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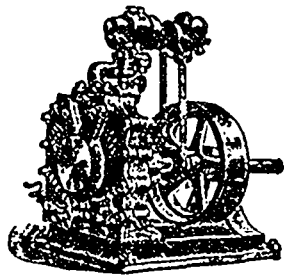
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...LEADING TOPICS FOR THE WEEK...

Agricultural News and Comments. The Over-Crowded Professions and Agriculture Building a Silo. A Tribute to Mr. Dryden. Excessive Freight Rates and the Export Cattle Trade. Price of Stallions Higher. Heavy Hogs at a premium in the United States. The Bacon Pig in England. Alderman John Hallam. Tobacco Culture. Breeding, Feeding and Rearing of Dairy Calves. Use of Liquid Glass in Egg Preservation. Market Review and Forecast.

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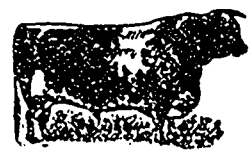
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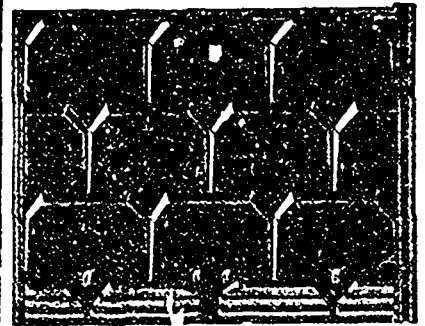
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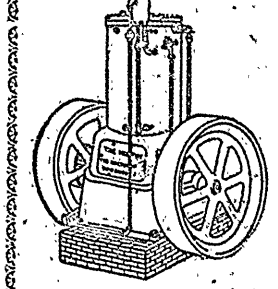
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FARMING

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JUNE 14th, 1898.

No. 41.

FARMING

AN ILLUSTRATED WEEKLY JOURNAL DEVOTED TO FARMING AND THE FARMER'S INTERESTS.

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TOPICS FOR THE WEEK

Agricultural News and Comments.

According to the annual report of the dairy expert for the colony of Victoria, Australia, the exports of perishable food products from that colony have largely decreased during recent years. For the year ending April 30th, 1898, the total exports of perishable food products amounted to £779,339, as compared with £1,069,000 for the year previous. But the decrease is more noticeable in the butter exports. In the year ending April 30th, 1895, the total exports amounted to £1,081,243, as compared with £670,000 for the year ending April 30th, 1898. This great decrease is ascribed to the drought of the past few years.

A British farmer advocates bran-water as a milk stimulant for dairy cows. Here is his recipe. If you desire to get a large yield of rich milk, give your cows every day water slightly warmed and slightly salted, in which bran has been stirred at the rate of one quart to two gallons of water. You will find, if you have not tried this daily practice, that your cow will give twenty-five per cent. more milk immediately under the effects of it, and that she will become so attached to the diet that she will refuse to drink clear water unless very thirsty. But this mess she will drink at any time, and ask for more. The amount of this drink necessary is an ordinary water-pail at a time—morning, noon, and night.

There is a difference of about four cents per pound between the price of the finest English cheese and the Canadian summer cheese. This difference is claimed by Professor Robertson to be mostly due to the English cheese being cured at a uniformly low temperature. If the low prices obtained for Canadian cheese, as compared with the English cheese, are due to the lack of proper curing facilities in the Canadian factories, the remedy is quite easy. Every factory should have in connection with its curing-room a sub-earth duct, as described in FARMING a few weeks ago.

There has been considerable controversy in England as to the best breed of cattle for the armer to keep. As one would expect, the controversy has not succeeded in settling the ques-

tion, and the breeder and farmer still thinks his own particular kind the best, and so it will always be. The best cattle for the farmer are the kind which he has a fancy for, and which will best meet his own conditions. Some authorities think that for raising the animals for stores, for milking and for fattening, the Shorthorns hold sway over one-half of England.

According to a bulletin issued by the Illinois Experimental Station, and based upon the figures furnished by 316 corn-growers, it cost 19.5 cents per bushel and \$10.59 per acre to produce corn in Illinois in 1896. These figures do not represent the cost of growing merely, but are based upon the average sum of the expenditures on all the processes involved in production, from the preparation of the soil to the delivery of the corn at the elevator.

A German authority states that the roots and stubble of a good crop of red clover weigh over three tons per acre, and contain 180 pounds of nitrogen, seven pounds of phosphoric acid, and seventy-seven pounds of potash, all of which is placed, when turned under, in the most available form for growing crops. Clover makes a large demand upon the soil for potash and phosphoric acid. If the resulting crops are removed from the soil it will be easily seen how clover may rob the soil, as well as restoring fertility if the substances taken out are not restored.

Harness horses are reported to be scarce in Scotland, and that that country must come to America to have its needs supplied. The French are buying their light cab horses in America, which they formerly purchased in Germany. They claim to be able to buy their cheap horses cheaper than they can raise them. However, why should the Scotchman and the Frenchman make all their purchases in the United States? Cannot Canada supply a large share of this trade?

An American dairyman says: "I have never been able to discover any difference between well-fed cows that never go dry and those that go dry from one to two months, so far as health and vigor go, or lasting qualities. I think it is largely a matter of habit. If a heifer is allowed to go dry with her first calf, she is more apt to go dry a little longer with her next. In fact, the whole character of the cow, so far as man can shape it, is made in the heifer. If the child is father of the man, the heifer is mother of the cow."

Many creamery men think 16 cents a low price for a fine quality of butter. But it is fully two cents higher than was paid last year for export at this time. At Elgin, Illinois, the largest local butter market in the United States, the quotation last week for fine creamery butter was 15½ cents. The Canadian butter-maker is, therefore, not so badly off, comparatively speaking.

In the winter wheat belt of the United States the increased acreage sown is estimated to be 7.2 per cent. larger than last year, making the total winter wheat acreage now growing for harvest 25,651,000 acres. The spring wheat acreage shows a more decided increase, which is estimated to be 17.3 per cent. greater than last year's acreage, and making the total spring wheat acreage 17,868,000 acres. This makes a total wheat acreage for the United States of 43,519,000 acres. And, if the crop is up to the average, an enormous yield may be looked for.

The Over-Crowded Professions and Agriculture.

One may well ask the reason why so many of our brightest young men, year after year, continue to enter the so-called professions and make them their life-work when there are decidedly better opportunities for advancement in other lines of life. The professions, such as law, medicine and teaching, are all overcrowded, and where openings can be found for recent additions is somewhat of a mystery. A few days ago, at Osgoode Hall, eighty-four gentlemen were given the right to sign the roll as barristers, and at Toronto University fifty-one were given the degree of bachelor of medicine. There are other colleges yet to be heard from, and it is probable that upwards of two hundred young men will enter the professions of law and medicine this spring from the various colleges of Toronto alone. A large number of those already in these professions can barely make a living, and many of them do not do even that, but depend upon special lines entirely separate from their vocations to afford them a livelihood. Now where in a province the size of Ontario a couple of hundred more lawyers and doctors are going to locate and make a competency is, as we have already stated, a mystery. Many of them, no doubt, have connections that will enable them to find openings, but in doing so others may be driven out. A large majority, however, may struggle on for a few years, and drift to other countries. These are among our brightest gems, and this young country can little afford to lose them. If these had entered some of the lines of life that would have enabled them to engage in developing our agricultural and mineral resources this country would be able to retain them as citizens, and to provide them with greater opportunities for obtaining a competency.

No other calling affords greater opportunities at the present time for advancement, and also for making a competency, than agriculture, and yet we find that only eleven young men received their degrees from Toronto University in the science of agriculture this spring. Two hundred in law and medicine, eleven in agriculture, is the proportion, and yet who will say that our great West alone does not furnish infinitely greater opportunities for advancement in agriculture than the whole Dominion could possibly afford through law or medicine. This, in a way, is a sad condition of affairs, and is well worth considering by everyone having the welfare of this country and its people at heart. How is this tendency on the part of young men to enter the professions to be counteracted, and what means shall be adopted to induce our young men to enter upon such a calling as agriculture, which in this country affords ample room for every steady and intelligent worker, are among the important problems which those in authority will have to decide and that very soon, if this country is to retain within her borders its best young blood.

One reason why there is a tendency to crowd the professions and to overlook the opportunities which agriculture affords is, we believe, because the children both in the city and country have acquired false ideas regarding these different pursuits. No definite effort has been made to instil in the young mind at the public school a love for the farm and for the line of life with which agriculture is so intimately associated. If the child, whether in the city or country, has been led to look upon farming as a kind of drudgery in which there is nothing but work and no play, then it is little wonder that young men to-day are rushing

into the professions and more aesthetic callings in life, from which many of them will come forth much poorer than when they entered. True, to farm successfully, as well as to make any other calling a success, means hard work, but to say that farming means all work and nothing better is to say something that is as far from the truth as day is from night. In conversation with a gentleman the other day, who was once a successful business man, and is now managing a large farm in Western Ontario, he stated that farming furnished a wider field for thought and for active brain work than any other line of life, and we believe that this is true. Where will one find a wider and more pleasant field for research and investigation than on the farm in studying the qualities of the various soils, the kinds of grain to grow upon these different soils, how plants grow and feed upon the soil, why sunshine and rain are necessary for the growth of plants, the best methods of feeding stock, how to conduct the dairy, and a hundred and one other things we might mention?

One may well ask why these grand features connected with agriculture have not been instilled into the young men of the country before this. It is because they have not formed part of the early training of the child. Until we have on the curriculum of our public schools a course of study that will create in the young mind a love for the farm and the farmer's calling, and will set clearly before the pupil the advantages to be derived from engaging in agricultural pursuits, this tendency to crowd the professions will not be successfully overcome. We must begin at the beginning. Nothing much can be done after the early training of the young man has been in another direction. The farmers themselves can assist in this matter much more than they are aware of. If every farmer would give up looking upon his calling in a sort of apologetic way, and instead of saying, "I am only a farmer," would say, "I am proud to be a farmer," many young men would look upon the farm in a different light. Every young man worth a snap of your finger is ambitious, and if he feels, and those already engaged in farming lead him to feel, that, in becoming a farmer he is entering upon a lower scale in life, he is likely to seek some other calling. Farming, both intellectually and socially, should be and is equal to any other calling. Then why should the farmer belittle his own calling and put a "stumbling block" in the way of the best young men in the country from entering it?

Building a Silo.

It seems hardly necessary, in these days, to say much in vindication of silo-building, so conclusively has it been proven by the best authorities that the silo is the most economical and best method of preserving green fodders for winter's feeding. Yet we frequently hear of farmers who are opposed to the silo, and who claim that ensilage is not a suitable food for stock. They, as a rule, can give no valid reason for this contention, inasmuch as they have never tested the silo for themselves. Every farmer who has tried preserving corn in a silo, and given it a fair chance, is well satisfied with the results. No dairy farmer should be without one, and especially if he milks cows during the winter months, and we might go further and say that no farmer who can grow corn successfully can afford to be without a silo.

