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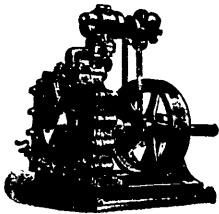
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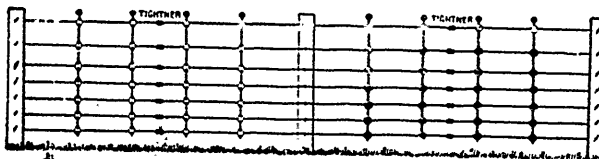
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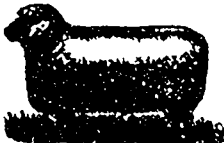


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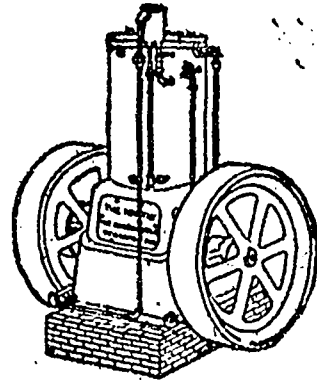
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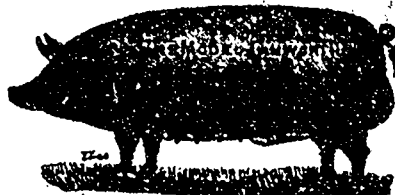


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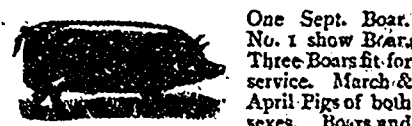
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FARMING

Vol. XV.

JUNE 28th, 1898.

No. 43.

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.

The Devon breed of cattle was introduced into the United States the same year that Shorthorns were, in 1817, but they have not been as favorably received and have not met with the popularity that the Shorthorns have. The Devons are said to be a typical general purpose cattle. The cows give a good quality of milk containing high percentage of butter fat. The beef qualities of the breed are the very best. One serious objection to the Devon breed is their slow growth.

In 1870 the yearly average rate of freights per bushel for wheat from Chicago to New York was, *via* lake and canal, 17.10 cents, lake and rail, 22 cents, and all-rail, 33.3 cents. In 1897 the rate was 5.22 cents *via* lake and canal, 7.42 cents *via* lake and rail, and 12.5 cents *via* rail alone. The lowest year for lake and canal freight was in 1895, when the rate was 4.11 cents. The lowest year for lake and rail freight was in 1890, when the rate was 0.61 cents. In 1896 the all-rail rate was the lowest, when it decreased to 12 cents. The decrease in all the rates during the past 27 years has been full 300 per cent.

In 1880 the acreage of wheat in the United States was 37,986,717 acres; the average yield 13.1 bushels per acre, and the average price in December 95.1 cents. In 1897 the acreage was 39,465,066; the average yield 13.4 bushels, and the price in December 80.8 cents. The highest price in December of any year was in 1881, when wheat went up as high as \$1.19 per bushel, the lowest price in December of any year was in 1894, when it dropped to 49.1 cents. The greatest average yield per acre was in 1891, when it reached 15.3 bushels per acre, and the lowest average yield in 1881, when it was only 10.2 bushels per acre.

The United States crop report makes a favorable indication for the wheat crop for the present year. The approximate estimate for the United States is 375,000,000 bushels of winter wheat, and 275,000,000 bushels of spring wheat, or a total of 650,000,000 bushels. Though this estimate may be exceeded, it is hardly safe to count on a larger estimate at this juncture. This is nearly 200,000,000 bushels more than last year, and the largest on record.

According to late statistics, the American farmer is becoming an omnivorous reader of agricultural literature. Prior to 1894 the total number of farmers' bulletins issued by the U.S. Department of Agriculture was 540,000. In 1894 the number issued was 278,500, 1895, 1,567,000, 1896, 1,891,000, and in 1897, 2,387,000. The superintendent of the division of publication says that the demand for literature is steadily increasing, and that this increase seems likely to continue until every one of the 5,500,000 farmers of the United States is provided with literature sent out by the department bearing upon agriculture.

