on the average nearly what they cost in the country. On Friday some 25 cheap horses were sold at from \$20 to \$60 each. There is a good demand for fine general purpose horses, and also for heavy draughts.

An Editorial Dilemma.

An editor of a little country paper in this State runs an inquiry department in connection with his journal, and it has proven to be quite a popular feature with the subscribers. Recently, however, he got his answers mixed with disastrous results.

Two subscribers asked the following questions:

1. How can an orchard be protected from a plague of grasshoppers?

2. What is the best method for getting twins safely through the trouble of teething?

To the horror of the editor the numbers denoting the answers became mixed and appeared in the paper like this:

1. Give a little castor oil and rub their gums with bonestrings.

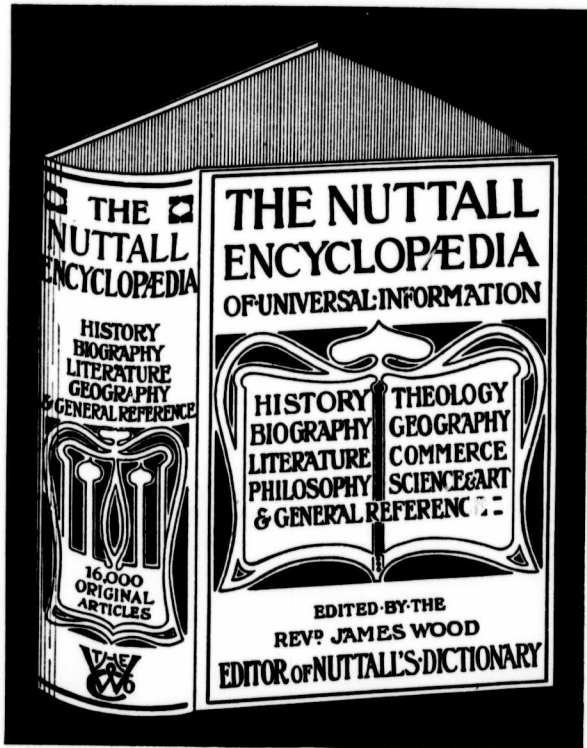
2. Cover them with straw and set fire to them. The little pests, after jumping about in the flames a few minutes, will not be in condition to cause any further trouble.—Spokane (Washington) Outburst.

Maple Cliff Dairy and Stock Farm

20 Boars fit for service. Improved Berkshires and Tamworths several of them winners at Buffalo and Ottawa
REID & CO., - Hintonburg, Ont.
 Farm adjoins Central Experimental Farm. Mention FARMING WORLD.

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Silver Steel is no longer a guarantee of quality, as some of the poorest steel made is now branded silver steel. We have the sole right for the "Razor Steel" brand.

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Farmhamville, Iowa, June 11th, 1900.

Fleming Bros.

Messrs.—I got out druggist to send for a bottle of your Lump Jaw Cure. I applied it twice to one case, that had not been opened. That case is now well. I applied it three times to a case that had been opened, and that looked like a big red wart, which is now well. These were not on the bone, but on the neck just back of the jaw. I think your cure a heroic remedy. Yours truly,

W. W. WILES.

Price 62 per bottle, or three bottles for \$5. If not sold by your druggist we send by mail prepaid. Let us send you our illustrated pamphlet FREE to readers of this paper.

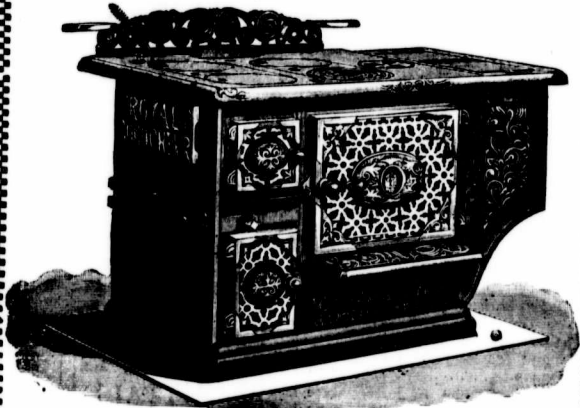
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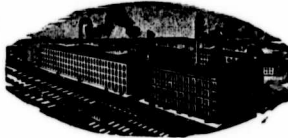
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