A silo can be built as cheaply, if not more cheaply than any other building of the same intrinsic value in connection with a farm equipment. The majority of silos are built of pine or hemlock lumber, though many farmers are now building silos of cement, especially when built square, as it is claimed that a square silo built of wood decays easily. A square wooden silo will last about seven or eight years, when it usually has to be relined. At the Ontario Agricultural College a square silo built eight or nine years ago is being replaced this summer by one built of cement. Mr. Rennie, the farm superintendent, says that the life of a square wooden silo is about seven years.

All things considered, it may be economy to build a cement silo, though the cost is considerably greater than when built of wood. A cement silo, properly built, should last for ages. A square silo built of wood will cost, on an average, from 75 cents to \$1 per cubic foot capacity. A cement silo will probably cost about two and one-half times these figures. The round stave silo is cheaper than either of these, and can, perhaps, be built with the least amount of trouble.

The size of the silo a farmer should have depends largely upon the number of stock he keeps. One having a capacity of from 150 to 200 tons would be about right for the average farm. A cubic foot of ensilage in a silo thirty feet deep will average about forty pounds in weight. Knowing this it will be easy to estimate upon the capacity of any silo desired. The following table and example from *Hours' Dairyman* gives the average weight per cubic foot of well-matured corn ensilage, at different depths, after settling two days, and the average for the entire depth:

Average for	lbs.	Average for total depth, lbs.
First 5 feet.....	22.0	22.0
Second 5 feet.....	30.0	26.1
Third 5 feet.....	39.3	29.8
Fourth 5 feet.....	43.8	33.3
Fifth 5 feet.....	49.5	36.5
Sixth 5 feet.....	54.5	39.6

Find the number of square feet in the bottom of the silo, multiply this by depth of silage and the product will be the total cubic feet of silage. For instance, if a silo is 12x15 feet inside measurement, and 20 feet deep, it will have 3,000 cubic feet, and, when well filled with mature corn, the average weight, per cubic foot, will be 33.3 lbs., or 100,000 lbs. (60 tons) for the whole. The lower layer of five feet in depth will be nearly 20 tons, the one above is about 17 1/2 tons, and in this proportion for other depths.

The above table does not apply to round silos. In *FARMING* for September, 1906, page 42, an excellent description of a round silo is given by Mr. Joseph E. Gould, Uxbridge, Ont. According to his description a 60 ton, round, stave silo can be built for \$40 to \$60, depending upon the price of the lumber in the locality. Mr. Gould's large silo, holding 140 tons, cost about \$75. The important point to be considered in building a stave silo is to secure as much depth as possible. The planks should be two inches thick and any width up to ten inches. The following table shows the capacity in tons of round silos of various sizes:

Diameter of silo in feet.	Depth of silo.			
	20 feet.	22 feet.	25 feet.	30 feet.
10	31 tons.	34 tons.	40 tons.	47 tons.
12	45 "	49 "	56 "	65 "
14	63 "	68 "	77 "	90 "
16	80 "	90 "	105 "	130 "
18	100 "	110 "	125 "	150 "
20	125 "	135 "	155 "	185 "
22	145 "	160 "	180 "	215 "

A Tribute to Mr. Dryden.

A representative deputation, consisting of Messrs. John I. Hobson, President Dominion Cattle Breeders' Association, G. W. Clemons, Secretary of the Holstein-Friesian Association; George Gunn, President Dominion Swine Breeders' Association; D. G. Hamner, President Dominion Sheep Breeders' Association; J. E. Brethour, Burford; James Tolton Walkerton; Major Sheppard, Grimsby; R. C. Steele, Steele Briggs Co.; J. M. Shuttleworth, manager Bow Park Farm; Wm. Davies, of the Davies' Packing Co.; Alderman Hallam, Toronto; John Kelly, Shakespeare; Wm. Laidlaw, and James Anderson, Guelph, and one or two others, waited upon the Premier of Ontario on June 7th, and asked that in the interests of agriculture in this province the services of the Hon. John Dryden be retained as Minister in charge of that department. The deputation presented a petition signed by fully two thousand of the leading horse, cattle, sheep, and swine breeders of the province, the leading poultrymen and fruit-growers, and other prominent agriculturists, setting forth the splendid services Mr.

Dryden has rendered to agriculture in Ontario, and requesting that the Government make a special effort to induce him to remain in office.

The members of the deputation and the petitioners belonged to both political parties, and, therefore, nothing of a partizan nature could be ascribed to their action. It was merely a focusing of the general approval of Mr. Dryden's services to agriculture which exists in the country, and giving expression to the strong desire of those who know the value of his work, that his services should not be lost to the province at this juncture. A few weeks ago we gave expression to our views regarding the retention of Mr. Dryden as Minister of Agriculture, and there is no need of further endorsement on our part other than that we hope the mission of the deputation will be fulfilled, and that his services will be secured to this province for many years to come.

Excessive Freight Rates and the Export Cattle Trade.

In a recent issue of *The Weekly Sun*, Mr. G. S. MacDonald, a railway freight expert of Montreal, gives the following valuable table of comparisons regarding the freight charges on cattle shipped from Argentina, the United States, and Canada:

Country	Distance (Miles)	Time (Days)	Transport Charges*	Sale Price in Britain**	Producers' Profit or Loss	Shippers' Profit or Loss
Canada.....	Rail 917 Ocean 2878	3825	\$5.00	\$72.35	+\$95.75	-\$14.00
United States...	Rail 1300 Ocean 2926	4956	20.00	77.94	+ 40.00	-.56
The Platte....	Rail 200 Ocean 7000	7200	30.00	68.90	+ 20.00	2.00

Estimated Difference for 1897 between Canada, United States, and the Platte (Uruguay and Argentina), in prices of production, transport and sale of cattle, per head of 1300 lbs. exported to Great Britain.

* Harbor fees, feed, insurance, and selling commission included.

** The figures under this head refer to net weight, which is 53 per cent. of the gross weight of Canadian and Platte cattle and 54 1/2 of United States cattle. The average prices taken are \$10.50, \$11, and \$10 per 1300 lbs. n. for Canadian, United States and Platte animals respectively.

The fact that the freight rates from Canada to Great Britain are \$6.00 more per head than from the United States will be a surprise to many cattle breeders and feeders. There is no reason whatsoever why this difference should be made. If the distance travelled is taken into account the shipper in the United States should pay a higher rate than the Canadian shipper. But the Canadian shipper is not so highly favored by the railways and steamships and, instead of paying a lower rate, he pays a much higher rate, and does not get as much for his cattle. As compared with Argentina the Canadian shipper pays only \$6.00 less per head than the shipper of the La Platte, while the time of transit is twice as great from the latter country. If we take the figures given in the table we find that the cost per mile for the Canadian shipper is nearly three-quarter cents; for the American shipper less than one-half cent, and for the Argentine shipper a little over two-fifth cents per mile. This unfair condition of things should not exist, and our export cattle trade will never be placed upon a proper footing till some radical remedy is applied.

Another discouraging feature shown by the table is the amount of losses sustained by the Canadian shipper as compared with the shipper from South America. While the latter makes a profit of \$2.90 per head, the former loses \$1.40 per head. Last year may, however, be only the exception; but

even so, the comparison is sufficient to show the great disadvantage in which the Canadian shipper is placed, and that with Argentina as a rival it will be a hard matter to do business at all. Argentina has long been looked upon as a formidable rival in the markets of Great Britain, but it was not till now that the reasons for her growing supremacy in the cattle trade were fully understood.

The question now is, how is the Canadian feeder and breeder to compete with his South American rival and also the American feeder? One important means of making the competition more easy is to secure for the Canadian shipper equal freight rates to those which his competitors enjoy. Another is to lower the cost of production, and a third is to improve the quality of the cattle, so that the shipper will be able to get the top price for them in England. Whether it is possible or not to lessen the cost of production in Canada is hard to say. We are afraid that this is one of the conditions in which the American feeder with his western ranges and the Argentine cattle raiser with his estancias has an immense advantage over his Canadian competitor. In regard to improving the quality there is room for advancement. According to the above table, Canadian cattle in 1897 sold in Great Britain for \$3.45 per head more than the Argentine cattle, but for \$4.59 less than the United States cattle. There is no valid reason, whatever, why Canadian cattle should sell for less than the United States cattle. More attention to breeding and feeding should enable our cattle dealers to overcome this difficulty.

But the great disadvantage of the Canadian shipper is the excessive freight rates. If these were the same as in the United States, the Canadian shipper would be able to pay the producer \$53.75 per head instead of \$47.75, as was the case in 1897; and, if the quality were so improved that Canadian cattle would sell for as much in England as the United States cattle, the shipper would be able to add a few dollars more to the producers' profit. An increase of seven or eight dollars in the price paid the farmer for his cattle is worth looking after, and we hope that something will be done very soon to remedy existing conditions in regard to railroad and ocean freights for cattle.

Price of Stallions Higher.

The prices of draft and coach stallions are higher in Great Britain, France, Germany and Belgium than they have been for sometime. Importers who have to pay cash for horses will have to abolish the credit system and sell for cash. Where \$1,000 to \$2,000 are paid for stallions cheap service fees will have to be given up, and instead of the insurance plan, a more rational one of half cash at breeding and balance when mare is known to be in foal substituted. In the United States horsemen are just beginning to find out that there are not enough good young stallions in the country to go around, all the available ones having been bought, with the expectation of still higher prices in the fall or next winter. A few importers are refusing to sell their stallions for this season's business.

This scarcity of good stallions means a scarcity of good horses for the next few years, and it is probable that more money will be made during the next ten years from breeding good horses than for several years back. But the horses bred must be the best of their class. The day for making money out of scrub horses has gone by, and unless the farmer is prepared to produce only the best class of horses we would not advise going very extensively into the business of horse breeding, even though the outlook for the future is bright. To breed good horses the best types of mares should be used as well as the highest types of stallions. It is contrary to the laws of nature to expect a first-class animal from a scrub mare, even though the sire may be the best of his class. Farmers therefore would do well not to go too largely into horse breeding unless they are properly prepared for it.

One effect the charging of a higher price for a

stallion's services will have is to shut out some of the scrub breeding mares. If a farmer has to pay a good figure for the services of a stallion, he is not likely to use any but the very best types of mares for breeding purposes. In this way the increase in the cost of stallions will have a good effect and be the means of producing a better class of horses in the country, though the number may not be so large. However, it is quality not quantity that tells in horse breeding as well as in anything else.

Heavy Hogs at a Premium in the United States.

According to *The National Stockman and Farmer* heavy hogs are likely to be at a premium in the United States for a while. For several years lard was so cheap as compared with meats that slaughterers were forced to discriminate sharply against heavy hogs. The hog that carried a large proportion of the higher-priced lean meat was what the market wanted, and producers were urged to turn their attention to the bacon hog, the opposite of the old-time lard yielder. Under these circumstances it was claimed by high authorities that the necessity of the lard hog was a thing of the past. But it now seems that a change has been wrought in a few months by a heavy foreign and home demand for lard. Heavy hogs, according to the above journal, are selling at the top and light ones at a discount in spite of summer weather, and producers are urged to hold their light hogs and put more lard on them.