Professor Robertson has recently visited the creameries in the Northwest Territories. The butter business in that section is progressing, and it is expected that there will be an increased output this season. The great mining districts of the West will be able to take all the butter these creameries can supply. Professor Robertson, on his return from the West, will visit England on business connected with his department.

Through the skill of the chemist the farmer may find another competitor in the market for supplying food. It seems that sawdust is very good food. When sawdust and timothy hay are analyzed it is found that their component parts are almost identically the same. A German scientist has recently invented an apparatus for converting sawdust into cakes. These cakes may be used for cattle, horses, etc. The new substance consists of two parts of fine sawdust and one part of bran and muriatic acid. After fermentation the mixture is baked. It is then damped by means of water, when it makes a good substitute for hay or straw, and is also good fodder for cattle and horses.

The Philippine Islands are south-east of China and contain about 100,000 square miles, with a population estimated as high as 10,000,000. There are three seasons, a cold season from November to March, a hot season from March to June, and a rainy season from June to November. The islands are rich in natural resources, which are still largely undeveloped. Large quantities of tobacco, hemp, sugar cane, coffee and cocoa are produced, a considerable part of which is shipped to the United States. The value of all imports from the Philippines fluctuates widely between \$5,000,000 and \$16,000,000 annually.

Bone is one of the most valuable foods for hens. If the poultry raiser has no bone-cutter or bone-mill, many bones that could be used for the hens will be wasted. Bones are very tough, and are not easily broken by pounding with a hammer. To facilitate such work, however, bones should be heated in an oven or partially burnt. If well-steamed, they also become brittle. After heating the bones, pound them on a flat stone, and they will be found not so difficult to break as before.

It will be of interest to know that in European countries the governments assist very materially in regard to freight rates on agricultural products. France has obtained reductions of 30 to 50 per cent. on agricultural products and manures. Denmark has given a subsidy of £8 300 to a steamship line for the bacon trade, and milk and butter are there forwarded by passenger trains at good rates. In Belgium free carriage is given for milk, vegetables, poultry, etc., carried by farmers for immediate market. In addition to its efforts towards decreasing rates, Germany gave in 1895 £246,000

as a first instalment towards making light railways, for which purpose Denmark has also granted large sums. The colony of Tasmania gives guaranteed freights.

A road grader is one of the most necessary implements for a township to possess. To depend upon manual labor for the first grading of roads and the repair of others that require re-shaping is a useless waste of labor and money. Improved road machinery is as great a saving in road making as is the self binder or the steam thrasher in farming operations. The grader in the hands of a skilful operator will do the work of fifty to seventy five men in grading and levelling the roadway.

Our British Letter.

Co-operation in England.

(From Our Special Correspondent.)

London, Eng., June 6, 1898.

In a recent article I promised to refer to the question of co-operation in England. We here know well what it is in Canada and continental countries, thanks to the governments and press of these nations. In England, too, there is a good deal of co-operation; but, unfortunately, it is not amongst agriculturists. It is amongst the consumers. These gentry have co-operative stores in some of our large towns by means of which they purchase their consumable goods in large quantities and also very cheap, and, when they have them, they sell them to the individual members at a price which none of the retail shops can match.

But these same gentry hold annually in a different district what they term a "Co-operative Congress." At this the chief officials, etc., enlarge on the advantage of the co-operative system, and, sometimes—as this year—they go out of their way to "teach their grandmothers how to suck eggs" (to use a colloquialism). The congress for this year has just concluded its annual deliberations. I don't intend to refer at length to them, but I simply cite the affair as one common in all countries, *etc.*, there are always and everywhere to be found those who, by some perversity, think they can teach the agriculturist either a short cut to wealth, or at the least, teach him how to manage the business, in which he has spent a lifetime, better by far than he himself is able to manage it. In a country like England, where the farming community is conservative in every characteristic to an enormous degree, this advice is not listened to with much attention by that community.

With much advice of the description indicated flying about ever and anon, it is, perhaps, hardly to be supposed that our farmers have yet taken to co-operation in any large or national sense. It may be, and is, unfortunate, but that is the simple fact.