Whatever may be the views of the United States pork trade in regard to this matter, we are quite safe in stating that there is no big demand in Canada for the heavy, fat hog. Though there may be an increased demand for lard just now, the market for that article is such as would not warrant our farmers in changing from the bacon type to the heavy hog. Our export bacon trade requires a hog with the proper proportions of fat and lean, and weighing from 160 to 180 pounds, and this is the kind our farmers should aim to produce.

The Bacon Pig in England

The British farmer is just now beginning to realize that the consumption of bacon, hams and pig meats has increased enormously during late years. While he has been "napping," the American, the Dane and the Canadian have come in and secured a large share of this trade. Now that the situation in regard to bacon is fully realized, the English farmer is getting somewhat anxious to retrieve what he has lost. One of the difficulties with which he will have to cope at the beginning is to secure a type of hog best suited to the bacon trade. One would think that in England, where nearly all are pure-bred animals, this would not be such a difficult task. But it is because of the great variety of breeds that the task is a difficult one, and that it is hard to secure a standard size and quality throughout. The English packers complain of this, especially throughout the summer months, when it is very difficult to get the kind of hogs required for the bacon trade. The popular demand seems to be for pigs that will weigh from 140 lbs. to 160 lbs. each. Among the breeds mentioned as best for meeting the requirements of the bacon trade are the Berkshires, Large Blacks, Tamworths and the Middle and Large Whites. In one district one breed is popular, and in another section a different breed holds sway, so that it is difficult to get a uniformity of type all over the country.

To induce a greater production of bacon it is proposed by some authorities that the farmers cooperate and form bacon factories at convenient centres in different parts of the kingdom. It is claimed that this plan would make the farmer independent of the market value for store pigs, and give him full benefit of the rates for bacon, ham, etc.

The development of co operative bacon-curing is being considered in Ireland. There are 2,000 par-

ishes in Ireland, which, if organized, ought to turn out fifty pigs weekly, each of twelve stone net average. This would give a total of 100,000 pigs weekly, or an annual number of 5,200,000, which, at an average of 36s. 8d. per cwt., would amount to £14,300,000. Of course this is all speculation, but it shows what the possibilities of bacon production in Ireland are.

Alderman John Hallam.

Though not so intimately associated with agriculture as many others of whom it has been our privilege to give short sketches in *FARMING* during the past year or two, Alderman John Hallam has in many ways been closely identified with those engaged in agricultural pursuits. As one of our largest buyers and exporters of wools and hides he has come more or less directly in contact with every sheep breeder and wool grower in the country. Not only this, but he has always been and is at present an ardent supporter of every movement having for its object the development of our agricultural resources and the improvement of the farmer's condition, realizing with many others that the success of the farmer means the success of the business man.

Alderman Hallam is an excellent example of what can be accomplished in a young country like Canada, and for that matter in any country by push, determination and energy combined. Born of poor but honest parentage in Chorley, Lancashire, England, in 1833, Mr. Hallam was deprived of the early educational advantages which even the poorest in this country now have. In fact at a very early age the boy John had to work in the cotton factory with his parents and add his quota to the keeping of the family.

In 1856, Mr. Hallam, then a young man, resolved to try his fortunes in a newer land and sailed for Canada, arriving in Toronto in September of that year. No fat position awaited him, and for several years he did, what every young man should do under the same circumstances, that is, worked at whatever odd jobs came in his way. But better things were in store for Toronto's future Alderman. He was determined to carve out a position for himself, and in June, 1866, he laid the foundation of his present large and prosperous business as a hide, wool and leather merchant. Mr. Hallam's remarkable success as a business man is in a large measure due to the invaluable heritage of a life of honesty, frugality and thrift given him by his parents. The business of which Mr. Hallam has been principal for so many years is now one of the largest of its kind in the Dominion. A large and flourishing branch is located at 298 Ross street, Winnipeg, Man.

Whilst opportunities for education did not come to Mr. Hallam in his younger days, he has given himself what in some respects is the best of educations, that which comes from wide reading and extensive travel. Mr. Hallam is a champion of the free library movement, and the establishment of the Toronto free library is more due to his energy and ability, perhaps, than to any other influence. He was the first chairman of the free city library board, and presented the library with a valuable collection of two thousand books.

Unlike many who have made a success in business and have devoted their early energies to business pursuits, Mr. Hallam has always been inspired with a strong desire for public life, which seems to be characteristic of Lancashire people generally. In 1870 Mr. Hallam was elected a member of the council of the city of Toronto, and, with only an occasional interval, has continued a member of that body up until the present time, making, in all, a period of twenty-six years. During that time he has occupied some of the most important positions in the gift of the council and public school board, among them being the chairmanships of several of the leading committees.

Mr. Hallam is now sixty-five years of age, and is still hale and hearty, and bids fair to exercise his unusual vigor and energy for many years to come. Lynden Villa, his place of residence, is one of the most beautiful and charming spots in Toronto.

TOBACCO CULTURE.

By WILLIAM SAUNDERS, LL.D., F.R.S.C., F.L.S.,
Etc., Director Experimental Farms.
(Continued from last issue)

HARVESTING.

When the leaves approach maturity they gradually lose their deep green color and assume a yellowish hue, which, in some varieties, is mottled with deeper markings of the same color. The veins of the leaves become swollen and the substance of the leaf feels thick and gummy. At this stage the tip of the leaf becomes somewhat brittle, and the midrib will usually break with a clean fracture if the tip is sharply doubled back; the leaves are then ready for harvesting. When the leaf is sufficiently matured, the sooner it is cut the better, as it is liable to injury from frost or other unfavorable weather. The usual method is to cut the plant down nearly to the ground and suspend the stalk with its leaves attached in a suitable drying house, where, when dried, the leaves are stripped and packed. The other method which is sometimes followed by those who cultivate tobacco on a small scale, or where labor is plentiful and cheap, is to strip the leaves from the plants in the field, gathering them as they mature and stringing them on twine or wires attached to laths or strips in such a manner as to allow each strip with its load of leaves to be handled separately. These are then placed in the drying-house to cure. By this process a better quality of leaf is obtained, but at a larger cost for labor.

Some growers split the upright stem of the plant before cutting, with a sharp knife down the middle to within four or five inches of the base, then withdraw the knife and cut the stalk off close to the ground. This plan is said to be convenient for hanging, as the stalks can be placed astride the strips on which they are suspended, and the leaves on stalks thus treated dry more rapidly; they are, however, more apt to slip off the sticks when moving them.

Another method is to pierce through the stalks with a V-shaped spear made of iron or steel, with a socket large enough to admit the end of a stick on which the tobacco is to be hung. The stick is set upright on the ground, fitted with the spear at the end, when the tobacco is lifted, one stalk at a time, and thrust on the spear, which passes through the stalk, about six inches from the base. The sticks are usually made $4\frac{1}{2}$ feet long, and afford space enough to suspend eight plants. When one stick is filled, the spear is taken off and attached to another, and this process is continued until the plants are all hung. Other growers prefer to suspend the plants by tying them to suitable sticks with twine.

Cutting should begin as soon as the dew is off the plants in the morning. Cut with a hatchet or suitable knife, grasp the stock with the left hand and bend it well to the left, so as to expose the lower part of the stalk, and sever with the knife near the surface of the ground, letting the stalk drop over without doubling the leaves under. Lay the plants on the ground to wilt for an hour or two, or until the leaves lose their brittleness and can be handled without breaking. Then load the tobacco on a wagon, keeping the butts out on both sides in loading, and

draw to the drying-house. No more plants should be cut than can be taken in and hung up the same day. Never cut tobacco on a rainy day, as the leaves are then sure to get sandy, which will lessen their value, and do not allow the plants to lie long on the wagon or in a pile, as they soon sweat and heat, which quickly injures them.

DRYING.

A house 30 by 24 feet so arranged as to hang the tobacco in four tiers is said to be large enough to give drying accommodation to an acre of tobacco. Most growers prefer to build their drying-houses tight, so that they may be closed up in unfavorable weather. Such buildings are supplied at the base with a number of doors, affording openings large enough to admit air freely, and ventilators are provided above. Drying-houses are most commonly built from 16 to 20 feet wide, 16 feet high, and 40 to 50 feet long, or longer if required. Occasionally buildings are met with which have their sides covered with boards so placed as to leave an inch or more of space between each to provide for free access of

ping the leaves are separated into two grades according to size and soundness—all the torn and injured leaves, as well as the small and less matured specimens, forming a second grade.
(To be continued).

BREEDING, FEEDING, AND REARING OF DAIRY CALVES.

By S. SHAVER.

My subject should be studied with care. A great quantity of our dairy products must be sold in the markets of the world, therefore we must study not only to produce the best, but must study to produce it as cheaply as possible, so as to obtain a profit. If there is anything in breeding, or feeding or both, that causes cows to differ one from another in economical productive capacity, its importance must be conceded. That they do differ in some degree is universally observed, and that this difference assumes wider proportions than is commonly supposed, has been proven by as carefully conducted experiments as the wisdom of man can devise. What is it that causes this difference? It cannot be

mixed blood and mixed characteristics, so will be the progeny, and in a greater degree, but always subject to the law that the stronger or more potent will predominate. If it was not for our lack of knowledge of the characteristics and possibilities of our breeding stock we could know just what we are going to breed if this be true. If we are going to have better cows, they must be better bred, and to this end we must select better cows for dams—cows that have the characteristics that we wish to reproduce and perpetuate, and what is still more important, we must have better dairy bulls. Something has caused us to give little heed to the truth that the "bull is half the herd," and in consequence though we may have ten or twenty cows, we hesitate over the price of a good bull to put with them, as much as we would over a heifer, and sometimes let \$10 or \$20 hinder us from getting a good bull. The loss of keeping one or two poor cows is nothing to be compared with a bull that is an inferior sire. He leaves his impress on your ten or twenty calves, either for better or for worse, and it is three years before you find out the character of that impress. It is apparent, therefore, that his selection should receive the most intelligent consideration.

But "breeding," important as it is, and as I have tried to make it appear, is only half the story. When we get a calf from an ideal cow bred to a dairy bull that has been bred specially for the dairy, we must feed that calf intelligently. For instance I would feed it whole milk from two to three weeks. Then I would gradually mix in skimmed milk, invariably warm as cow's milk. In a short time the calf will eat whole oats, fine hay, oats in straw, and corn fodder; this will develop its digestive organs so as to be able to consume later on and assimilate as large an amount of coarse fodder as possible. For her future usefulness as a dairy cow depends on the amount of food she is able to manufacture into butter fat. The calf must be kept thrifty, but not fat. We want to teach our heifers to produce butter fat, not tallow. I believe we can destroy our calves and heifers by teaching them to lay on fat. I would feed to keep heifers thrifty, and would breed them when about fifteen months old to the best breed dairy sire I could get.

USE OF LIQUID GLASS IN EGG PRESERVATION.

The use of a water glass solution in the preservation of eggs is probably the best known process yet available for keeping eggs good, inasmuch as it is accompanied by fewest disadvantages. Water glass or Wasserglas, as the Germans call it, is a very curious substance, well known in certain industries, but almost unknown to the general reader. A better name for it is soluble glass. It is called a glass because it is an alkaline silicate, and it is termed soluble because it will dissolve in water, or rather will mix with water very easily. In appearance it looks like a thick sugar syrup and might easily be mistaken for it. It is made by fusing silica, for example, quartz, with sodium or potassium carbonate, adding a little small coal in order to aid the reaction. The commonest grades are manufactured by fusing two



Pure Bred Ayrshire Cow.

Bred and owned by A. Terrill, Wooler, Ont. A three year old, Nettie, 2436, daughter of Mary 1877. She comes of an excellent milking strain.

air. This, however, does not afford sufficient protection in case of an unfavourable weather. Whatever method may be used for hanging the stocks, they are placed on the sticks about five inches apart, leaving eight or nine stalks on a stick, and the sticks are so arranged as to leave a space of eight or nine inches between them.

When the plants are sufficiently dried, which is known by the stems becoming of a brown colour and breaking when bent, the tobacco is ready for stripping. Damp weather is chosen for this operation, when the damp air is freely admitted and the leaves absorb moisture so that they can be handled without breaking. The operator pulls the leaves from the stocks one by one, until he gets what is technically called a "hand," which consists of from twelve to sixteen leaves, when these are fastened together by a good leaf folded to two or three inches in width, and wound around the base and secured by tucking the end under. During the strip-

feeding alone, or environment or care, or anything else subsequent to birth, for we can observe these differences when there is uniformity in all these particulars. It must be, therefore, that animals are born with different capacities for production. And hence improved dairy cows can be bred with just as much certainty as improved beef cattle, improved draught horses or roadsters, or any other kind of domestic animals. What is intelligent improved breeding? It involves something more and beyond the mere perpetuation of the species. It implies selection, care, and judgment; also, more than the mating of two animals. For each of these trace back to scores from the other in function, form, or temperament, as well as color and potency. Wild animals breed true to type without an exception, and in like manner every calf has in itself the germ of every possibility that is inherited in either its sire or dam and none other. If the parents are of

parts of quartz sand with one part of sodium carbonate and one-tenth part of small coal. Most of the soluble glass or water-glass which is on the market is used for making artificial stone, but large quantities are used for rendering wood fire-proof, as a detergent, and for protecting natural stone of good quality but which does not weather well. These uses suggest the reason why water-glass is so useful in the preservation of eggs, for in solution it enters the pores of the egg and probably combines with the calcium carbonate of the egg shell, forming an impervious cement, which prevents the ingress of air and the germs which it may contain. It ought to be pointed out that treatment with water-glass, as with lime water, will reduce the elasticity of the egg-shell, so that when the contents of the egg swell during boiling, the shell will crack unless relief is afforded by puncturing one end with a fine needle immediately before cooking.

In order to use water-glass successfully, the following plan should be adopted; Take one part by measure of water-glass (one gallon) and ten parts by measure of water that has been well boiled and cooled (ten gallons). Place the water and the water-glass in the vessel in which the eggs are to be preserved, and stir the ingredients well together; then put in the eggs, or the eggs may be packed in the vessel first of all, which is perhaps the better plan, and then the mixture of water and water-glass poured over them until the topmost layer is completely covered. The reason for boiling the water is obvious to anyone who knows that the process of boiling kills any putrefactive germs which may happen to be in the water at the time, but great care must be taken that the water is not used hot or even warm; it should be cooled down to the temperature of the air before the water-glass is mixed with it and the mixture poured over the eggs. On the whole, it is the best plan to purchase water-glass of the best quality, and even then it is quite cheap. It is generally bought by the cwt., and, although the market varies, it ought to be procurable at about 10s. or 12s. a cwt. The reason why we recommend purchasing the best is that sometimes common kinds of water-glass affect the fingers in handling and if such is employed there will probably be trouble with the workmen, who are quick to object to anything which, as they say, "perishes" the hands.

Eggs kept in this solution of one part water-glass and ten parts of boiled water have been known to keep good for at least nine months, but it goes without saying that the eggs must be fresh when they are immersed in the solution.—*The London Grocer.*

The third annual excursion of the Halton Farmers' Institute to the Model Farm at Guelph will take place on Saturday, June 25th. The fares are placed at a very low rate, and every farmer in Halton who can possibly leave home should unite with the members of the institute in making this the most successful excursion which has ever been organized in that locality. Particulars and rate may be obtained from Dr. Robertson, Milton,

J. L. Warren, Esq., Acton, or the secretary, W. B. Robbins, Esq., of Freeman.

CORRESPONDENCE.

ILLUSTRATION STATIONS FOR FARMERS.

Editor of FARMING:

Having seen in your columns Professor Robertson's scheme for illustration stations, I would say that such would be the grandest move possible for the aid of farmers and the public thereby. The great want on the farm being manure, in addition to that made on the farm, and to know what quantities and which fertilizers are the best on the different soils. If men had confidence in the different fertilizers (of repute) they would use them more largely, and thus greatly increase the products of the country. In fact what men want to know and see through illustration experiments by reliable disinterested farmers is the effects of fertilizers as compared with unmanured plots in the different soils of the country, or in other words, how will they profit them to use for present and permanent effect?

The object should be not so much to test different kinds of seeds and the quantities sown, but to know if the commercial fertilizers deserve the praise and value which their manufacturers give them? If so, they would be sold in tons in place of 100 lbs., and the crops of the country nearly doubled.

Hence, a few illustration stations in different parts or on different soils: on clays, clay and sandy loams, dry or damp, etc., where "seeing is believing," would be of untold benefit to the farming interests of the country.

A. B. CROSS.

Brookfield, N.S.

J. E. BRETHOUR LEAVES FOR ENGLAND.

Mr. J. E. Brethour, of Burford, Ont., left for England on June 11th on a purchasing tour. During his trip Mr. Brethour will visit the leading summer stock shows in Great Britain, among them being the Royal Show, which this year will be held at Birmingham. As the readers of FARMING are well aware, Mr. Brethour is the proprietor of the Oak Lodge herd of Yorkshire swine, and his purpose in visiting England at this juncture is to import a number of Improved Yorkshires to add to his already celebrated herd of bacon hogs. Mr. Brethour has great faith in the future of the Canadian bacon trade and believes that the Yorkshires are well adapted to meet the needs of this trade. His desire to keep his herd up to the highest English standard, and thereby assist in keeping up the high standing of Canadian swine, is to be commended.

In addition to purchasing stock Mr. Brethour will make a study of the English bacon trade when in England. As he has made a special study of the Canadian end of the trade during the last few years Mr. Brethour will be in a position to secure information of value to every swine breeder in this country during his trip to Great Britain.

GASOLINE ENGINES.

The rapid development of conditions favorable to the production of all kinds of agricultural commodities with economy of time, labor and material, has created a demand for various devices designed for the purpose of supplying the power required in operating farm machinery. Naturally, farmers are interested in any machine which promises to do the required work cheaply and effectively with materials easily obtained. This, no doubt, has led to the interest shown in the gasoline engine manufactured by The Northey Manufacturing Co., Limited, of Toronto, as evidenced by the number of enquiries concerning it which have lately reached this office.

In order that he might be able to satisfy the curiosity of those interested a representative of FARMING visited the extensive work shops of the company for the purpose of seeing the engine in course of construction and determining for his own satisfaction how far it filled the requirements of a convenient and economical motive power adaptable to the uses of the farm. What he found may be summed up in a short description of the engine from his point of view, which is neither technical nor professional. The Northey Gasoline Engine is certainly convenient in form and size. The one-horse power engine, which is the smallest one made, occupies a space of twenty inches square, and weighs about 500 pounds. The power is wholly generated by gas or gasoline. Where natural or manufactured gas is obtainable it may be used to advantage, but gasoline is commonly used in nearly all rural districts. The gasoline is forced from an iron tank placed outside buildings by means of a small pump on the base of the engine, into a cup, from which it is allowed to descend in proper quantities to the cylinder, where it comes in contact with the amount of air required to form an explosive gas. This gas is ignited by an electric spark produced by means of a small battery of eight cells, which furnishes the current needed for the purpose. The ignited gas heats the air in the expansion of which sufficient force is acquired to furnish the power. The whole thing is most simple, the principle applied being merely that of expansion of air by heat. As gasoline is not explosive, except when its vapor is mixed with a certain quantity of air and a light applied, and as this condition only exists within the strong cast-iron cylinder, safety is one of the strongest characteristics of the engine. There is no boiler, no fire, and practically no heat about the engine. Water is used only as a means of cooling the cylinder. For a day's run of ten hours one painful per horse power will be found ample for all the requirements of the engine. The consumption of gasoline is not more than 1/8 of a gallon of seventy-four degrees gasoline, at a cost of about 1 1/2 cents per horse power per hour. There is no engineer or fireman, no coal or wood, no ashes or cinders, and no danger from fire. It is always ready for business, and may be put into operation in less than a minute at any time. It is available for running all kinds of farm machinery requiring power. The medium and small engines may be bolted to an ordinary six foot stone boat and carried to any part of the farm where required. There is no steam to generate, only a trifling amount of water to draw, and as there is no fire there can be no danger.

From this necessarily imperfect description the reader can at least draw some conclusions as to its adaptability to his own particular uses. If he is interested in it, his better plan would be to see the engine for himself, or write the makers for full particulars.

BOOKS RECEIVED.

Suffolk Flock Book, Vol. XII. Rams, Nos. 4442 to 4508. Published by the Suffolk Sheep Society. Bury St. Edmunds, Eng., 1898.

FOR SALE

A HERD OF THE HANDSOMEST DUTCH BELTED CATTLE IN THE UNITED STATES.



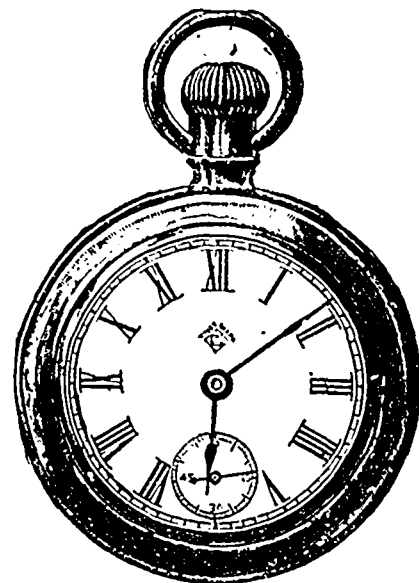
Every animal registered. Most of them have taken first premiums at the State and County Fairs where they have been exhibited. The herd is composed of all ages and is in prime condition for exhibition purposes. If entered for competition at nearby State and County Fairs next autumn, the premiums the exhibitor would receive should repay the cost of the herd. Every animal well marked and registered. The Commissioners of the Essex County Park have taken for park purposes forty acres of the Locust Grove Farm, which necessitates a reduction of stock.

For full particulars, address MICHAEL ROSNEY, Manager Locust Grove Farm, Pleasantdale (West Orange), N. J.

This celebrated herd of Cattle was illustrated and described in this journal in issue of April, 1896.

There is Nothing Better

For a gift to your boy than a real, genuine watch—one of which he may justly feel proud, and which will be a source of pleasure and of usefulness to him for years to come.