However, I am able to state, on the best authority, that some of our agricultural institutions are not only engaged in looking into the subject of co-operation (both for the purposes of purchase and of sale), but that there is a possibility that it will be tried in a form which can be commended. The subject is a very difficult one, so far, at any rate, as co-operation for the purposes of sale are concerned, and this arises, in my opinion, more from the phlegmatic and conservative temperament of our cultivators than from anything else.

Co-operation among the farmers for the purpose of purchasing seeds, manures, implements, feeding

stuffs, and other dead stock, has always been a success. But this is a very small part of the general subject. It involves no liability on the part of the farmer beyond a small subscription to the particular association with which he associates himself. By such membership he is able to go to a merchant or a manufacturer and to say, "I am a member of such and such a society, and I want such and such an article." The manufacturer is only too pleased to sell it to him, and at the lowest price, because, if he refused the farmer, the other associated members would take their custom elsewhere.

When we advance to co-operation for the sale of the produce of the farm, then we have a difficulty to tackle. The farmers, in starting an association with this object, must spend their capital. They must, for example, open shops or stores in the towns where their commodities can be seen and purchased by the townsman. They must employ a manager or managers to work up a connection, and to supervise the staff required for serving customers and for delivering the goods to their doors, etc., etc. After all this has been done, they must individually do their best to meet the manager's demands on them for goods, and then, perhaps, give longer credit than if they had sold their goods outright to the middleman. Of course, the great object is to secure for themselves the profits which the middleman now retains mostly for himself.

Now, to advance capital in a risky way (and co-operation of the latter sort is, the agriculturist maintains, quite risky until success has been achieved or is assured) is not to the liking of our farming people. That is the point that it is hoped to overcome. There are, nevertheless, always a few in any sphere of life more advanced than others; and amongst our agriculturists there are some—a few—whose names carry weight, and who, I am happy to think, will be able ere long to make (as they are trying to do) such an impression as to bring about a satisfactory trial to the system of co-operation for the sale of farm produce. I shall watch the movement with great eagerness, as it must, if successful, have an effect—though small—on our import trade, whether from Canada, our other colonies, or from foreign nations. I purposely say nothing just now about the co-operative movement in Ireland, associated with the name of the Right Honorable Horace Plunkett, M.P., as the conditions in Ireland are somewhat different from those in England. Mr. Plunkett, however, has during the past three years or so organized a system there which is fast spreading its wings over the land, and bids fair to bring that success for which the Irish farmer pines, and which no Home Rule Bill could bring him. He is on the right track, and he has as supporters men of all politics and all religions. That is as it should be.

Excessive Freight Rates.

The more the question of railway freight rates is looked into the more does it seem as if the Canadian producer, whether he be a farmer or a manufacturer, is not being justly treated by the railways of this country. The disadvantage in which the Canadian producer is placed regarding freight rates is more clearly seen, perhaps, when a comparison of the rates in the United States and Canada is made. In the former country the shipper has an immense advantage over the Canadian shipper in the way of cheap freight rates. So long as these cheap rates are confined to the railways in American territory, the competition is not felt so much on this side excepting when an export business is being done. But, when the United States shipper has the advantage not only of cheaper rates in his own country, but of cheaper rates on Canadian railways as well, the injustice to the Canadian producer becomes more flagrant.

The following letter, sent by The W. A. Freeman Co., Limited, Hamilton, Ont., to the District Freight Agent of the G.T.R. at Hamilton, has a direct bearing on this whole question, and shows the great disadvantage in which the Canadian shipper is placed as compared with the American

shipper on railways running through Canadian territory:

DEAR SIR:

The manufacturers in the United States have a great advantage over the manufacturers in our country in regard to freight rates. For example, the rate of freight from Hamilton to Windsor in less than carload lots is twenty-five and a quarter cents per hundred pounds including cartage at this end. The rate from New York to Windsor is twenty-four cents per hundred pounds. Now we have to freight all our chemicals from New York and they are shipped again. To freight our materials from New York "under the commodity rate in full carloads" to our factory and complete the fertilizer and ship to London, Chatham or Windsor, it will cost us about \$2.50 to \$3 per ton more than if the American manufacturers shipped these same goods from New York to Windsor in small lots. You asked us twenty-five cents per hundred pounds freight rate on fertilizing materials from New York to Hamilton and the American dealers can ship from New York to Windsor the same kind of goods at twenty-four cents per hundred pounds and have some two hundred miles more to haul it.