This Watch Free

For Three New Yearly Subscriptions

All that is necessary in order to secure this handsome nickel watch is to send us the names of three new yearly subscribers with the money to pay for same. On receipt we will at once forward the watch, securely packed, carriage paid, and free of all other expense to the sender.

A score of boys have already been made happy in the possession of this watch as the result of a few hours' pleasant canvass amongst their friends. Who will be the next? For a full description of the watch see our issue of May 17. A copy of it will be sent free to any one applying for it.

Two Dollars for One

DR. CARLIN'S UNIVERSAL RECEIPT BOOK AND HOUSEHOLD PHYSICIAN. A compendium of practical information such as every farmer, every stock keeper and every mother needs. Contains more than 6,000 valuable receipts. Full information as to the care and management of horses, cattle, sheep, swine, bees, poultry, birds and plants. Rules for the care of the sick, with remedies for all ordinary diseases. Index of symptoms. Index of remedies. Lists of medicines, how to prepare them and how to administer them. The selection of food, the best manner of preparing it, what should and should not be used under certain conditions, all based on the excellent medical instructions given. No family should be without it. This invaluable book will be sent

Free with FARMING until 1st Jan., 1899, for only One Dollar.

For list of other valuable and useful premiums see our issue for May 24th. Remember all premium offers in that issue are still good. Agents wanted, to whom liberal terms are offered. Address

FARMING

44-46 Richmond St. West
TORONTO, Ont.

The Ontario Agricultural Gazette

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

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

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

BENEFITS OF MEMBERSHIP.

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

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

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

The name and address of each member, and the stock he has for sale, are published once a month. Over 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 probable buyers resident in Canada, the United States and elsewhere.

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

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 15th 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.

F. W. HOPSON, Secretary
Parliament Buildings Toronto, Ont.

HUMUS IN THE SOIL.

By D. Z. GIBSON.

Humus is any animal or vegetable matter which is in its intermediate stage of decomposition. In prairie soils, where the grass has not been moved for centuries, and where each season's growth goes back to the soil, it is found in great abundance. In fact, humus constitutes a large part of the almost inexhaustible fertility of such soils. In newly-cleared lands it is found in varying amounts, having come from the partial decomposition of trunks, branches, roots and leaves of trees, and other smaller vegetation that may have sprung up. In some swamps it occurs in large quantities in the form of muck. In tropical climates, where the rate of decay is rapid, it is not so abundant as in temperate regions. As yet the chemical composition of humus is not well understood, nor has its functions and importance as a food for plants been clearly defined. Yet we know from observation and experience that it is of prime importance to the farmer. Continued cultivation for years has greatly diminished the amount of humus in the soil of this province, and the lack of this important element may account to a certain extent for the small crop returns and failure to get a good stand of clover. Chemists tell us that an average soil contains enough plant food to grow wheat at the rate of thirty bushels per acre for seventy years in succession without the addition of any fertilizer. Nature, however, is not so lavish with her treasures as to allow us to get this plant food in our grasp within the space of a few years. A great deal of it is locked up in an inert form, and can only be made soluble when surrounded by certain favorable conditions. It is the business of the farmer to furnish these conditions as far as he is able, and make use of whatsoever agencies he can in doing so. Humus is one of these agencies. It makes the soil more retentive of moisture. The early settlers can well remember that the spring

freshets never took the form of such destructive floods as occur at the present day. This change is largely due to the fact that the surface of the earth possessed more humus or vegetable matter in the form of moss, decaying logs, stumps, etc., which retained a considerable portion of the moisture that came from the rains and melting snows, thus making the descent of the water more gradual. D. J. Crosby, of the Michigan Experiment Station, conducted experiments which show the difference in soils to retain moisture. Samples of sand, clay, loam and muck were placed in jars, and after being thoroughly dried each was moistened with the same amount of water and exposed to a drying atmosphere. At the end of 97 hours the sand had lost all of its moisture. The clay after 197 hours lost 99 per cent. of its moisture; the loam 91 per cent. and the muck 62 per cent. At the same time the temperature of the sand was lower than that of the muck, but the superior retentive powers of the muck more than made up for the difference in temperature. Thus the muck soil which was richest in humus was the best retainer of moisture. Humus in the first five or six inches of a soil acts similar to a mulch, except that the effect is not so marked. Now since water is one of nature's greatest solvents, and since plants require—according to Hellriegel—325 pounds of water to produce one pound of dry matter, it is important that a goodly supply of humus be kept in the soil, so that the bad effects of a dry season may be somewhat lessened.

The presence of humus in the soil, if the other conditions are the same, makes it warmer. This increase in temperature is due to the fact that it is of a dark color, thus absorbing the sun's rays more readily than a lighter colored substance. All know that a black garment is much warmer in a bright sunshine than a white one. The fermentations of organic matter which go on in a soil containing humus also produce a considerable amount of heat. A few degrees of increased

temperature in a soil may not seem to be very important, but then it is remembered that the vital processes of plant life only begin after the temperature has risen above 45° to 48° Fahrenheit; we then see that a difference of two degrees may bring one soil up to the growing temperature, thus causing germination and growth, whilst in a cooler soil these changes would be less active. Humus facilitates nitrification, or the making of nitrates. This is a process of decomposition that takes place in the soil, in which the complex insoluble compounds are broken up into simple form available for plants. Those bacteria that play such a prominent part in the growth of certain plants work more vigorously when in a soil containing plenty of humus. The presence of humus in a stiff soil improves its texture very materially. It also lessens the damage done by the puddling action of rain falling upon it, causing it to bake, especially when the surface has just been pulverized at the time of seeding. The tendency of stiff soils to contract, causing great cracks or fissures to appear, which tear or break off many of the smaller rootlets, thus depriving the plant of its means of water supply when most needed, is diminished when sufficient humus is present. The stiff texture of a clay soil is perhaps its greatest disadvantage, and as it is a fact that humus makes it more easily tilled (at the same time bringing other advantages) it is especially important that the farmer working a stiff soil should, as far as circumstances will permit, keep up the supply of this valuable material. On the other hand, it makes loose and open soils more compact and less liable to leach out the plant food in solution. We have briefly considered some of the benefits derived from humus, enough at least to prove that the average soil must contain a sufficient amount in order to get the best yield at the least cost.

How are we to increase this element in those soils that are lacking? is the next question. Since circumstances vary so widely, no one method can be given that will apply in every case, but some one or more of the following may be found helpful. First—Plowing down clover or clover sod not only increases the humus but also augments the store of nitrogen. Second—Any grass sod turned under every four or five years. Third—Apply farm-yard manure when fresh. Fourth—Where summer fallowing is practised in connection with the growing of winter wheat, winter rye may be sown in August or September on the field intended to be fallowed. Plow the rye under the following June. Buckwheat, because of its abundant root growth makes it valuable as a producer of humus in conjunction with a fallow. The cultivation of a fallow or a crop tends to diminish the humus, but this

cannot be helped, and, as humus is one of the agencies that enables us to get the most out of the land, we may have to restore it just as we would have to cultivate again for another crop. Cultivation also increases the nitrates which may be lost in the drainage water, if there is excessive rainfall and the land is liable to leach. This danger has led some to object to the bare fallow. If rye or buckwheat is sown it ceases to be a bare fallow, as those plants take up the soluble plant food and store it in their tissues in a form not liable to waste, which when plowed under and decomposed becomes soluble plant food again just at the time when the young wheat plants require it. Of course, should much rain fall during July or August, waste might occur, but usually dry weather prevails in those months in this province. Fifth—Sow rape after the oats or barley is harvested, and plow under in the fall. Sixth—Peas plowed under when in blossom increase the humus and also the fertility. In a climate where they will thrive lupines and vetches answer well for this purpose.

In conclusion, it might be said that any green vegetation, that would not become troublesome as a weed or interfere too much with the ordinary farm crops, will answer as a restorer of humus.

MEETING OF COMMITTEE TO REVISE RULES AND REGULATIONS OF THE DAIRY DEPARTMENT OF THE PROVINCIAL WINTER SHOW.

A meeting of the committee appointed to revise the rules and regulations of the dairy department of the Provincial Winter Show met at the Royal Hotel, Guelph, on Saturday, June 4th. Members of the committee present were: Prof. H. H. Dean, G. W. Clemons, G. E. Day, and W. E. Butler.

The clauses in which a change was made now read as follows:

(a) The following entrance fees will be charged, and must accompany each application for entry, for which accommodation will be provided: For each entry, with the exception of those designated "special," \$2.

(b) The age of dairy cattle will be computed to the 1st of August.

(c) Cows must all be giving milk, and the awards shall be made by the following scale:

10 points for constitution and conformation.

20 points for each pound of fat.

4 points for each pound of solids (not fat).

1 point for each 10 days in milk after the first 30 days (limit, 30 points).

(d) An affidavit will be required from each exhibitor in the dairy department stating the number of days his cows have been in milk, also stating that each cow is shown in her proper class, and that she is the ani-

(Gazette Continued.)

mal named on the registration certificate produced.

(c) Prizes in the dairy department will not be paid for one week after the show is held. This rule is made necessary on account of the large amount of work in figuring out the result of the test.

As the show this year will be held on Wednesday, Thursday, and Friday, the test will take place on Wednesday and Thursday instead of Tuesday and Wednesday.

AN IMPORTANT SALE OF AYRSHIRE CATTLE.

Mr. Robert Davies yesterday had landed on his farm four of the best Ayrshire yearling heifers that have been hitherto imported into York county. They were bred by Messrs. Dundas & Grandy, of Springville. The sire, Victor of Boghall, was bred by Robert Wilson, of Boghall, Scotland. The dams of Mr. Davies' heifers were bred by Mr. Parks and Robert Wilson, of Kenfrewshire, Scotland, and were selected by Mr. Dundas and imported because of their great excellence as dairy cows, one of them having a record of eighteen pounds of butter in one week. These Ayrshires are of the most fashionable type. It is a noteworthy fact that Mr. Davies and a friend, after inspecting the herd, concluded to buy out the entire importation, including all of the offspring then in Messrs. Dundas & Grandy's hands. The purchase includes six cows in calf, imported bull, Victor of Boghall, and four exquisite yearling heifers.

**PROVINCE OF ONTARIO
ISSUE OF FORTY-YEAR ANNUITIES.**

Sealed tenders for the purchase of terminable annuities running for a period of 40 years, issued under authority of an act of the Ontario Parliament, 47 Vic. chapter 31, will be received by the undersigned at his office, Parliament Buildings, Toronto, on or before 14th day of July next, at 2:30 p.m., when the tenders will be opened in the presence of such of the applicants, or their agents, as may attend.

The annuities will be in the form of certificates signed by the Provincial Treasurer, in which certificates the Provincial Treasurer will agree to make half-yearly payments at his office at Toronto, or in London, England, of sums of \$100, or larger sums, or their equivalent, in sterling at the par of exchange (£20 to \$124), on the 30th day of June, and 31st day of December in each year, for forty years from 30th day of June instant, the first half-yearly certificates being payable on the 31st December next.

The total amount of annuities to be issued in 1898 is \$5,700 annually, but tenders will be received for any part of the same not less than \$200 annually.

Tenders may, if preferred, be upon condition that the annuities be payable in sterling in London, Eng. In such case the conversion will be at the par of exchange, \$4.862-3 to the pound sterling. Tenders will be required to state the purchase money which will be paid for either the whole annuities offered or such portion as may be tendered for.

Notification of allotments will be given to tenderers on or before 20th July and payments from the persons whose tenders are accepted must be made within ten days thereafter at the office of the Provincial Treasurer in Toronto, but if, from any cause, the purchase money is not paid by the 1st day of August next, purchasers who have not then paid will be required to pay interest on their purchase money from that date to date of payment at the rate of interest which the investment will yield, according to their respective tenders.

The annuity certificates will be delivered at the office of the Provincial Treasurer in Toronto, where, if desired, they may be specially registered.

The Provincial Treasurer reserves the right to determine what tender is most advantageous to the Province, but no tender will necessarily be accepted. Tenders should be on the accompanying form.

Envelopes containing tenders should be endorsed, "Tender for Province of Ontario Annuities."

Further information may be obtained on application to the Provincial Treasurer.

R. HARCOURT,
Provincial Treasurer.

Provincial Treasurer's Office, Toronto, 2nd June, 1898.

NOTE.—Illustration of calculation on interest is—At the rate of 3 per cent. per annum (or in strictness 1 1/2 per cent. half yearly) a present payment of \$2,300.36 would represent an annuity of \$100 for 40 years, \$50 payable each half-year.

(Gazette, Continued.)

LIVE STOCK FOR MANITOBA, NORTHWEST AND BRITISH COLUMBIA.

The Live Stock Associations will send another carload of purebred live stock from Ontario to the West the last week of this month. The following gentlemen have already spoken for space: Henry Arkell, Arkell; J. E. Brethour, Burford; R. G. Steacy, Brockville; W. H. & C. H. McNish, Lyn; and W. R. Bowman, Mount Forest. There is still space for a few more animals. Intending shippers should communicate at once with F. W. Hodson, secretary, Parliament Buildings, Toronto.

A grand excursion of the United Farmers' Institutes of the county of Bruce will take place on Friday, June 24th, 1898, to the O.A.C., Guelph, by the Grand Trunk Railway from Southampton, Warton, Owen Sound and all stations on these branches to Palmerston. The early morning trains will take the excursionists from the different stations along the route. Tickets at low rates and good for two days will be issued. A union of four institutes is formed for this occasion.

JOHN DOUGLAS,
Secretary, Tara.

Stock Notes.

MR GEORGE GREEN, Farview, Ontario, reports a big demand for Berkshire hogs this season. He has done an exceptionally good trade with the north west this season. Mr. Green has a splendid lot of young pigs coming on for this fall's trade. He always has on hand a large stock of fine animals and intending purchasers have a splendid lot from which to make selections.

MR G. W. CUMMINGS, St. George, Ontario, has greater faith in Holsteins than ever. His herd of prize-winners are doing well this season and are distinguishing themselves as milkers. One cow fourteen years of age gave four hundred and twenty pounds in seven days, which is an exceptional record. Crops in the neighborhood of St. George are in splendid condition with prospects of a large harvest.

MR. JAMES TOLTON, Walkerton, reports his stock as looking exceedingly well. His purebred Oxford sheep are in splendid shape and his stock of lambs for next fall's trade are the best he has ever had. Mr. Tolton reports a keen demand for Shorthorns principally from the west. He has had several offers for his Shorthorn bull, half brother of Nominee, Captain Thomas Robson's winner at last year's exhibitions. Mr. Tolton has been offered as high as \$125.00 for this animal but refused to let him go as he desires to keep him for his own herd. Fall wheat as well as other grains is looking well up in the Walkerton section.

MR W. D. FLATT, of Trout Creek stock farm, Hamilton, has sold one of his young bulls, "Crimson Knight" (3677) Roan, calved August 19th, 1897, to Hon. T. Greenway, Crystal City, Manitoba. Mr. James Yule, farm manager for Premier Greenway visited a great number of the herds throughout Ontario in search of a bull calf to show along with their young heifers for the young herd prize to be competed for at the Winnipeg fair next month, and decided that Crimson Knight was what he wanted. The prize paid, we believe, was a very handsome one. Mr. Flatt has sold four bulls recently, and still has four good ones on hand, as well as some very choice heifers and heifer calves which he believes are good enough to go against any company, and are about the right age for show purposes.

CAPTAIN T. E. ROBSON, of Ilderton, having disposed of his fine Shorthorn bull, Nominee, the winner of first prize for aged bull at last year's Toronto Exhibition, has succeeded in securing one of the best specimens of his class in America to head his herd. Moneyfuffel Lad was exhibited at Toronto first in 1895 by Mr. James Leask, of Greenbank, winning not only first prize in his class but the sweepstakes for best bull of any age. In 1896 he was again successful at the same exhibition in winning the double event, taking first as two-year-old and also the sweepstakes. At this exhibition the competitors for the sweepstakes comprised six of the very best bulls ever shown in any ring and the honor falling to the winner was therefore the greater. In 1897 he was first choice for the third time in his own class—three-year-olds—and at the Western Fair at London again won first prize in his class as well as the sweepstakes. It will be seen that this record for a young animal has scarcely ever been surpassed. He has an excellent skin, well-covered shoulders, level flesh, beautiful fine hair, and is full of life and vigor. A better selection could not have been made. In Captain Robson's hands he is not likely to lose the prestige he has won in so many well-contested competitions.

MR. F. W. TAYLOR, of Wellman's Corners, reports that the past winter was a very favorable one for his stock and that they went out to grass this spring in excellent condition. His cows are all milking satis-

factorily and a number of two-year-old heifers are making great records for themselves. The following are a few of the more important sales made by him during the past winter, all the individuals sold being from Lord Douglas of Loudoun: Prince Charley to John McCullough, Corbyville; White Floss to George Johnston, Belleville; Prince of Wales to James Robinson, Camiffon; Gladstone to John Kingston, Sterling; Surprise to E. S. Carson, Campbellford; Klondike to George M. Phillips, Cannington; White Silver to Wilfred Cummings, Anson; Melissa to Phillip Lott, Springbrook. Mr. Charles Parison, of Summerstown lately bought four heifer calves, being so well pleased with the first pair he obtained, that he sent for another pair. He has disposed of all the heifer calves he can spare but has still on hand a number of extra fine young bull calves which he will sell on very reasonable terms. He also has a number of cows coming in soon. Mr. Taylor is justly proud of his stock and we hope to be able to give our readers an illustration from it before very long.

MESSES. A. & G. RICE, the well-known breeders of Holsteins at Brookbank Farm, Currie's Crossing, Ont., always have something interesting to say, and we are pleased to be able to give our readers the following account of their herd, which will no doubt be appreciated by all. Our herd numbers now over fifty head, all purebred Holsteins. We have been making many sales some every week—have, in fact, had such a big demand that, in order to keep pace with our growing business, we have imported twenty-six head the past six months. These have all been personally selected for individual merit and breeding. "Pedigree without performance is valueless" is our motto. As to individuals of our herd, there are many good ones. We should perhaps first mention Eunice Clay, as she was the first Holstein to win in public test in Canada, and since then the fortunes of war have gone steadily with the black and whites. Eunice won the Toronto milk test (\$150), 1891, and the Ohio milk test, 1897, giving 84 lb. 10 oz in a twenty-four-hour day of test. Daisy Texal won second in the Toronto milk test, 1894. She is a cow of pure dairy type, and one of our first importations. We have had five daughters, and three sons from her, and many grand and great-grand-daughters. All have been extra good and prize-winners at the great shows. Taking into consideration Daisy's value as a breeder, she would have been cheap when we bought her at three years old at \$1,000, which shows the value of having good cows for foundation. We have still three of Daisy Texal's daughters. One of these, Daisy Texal Second, calved at Montreal at twenty-three months' old, and won first prize at Montreal, Toronto and Brantford fall fairs in September. She again went to Brantford dairy test in December, over 100 days after calving (at twenty-three months' old), and made there 78 1/2 lbs. milk in two days, testing 3.3 per cent. fat. All of Daisy's heifers have been of this quality, and a grand-daughter of hers, Jewel M. Artis Queen, won at the great fairs as a yearling, and as a two-year-old and a three-year-old. At three years old she gave 5 1/2 lbs. milk in one day. Another of our great cows, Calamity Jane, is too well known to need much notice here. Having won the provincial dairy test the past three years stamps her as a "stayer." Her record in the last test of 85 lbs. milk in one day has never been equalled to date, and I think her record of 14.25 lbs. of total solids is the highest ever made in two days in a show test away from home. We have a daughter and a son of Jane's, the latter we shall use in our herd. Another daughter we sold to Hon. W. A. Matteson, President of the American Holstein Association. Edgley Frena is another cow that has won public honors, though as yet only four years old. She won first at Brantford dairy test last September, and again in the provincial test in December. She gave 102 lbs. milk in two days, four months after calving, and in the official test at 113 days after calving she made a good showing, testing over 4 per cent. frequently, and averaging 3.7 per cent. fat for the week. We look for much greater work from Frena. Iolena Fairmont Third won first prize in provincial dairy test, 1896, as a two-year-old. Her dam, Iolena Fairmont, won the Ohio butter test, so she comes by her greatness through breeding. Lady Pieterje we consider also one of our plums. She won first prize at London show as best cow last fall, and she won second as a three-year-old in the dairy test at Gananoque. She had then been five months in milk.

A RELIABLE OFFER.

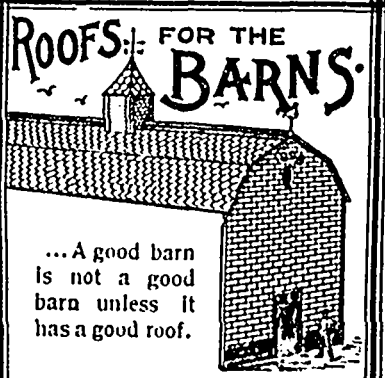
HONEST HELP FREE TO MEN.

FARMING is authorized to state by Mr. D. Graham, Box 133, Hagersville, Ont., that any man who is nervous and debilitated or who is suffering from any of the various troubles resulting from overwork, excesses, or abuse, such as nervous debility, exhausted vitality, lost vigor, unnatural drains and losses, lack of development, etc., can write to him in strict confidence and receive free of charge full instructions how to be thoroughly cured.

Mr. Graham himself was for a long time a sufferer from above troubles and after trying in vain many advertised remedies, electric belts, etc., became almost entirely discouraged and hopeless. Finally he confided in an old clergyman, whose kind and honest advice enabled him to speedily obtain a perfect and permanent cure. Knowing to his own sorrow, that so many poor sufferers are being imposed upon by unscrupulous quacks, Mr. Graham considers it his duty as an honest man and a firm believer in Christian sympathy and kindness to give his fellow-men the benefit of his experience and assist them to a cure. Having nothing to sell, he asks for no money, the proud satisfaction of having done a great service to one in need, he rightly considers an ample reward for his trouble. If you write to Mr. Graham, you can rely upon being cured and upon absolute secrecy as well.