There is a very wide difference between your carload rates and less than carload rates. For instance, from Hamilton to Windsor in full carload lots is thirteen cents per hundred pounds and in less than carload lots you add a fraction over eighty-five per cent. extra. The American roads charge eighteen cents per hundred pounds from New York to Windsor in full carload lots, and in less than carload lots they add only thirty three per cent. extra. You might say that your haul is much shorter which accounts for greater per cent. of cost in small lots. But from Hamilton to Montreal you add seventy-nine per cent to your carload rates for less than carload rates. From the goods which the American dealers ship into Canada you are willing to take your proportion of the earnings. Why are you not willing to take the same from your own people? The freight rate on poultry grit from Concord, New Hampshire, to Toronto is eighteen cents per hundred pounds by the carload and in less than carload lots twenty cents per hundred pounds. This freight rate is given for Toronto, also Hamilton, and, if we should want to ship any grit from Hamilton to Toronto, you would tax us fourteen cents per hundred pounds. That leaves only six cents freight from Concord, New Hampshire, to Hamilton.

As we said before, you are willing to share up the freight rate with the people on the other side. Why should you not share up with the people on this side? It leaves us in a very awkward position to ship goods around through Canada on account of our railroad system. The Americans have the advantage over us every time in this respect. Is there not some way for our railroad people to adjust these matters?

We would suggest that, if you cannot afford to lower your freight rates to the manufacturers and shippers that live in the same country with you, you should increase the freight charges on goods shipped from the United States for destination in Canada, in order to equalize the difference between the freight rate that is made on the other side and the freight rate that our own railways make to the shippers of Canada. We don't ask any advantage, only we want to be put on a level with our friends on the other side. We do feel that it is a hardship for us to be treated in this way and would be pleased to hear your view of the matter.

Yours truly,

W. A. FREEMAN Co., Limited.

Hamilton, Jan. 31st, 1898.

In reply to this letter the district agent referred to, Mr. J. Pullen, stated that, at their general traffic meetings where freight rates are arranged, the other railways interested would not concur with the Grand Trunk in modifying these wrongs. If the Canadian shipper is being unjustly treated, and if there is a grievous wrong, as Mr. Pullen in his reply seems to admit, there surely must be some way of remedying the wrong independent of the great railway magnates of this continent. Why should corporations who have no particular interest in Canada be allowed to dictate what the freight rates should be from one point to another point in Canada on a railway over which they have no control? Are the great producing classes of this country to have imposed upon them excessive freight rates from local points to the larger centres because a foreign tribunal is not willing to agree to a change? If so, it is time that some higher power took a hand in the game, and would see to it that every corporation receiving a charter from the people shall deal equally and fairly by every class in the community.

But aside from the question of excessive local freights, the fact that a shipper can send goods from New York to Windsor at a cheaper rate than from Hamilton to Windsor is of more importance, perhaps, from a national point of view, as it places the Canadian manufacturer at a great disadvantage as compared with his American competitor. There is no reason whatever for granting a cheaper rate to the American shipper.

The distance from New York to Windsor is about four times greater than from Hamilton to Windsor, and we would naturally expect to get a very much lower rate between the two latter points. But it would seem that the longer the distance the lower the rate. There is only the one loading and unloading to be done in each case, and, if the actual outlay in transporting a car of merchandise over the two distances were considered in estimating the freight charges, the rate for the shorter distance should be less than one-half of what it is over the longer distance.

From all this it would seem as if the ground on which freight rates are based is entirely wrong and unjust. The question of distance does not appear to come into the calculation at all. The distance travelled is, however, the only fair basis for establishing freight rates, everything else considered. Of course, it is reasonable to expect a higher rate per mile for a shorter distance, because of the trouble and delay in loading and unloading. But aside from this, and the nature and amount of goods shipped, a uniform freight rate per mile is the only fair way. Until the rate war began the passenger rate on all Canadian railways was uniformly three cents per mile, no matter how great the distance. Railway freight rates should be arranged upon the same basis, and aside from the cost of loading and unloading, the same rate per mile, the nature and amount of the goods being considered, should be charged from Hamilton to Toronto as from Hamilton to Montreal. Until some plan of this kind is put in force the producing classes of this country will never get fair dealing in railway freight rates.