Address as above, enclosing a stamp and refer to FARMING. No attention, however, will be given to those writing out of mere curiosity, therefore state that you really need a cure.

ROOFS FOR THE BARN.



... A good barn is not a good barn unless it has a good roof.

We would therefore press on you the importance of enquiring into the durability of our Steel Shingles before deciding on the covering of your barn.


We guarantee all our steel products to be water, wind, and storm proof and to last a lifetime.

We will give you the benefit of our 32 years' experience in roofing, our illustrated catalogues, and up-to-date information on these goods on receipt of a post card.

The Pedlar Metal Roofing Co.
OSHAWA, ONT.

Netherland Jewel Pieterje we know is as good, but, calving as she does in the spring, she has not been able to get into a public test. There are also several others that, if there was a test every month of the year, we should likely be there. So far we have but mentioned public test winners. But we have several recently imported that we believe can do the trick. Verbelte is a cow we bought because her owners, Chapman & Horr, of Ohio, considered her the finest cow in their herd of sixty cows, and she is good for 80 lbs. a day. Aydelott Fourth has a record of 68 lbs. at four years old. We believe she will make as good a cow as her dam, Aydelott, and she gave 81 lbs in one day at an Ohio county fair. We have two daughters of Aydelott Fourth that are very promising. Then another cow that suits us to a "T" is Winnie R., mainly because she is built so much like Calamity Jane. She weighs 1,600 lbs., has great depth and spring to her ribs, wedge shaped, and is a cow of great capacity to assimilate and digest her food. She has all the characteristics of a great cow, and is one. She gave 17,500 lbs. milk in one year. Her milk was sent to a condensing factory and frequently tested 3.8 per cent. fat. She is a breeder as well. Her daughter, Winnie Win, now three years old, is a credit to her dam, and we also purchased these two cows' last calves—heifers born last September. We might fill pages mentioning "good things" that are to be found here at Brookbank, but will briefly notice the bulls. Sir Paul Dekol Clothide, that has done us good service, as his progeny shows, we sold to our most enterprising neighbors, Messrs. M. & W. Schell, who can appreciate a good thing. As we are keeping his son, from Calamity Jane, we did not need him. We recently imported a very fine bull that our visitors all admire. He has a record of six first prizes at one-year-old, and seven firsts as a two-year-old. He is a very fine handler, veins, rudimentary, etc., weighs a ton, on short legs, and is very stylish in appearance. Another "gay" one is Homestead Albino Dekol, a yearling that seems to please them all—as also does Nicolo Belles Prince Dekol. We have had a great many people here to see these bulls, and they have all thought them very fine, and we are very much interested in the way our visitors discuss them. We think a visit to our herd will amply repay any lover of dairy stock. We have a great many visitors, and all are very welcome. There is many an object lesson to be learnt here.

BUY



Coleman's Salt

THE BEST

For Dairy or Table Use

IT IS UNEQUALLED.

Salt on the Farm

for wire worm, joint worm, army worm and all insects that destroy crops. Salt is the best insecticide. It is also a fertilizer.

TRY IT.

R. & J. Ransford
CLINTON, ONT

MARKET REVIEW AND FORECAST.

Office of FARMING, 44 and 46 Richmond street W., Toronto, June 13th, 1898.

A good indication of the improved condition of trade throughout the country is the increased profits shown by the bank earnings for the year. These have all been larger than before. The crop prospects throughout the country are good. In Manitoba and the Northwest the country is looking well. Goods are being ordered pretty freely by the retail merchants, who are looking forward to a big fall trade. The money market shows a good deal of activity, and the war seems to be cutting very little figure in the market on this continent. There has been a very good demand for investment stocks in the Canadian markets.

Wheat.

Preliminary returns of the spring wheat acreage in the United States show a total area seeded of 16,800,000 acres, which, added to the area of winter wheat—26,200,000, makes a total acreage of 43,000,000 or over 3,500,000 acres greater than last year. The average condition of the winter wheat is 90.8 as compared with 78.5 at the corresponding date last year. The average condition of spring wheat is the almost unprecedented one of 100.9 as compared with 89.6 on June 1st, 1897. In addition to this the prospects for a good crop in Canada are bright and we may look for a large yield all over the continent. We are now within a few weeks of the new crop and the world's wheat in sight is 26,457,000 bushels more than at this time last year, so that the great shortage foretold a few months ago has completely vanished. A great deal yet depends upon the condition in which the new crop is harvested.

The British markets are somewhat unsettled. About the middle of the week there was a further decline of 1s. 9d. to 2s. per quarter; but at the end of the week the market was firmer, owing to reported damages to the continental crop. The Chicago and New York markets continue unsettled, with an easier tendency. Cash wheat at Chicago touched the dollar mark. There has been a gradual decline in Toronto prices during the week from 95c. and \$1 to 92c. and 93c. north and west. Exporters are hardly willing to pay these figures, and sales are reported at 90 cents. There appears to be a large supply stored at country points, and dealers here have had offers of wheat at from 93c. to \$1. Manitoba wheat is also easier. A lot of 20,000 bushels was reported sold at the end of the week at \$1.13. Fort William, and it is at \$1.22, Toronto freights.

Barley and Oats.

The London market for oats is dull and a further decline of 1s. since last week is reported. Stocks are light and holders are not inclined to push sales. American crop reports show the condition of the oat crop to be 98 as compared with 93.3 on June 1, 1897. The Montreal market is easier and prices have receded 1/2c. to 1c. Quotations are 35c. to 35 1/2c. afloat. The Toronto market during the week has been dull, and prices range from 29c. to 30c. north and west.

The barley market here is practically the same as last week. At Montreal the market is dull at 46c. to 47c.

Rye and Buckwheat.

The Montreal market for rye is a little more active, and quotations are from 65c. to 66c. At Toronto rye is reported scarce at 60c. west.

Buckwheat is reported steady at 47c. west. Montreal quotations are 50c. to 51c.

Peas and Corn.

A further drop of 6d. to 1s. is reported in the London market, and still prices for peas are considered too high for business. At Montreal the market is quiet, owing to very little export demand. Prices range from 65c. to 67c. Here the market is easier at 53c. north and west.

A large export business in corn is being done at Montreal on a basis of 40c. and 41c. laid down there. Here quotations are 33 1/2c. for Canadian, and 42c. for American.

Bran and Shorts.

The market for bran is easier at \$10 west. Shorts seem to be in demand at \$13 to \$15. Montreal quotations for bran are \$12 to \$12.50. Shorts are quiet at \$13.50 to \$15.

Eggs and Poultry.

The London market for eggs has advanced 6d. per long hundred (120) and low prices seem to be stimulating demand. Receipts at Montreal are falling off somewhat, and sales of large lots have been made at 10 1/2c. to 10 3/4c., with seconds selling at 9 1/2c. The Toronto market is steady at 10c. Country dealers are paying about 9 1/2c. The demand for poultry is not large and the market is steady at 9c. to 10c. for turkeys, and 50c. to 65c. for chickens.

Potatoes.

The market here is steady. Cars on track are quoted at 50c. Potatoes out of store sell at 60c. to 65c.

Hay and Straw.

The demand for baled hay is dull. Quotations are \$5 to \$8.50 for cars on track. Baled straw is slow at \$4 to \$4.50 on track. Car lots of choice No. 1 hay are selling at Montreal at \$11.50 to \$12, and ordinary No. 1 at \$10 to \$10.50. Straw brings from \$4 to \$5 on track.

Small Fruits.

Advices from the strawberry sections promise a large yield and heavy shipments are expected soon. At Montreal new Canadian berries sold at from 9c. to 12c. during the week.

Wool.

Considerable interest is evinced in the wool clip, now that receipts of this year's clip are more liberal. The situation is very unsettled. The quotation for washed wool here is 16c. It is reported, however, that at some country points local dealers are paying as high as 19 1/4c. The market situation does not seem to warrant such prices for Canadian wool. In fact, reports from various sources indicate that prices will be even lower than they are at present. There is reported to be from

WOOL HIGHEST CASH PRICES.

JOHN HALLAM, - Toronto.

1,000,000 to 2,000,000 pounds of the clip of 1897 unsold. The Canadian wool does not seem to suit the United States market where most of the Canadian is sold, and unless there is some change in the styles of woollen goods manufacturers over there will not want large quantities of this year's output. The wool situation there is not a very favorable one, and the outlook is not very bright.

Cheese.

The large supply of old stock which came to light during the last three weeks has kept the Old Country market slow for new cheese. This old stock has been sold off pretty freely during the past week, and a better market for new goods is expected. Nine thousand five hundred boxes of old cheese were sold by auction at Liverpool last week for 33s. to 35s. per cwt. This pretty well clears out the old stock. The London market declined 2s. during the week, owing to liberal supplies. The public cable is 35s. 6d. for both colored and white. Factorymen have been selling pretty freely during the week. At Montreal sales of finest Ontario have been made at 7 1/2c. to 7 3/4c. Local markets have averaged 6 1/2c. to 7c., with some factorymen in the west holding for 7 1/2c. At Brockville on Friday over 2,000 boxes were sold at 7 1/2c. for white and colored. The receipts of cheese at Montreal up to May 31st were about 71,000 boxes, as compared with 120,000 boxes at the same time last year.

Butter.

Cable reports indicate an unsettled market, but as stocks are lighter holders are not pushing sales. Sales of creamery at Montreal have been falling off somewhat owing to holders asking too high a price. About 16 1/2c. seem to be the ruling price for fine, fresh creamery. Secondary grades bring from 15 1/2c. to 16c. As compared with some of the American markets, these prices are high and our creamerymen have no great reason to complain. At Elgin, Ill., last week the quotation for fine, fresh creamery was 15 1/2c., and this with a big war on hand. Western dairy at Montreal is quoted at 13c., and Eastern Townships at 14c. to 15c. At Toronto creamery quotations are, 17c. for prints and 16c. for tubs. Choice June, grass, dairy, tub will bring 12 1/2c. to 13c., and store, packed 11 1/2c. to 12 1/2c.

Cattle.

The cattle situation generally is brighter. The London market is reported steady and although there are more liberal supplies from Canada, prices advanced 1d. per stone during

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Cut showing Top and Bottom Lock



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Our Patent Safe Lock Shingles are so constructed that they lock or fasten on all four sides, making perfect joints, absolutely proof against the weather.

Buildings covered with our roofing look pretty, are fire and lightning proof, and will last a lifetime.

Samples and Prices sent free upon application.

Metal Shingle and Siding Company Limited

PRESTON, ONTARIO

the week. At Chicago and Buffalo a better feeling prevails and prices advanced 10c. to 15c. per cwt., chiefly for butchers' cattle, which may indicate a rise owing to the extra war supply needed. The market here is firmer and more active owing largely to operators purchasing largely for Barbadoes to meet the war demand. Receipts have been large.

Export Cattle.—The market for these has ruled considerably firmer at from 4c. to 4 1/2c. per pound.