Should Wheat Speculation be Allowed.

Now that the big Leiter wheat corner has collapsed it may be well to consider to what extent the recent "boom" has helped the producer. Some weeks ago a Chicago paper attempted to prove that the farmers of the United States had made \$150,000,000 on their wheat as a result of Leiter's manipulation of the markets and that to this extent he was the farmers' benefactor. But such a contention is utterly fallacious. It is very doubtful if the farmers of the United States and Canada combined made a hundredth part of that amount as a result of Leiter's campaign. In the first place when Leiter's operations began to affect prices, the bulk of the wheat had left the farmers' granaries, and was in the hands of the middlemen. This latter class has been the chief gainer on account of the boom. True, there are many farmers here and there who had a supply of wheat on hand, and were in a position to profit by the high prices, but the rank and file of the farming class were not in a position to derive any benefit from it.

But, in connection with a speculative boom, the after-effects must be considered when estimating the real effect such a scheme as this has upon any class or section of the community. In the present instance, the after-effects have been disastrous, and will be felt more by the farmer than any one else perhaps when this season's crop is ready for market. If the "boom" had continued till after this season's crop was harvested, then we might estimate the value of the boom to the farmer by hundreds of millions of dollars. The life of the Leiter campaign was only a few months, and at a time when the bulk of last season's crop was out of the farmers' hands; and it died a sudden death only a few weeks before the present season's crop was due. And is this not always the case? Speculation in food products, as a rule, never helps the producer. It usually occurs when the product is held in large quantities by those who are making a living out of the margins to be secured by manipulating the product on its transit from the producer to the consumer; and so it will ever be. The "bulls" will begin to operate, if they can, when the bulk of the product is out of the producers' hands, and, as soon as another crop is near at hand, the "bears" take a hand and endeavor to get prices down to as low an ebb as possible in order to secure the new crop or what-

ever it may be at such a price as will enable them to speculate with greater certainty of success.

This great game goes on year after year and comparatively speaking benefits very few, and then it is a question whether in the long run it is a benefit at all or not. Then why should it be tolerated? Why should one individual be allowed to obtain such control of the world's wheat supplies as to cause starvation and misery among the poorer classes of Europe? Nearly all lines of trade have been disarranged. Many fortunes have been lost, and to-day the condition of the great producing and consuming classes of two continents is no better, if not worse, than before the boom began. Many dealers are now loaded up with wheat bought at high prices upon which thousands of dollars will be lost. If no fictitious values had been created, and if the world's wheat markets had been left to regulate themselves as the supply and demand would warrant, these dealers would be in a better position to deal in the coming crop, whereas, now their losses will prevent them buying to as great an extent as formerly. It will be to their interest now to "bear" the market and get the new crop from the farmer as cheaply as possible in order to recoup themselves for the losses sustained in connection with the boom.

All things considered, every line of trade would be in a much better condition if the speculative element did not enter into its transactions. True, there may be advantages to a trade through speculation, but they are so much outweighed by the disadvantages as to make a boom of any kind a positive and lasting injury. Many claim that speculation makes trading lively and induces many to engage in it who otherwise would not do so. But even so, if it is of no material benefit to the people at large, why should it be countenanced? It would be better for every trade if laws were enacted that would prevent speculation of any kind in the world's food supply, and especially such speculation as has originated the greatest wheat corner in the world's history. Business would then be done on a surer basis—a basis of supply and demand, and no one would begrudge the legitimate middleman a fair margin for handling the product. But when, as is now the case, there are hundreds of speculative "sharks" on the way from the producer to the consumer ready to pounce upon the product and exact an unjust profit, it is time something was done to remedy the evil.

No Pleuro-Pneumonia in Great Britain.