Butchers' cattle have been in better demand during the week. On Tuesday the market was the highest it has been for some time, and ruled at 4c. to 4 1/2c. for the best. On Friday the figures were \$3.75 to \$4.30 per cwt. for the best, and 3 1/2c. to 3 3/4c. per pound for medium. The quality of the cattle has been very good.

Bulls.—At the end of the week the market was quiet at from \$3.40 to \$3.60 per cwt. for shippers, feeding bulls being 3c. per pound.

Stokers and Feeders.—Buffalo buyers have not been paying so much. Prices ruled from \$3.30 to \$3.35 per cwt. Feeders bring from 3 1/2c. to 4 1/2c. per lb.

Cattle.—Though the supply has been large all sold readily. Choice to fancy veals bring \$7 to \$8 each, but the usual price is \$3 to \$6 each.

Milk Cows and Springers.—Choice cows are wanted. Price from \$25 to \$45 each.

Sheep and Lambs.

Offerings at Buffalo have been light during the week, heavy export lambs being in good demand. The London market is steady, and, though there are liberal supplies from Argentina, the market advanced 1d. per stone. The market here is steady. Export sheep were slightly improved, owing to demand for Barbadoes. On Friday prices ruled at 2 1/2c. per lb., for bucks, up to 3c. to 3 1/2c. for ewes and wethers. Yearlings are steady at 4 1/2c. to 5 1/2c. per lb. Spring lambs bring from \$3.50 to \$4.25 each.

Hogs.

Both the Chicago and Buffalo markets showed a weaker feeling during the week, owing to provisions generally being more plentiful. Though supplies have been liberal, the market for choice singers is firm and somewhat higher at \$5.15 to \$5.20 per cwt. Too many light hogs are coming forward. Prices for light, thick, fat hogs rule from \$4.70 to \$4.75 per cwt.

Horses.

The London horse market is steady and Canadian heavy draught, driving and riding horses and carriage pairs meet with ready sale. The supply of Canadian horses is light. The Buffalo market continues active, and

prices are ruling from \$7.50 to \$10 higher. Good prime draught horses sell at \$100 to \$150; good drivers \$90 to \$170; speedy ones \$175 to \$225; exporters \$90 to \$135, and common and general purpose horses \$30 to \$65 per head.

Publishers' Desk.

Collie Dogs.—Any one who desires to obtain a purebred "Collie" should read the advertisement of Mr. Philip Hart, of Belleville. He claims to have the best dogs of that class in Canada.

Foods for Pet Animals.—The advance in wheat and, consequently, flour, has seriously affected all industries making use of breadstuffs. Many of them have advanced their price lists. Spratt's Patent have not advanced the price of their dog cakes and other foods. Having made favorable purchases of flour for future delivery, they decided to give their customers the advantage of their foresight in this respect so long as the supply lasts. The numerous friends of Mr. G. G. Cloather, the popular vice-president of the company, will be glad to know that he has entirely recovered from the accident which happened to him a short time ago, the accounts of which were greatly exaggerated in the daily press at the time.

A Useful Memorandum Book.—The Farmers' Binder Twine Co., of Brantford, have issued an attractive little book containing many convincing arguments to show why the Canadian farmer should stand loyally by the company in its efforts against monopoly. The book also has its practical side, being a combination calendar for 1898 and 1899 with blank pages for memoranda for every month of the year. Its artistic appearance is enhanced by a number of illustrations. It will be sent free to any one who will take the trouble to apply for it, and every farmer should have it, not only for its practical value, but for the information it contains regarding the binder twine industry, in which we are all greatly interested.



The Maple Leaf Churn

EASIEST AND BEST

Ask your dealer for it, or send direct to the manufacturers,

WILSON BROS. COLLINGWOOD, ONT.

Cheese Factory and Creamery Supplies

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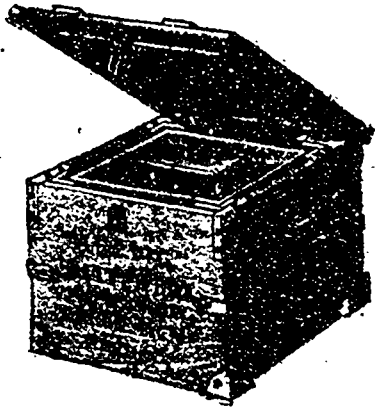
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July 11th to 16th.

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July 19th to 22nd.

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Harvie's "Arctic" Butter Shipping Box

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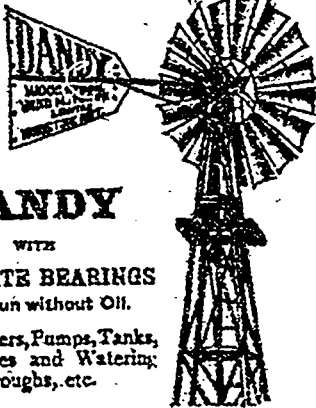
40 lbs. in Summer, or 48 lbs. in Winter	\$3.00.
60 " " 72 " "	\$3.50.
80 " " 96 " "	\$4.00.
100 " " 120 " "	\$4.50.

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Next time you churn try Windsor Salt—it is the salt that suits the taste of particular buttermakers—and butter eaters.

Other salt is said to be "as pure as Windsor Salt"—that usually settles it.

Progressive Grocers sell

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The Windsor Salt Co.
Limited,
Windsor, Ont.

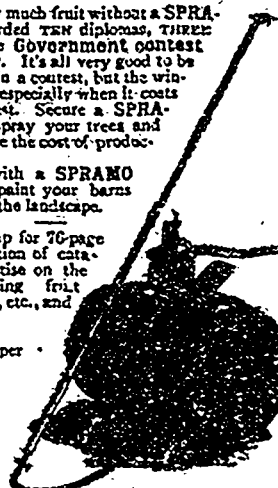
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as to try to grow much fruit without a SPRA-MOTOR. Awarded ten diplomas, thirteen medals, and the Government contest within a year. It's all very good to be second or third in a contest, but the winner's the thing, especially when it costs less than the rest. Secure a SPRA-MOTOR and spray your trees and plants and reduce the cost of production one-half.

You're safe with a SPRA-MOTOR. It will paint your barns and whitewash the landscape.

Send 3c. stamp for 76-page copyrighted edition of catalogue and treatise on the diseases affecting fruit trees, vegetables, etc., and their remedies.

Mention this paper



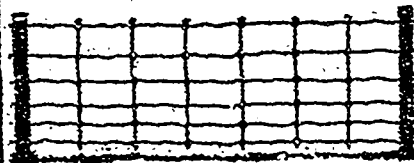
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THIS IS TO CERTIFY that at the contest of Spraying Apparatus held at Grimsby, on April 2nd and 3rd, 1906, under the auspices of the Board of Control of the Fruit Experimental Stations of Ontario, in which there were eleven contestants, the SPRA-MOTOR, made by the Spramotor Co., London, Ont., was awarded FIRST PLACE.

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Is a coiled spring wire fence containing all the latest improvements, is easily and rapidly erected without any expensive tools or previous experience. All particulars in our Catalogue. Write for one. Agents Wanted.

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Stronger, Lighter and More Convenient than ever, and has Roller Bearings.

The 1899 "DAISY" is far in advance of any other Churn in the market. Fitted with improved Gas Vent if required. The Gas Vent is not necessary, but you can have it if you want it.

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MOST desirable lands suitable for mixed farming can be obtained in the Old District along the line of the Calgary and Edmonton Railway, about fifty miles North of Calgary. Most desirable lands can be obtained in Southern Alberta in close proximity to the Calgary and Edmonton Railway and the Crow's Nest Pass Railway, suitable for mixed farming and ranching on both a large and small scale. North Saskatchewan also affords a splendid opening for intending settlers in the Prince Albert, Duck Lake and Rosheim Districts, on the line of the Qu'Appelle, Loog Lake and Saskatchewan Railway.

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Mailed Post Paid on receipt of Price, \$1.25. To any one who cannot derive the special benefit from any one single article we will refund your money.

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Paper back, mailed Post Paid on receipt of Price, 50c, or the two Post Paid \$1.50. The practical information these two volumes contain turned into practical account will be the means of earning the face of nature to blossom as the rose and to smile in prosperous abundance. Believing that he who does good unto his fellow man does good also unto himself, and awaiting your esteemed favors, I beg to remain, yours for success,

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The simplest and most effective hand machine for the placing of chemical fertilizers before plowing. Saves time and money, and will pay for itself in two days. Write for circulars.

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Use no other grinder than the "Joliette."
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HELDERLEIGH FRUIT FARMS AND NURSERIES

—400 ACRES—

Situated at the base of the Mountain in a warm and sheltered valley where trees arrive at full maturity. Having over 100 acres planted in fruit, I have unusual facilities for knowing the value of the different varieties and establishing their purity. Everything is GUARANTEED TRUE TO NAME or purchase price refunded. I have for the fall of 1907, and the Spring of 1908, a complete line of Trees, Shrubs, Vines, etc., both fruit and ornamental. Write for a Catalogue which is furnished FREE, and which contains over ten pages of closely written matter about the various PESTS that trouble fruit growers and means of preventing their ravages.

Buy CANADIAN GROWN STOCK only, and that except the dried San Jose Scale so prevalent in the States. There is no more reliable, healthier, or more complete assortment than mine.

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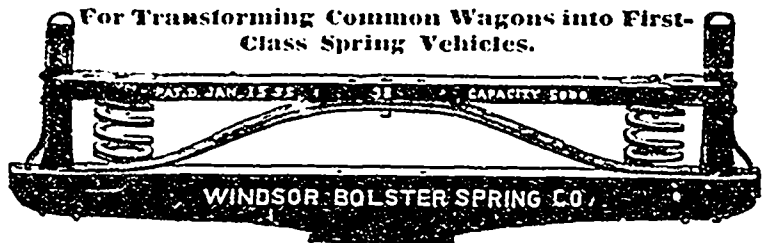
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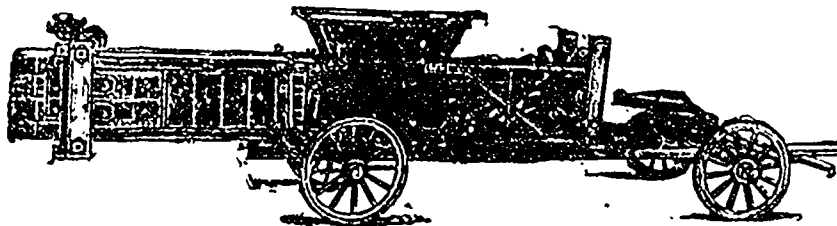
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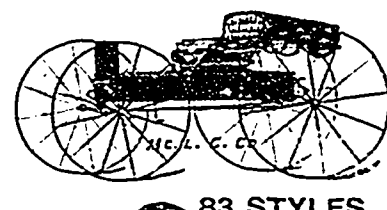
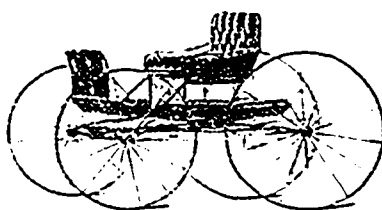
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