The annual report of the Veterinary Department of the Board of Agriculture for Great Britain has been recently issued. It treats of the work of that department in stamping out contagious diseases among live stock. One of the important items in the report is that pleuro-pneumonia in the United Kingdom is, to all intents and purposes, suppressed. Our readers will remember the interest in this subject a few years ago, when the embargo was put upon Canadian cattle. British live stock dealers claim that this disease was brought into Britain through animals imported from other countries, and they consequently took the necessary precaution to prevent the bringing in of diseased animals. While it is true that the disease was carried to England by cattle from other lands, it is also true that, while pleuro-pneumonia was prevalent there, the disease was carried to other countries to which imported stock from England was sent. So, if it is gratifying to the British live stock trade to know that there is no more pleuro pneumonia among their herds, it will be equally gratifying to stockmen in the colonies and elsewhere, who import largely of pure-bred stock from England. The report further points out that there is no record of pleuro-pneumonia having been introduced into any country in the world except by the importation of a diseased living animal.

Shire Horse Breeding in England.

The Shire Horse Society of England is coming in for some criticism just now regarding the effect

it has in producing a better class of Shire horses among the English farmers. The society has been in existence for twenty years, and it is claimed that it is time now to estimate results. Complaint is made that there is a scarcity of good geldings in the country, and that too many stallions of an inferior grade are travelling through it. These are used by the tenant farmers, who are the largest producers of heavy horses, because they are cheaper than the highest type of stallions. Again, it is claimed that the very best stallions, for whose services the fee is £10 to £15, do not travel through the country, and are in consequence not used by the tenant farmer. Besides, the fee is considered to be too high, and the average tenant farmer prefers a cheaper horse. In this way it is claimed that the society has not accomplished much. But the fault really seems to be with the farmers themselves, who use the cheaper stallions, and, even if the stallion is all right, have not the highest types of breeding mares. This seems to be the case in Canada to a large extent. Many mares used for breeding purposes are not of the highest type, and, though the best stallion is used, the finest type of horse will not result. The results are infinitely worse if both the stallion and the mare are of inferior quality.

U.S. Agricultural Exports Show a Large Increase.

Never before has the United States received as much money for exports as during the year which will end on June 30th. Reports received at the U.S. Bureau of Statistics regarding May exportations make it tolerably certain that the total agricultural exports for the present fiscal year will considerably exceed \$800,000,000. The greatest total at any previous time was in 1892, when the amount was \$799,328,232. Only twice before have the total agricultural exports reached \$700,000,000, and these were in 1881 and 1892. The increase in exports of agricultural products this year will be fully \$150,000,000 more than for the last fiscal year, \$250,000,000 more than for two years ago, and fully fifty per cent. more than for the fiscal year 1895.

In breadstuffs alone the exports of the year will amount to nearly \$313,000,000, and will be more than \$100,000,000 in excess of last year's exports of breadstuffs. Nearly all kinds of breadstuffs show an increase. The value of the exports of wheat for the present fiscal year will be more than double that of last year. The increase in flour and corn will be nearly fifty per cent. in value. The total exports of provisions (including beef, hog and dairy products) will likely reach \$160,000,000. The biggest increase is in hog products, which will be upwards of \$10,000,000 more than last year. Lard alone shows an increase of fully \$8,000,000 over last year. The exports of beef cattle will show an increase. The value of these exports for the first ten months of the present fiscal year is \$32,352,833, against \$28,866,703 last year for the same period. The exports of beef, either fresh, canned or salted, do not show an increase. Salted beef shows a falling off of 35 per cent. for the year, and canned beef dropped from 46,349,006 lbs. in the ten months of 1897 to 34,011,129 lbs. in the ten months of the present fiscal year.

Organized Agriculture in France and Germany.

The Agrarian Union of Germany and the French agricultural syndicates wield a powerful influence with the Governments of these countries. The German Agrarian Union in twenty-five provincial associations now numbers over 4,700 agricultural societies and over 100,000 members. This union controls legislation largely in the interests of the farmers against the commercial interests. Its influence is much the same as the French syndicates in France. There the 100,000 members demand a duty of \$50 on American horses, and get it, and, when wheat was low, in like manner got high duty on wheat; which was

only abolished when the recent high prices were likely to cause trouble among the wheat consumers of France.

As one would naturally expect, these powerful organizations wield a great influence with the Governments of the day, and, consequently, liberal grants are made each year to improve agriculture and live stock. Horse breeding, more particularly, is given every encouragement. State breeding studs are established in various sections of the country, and liberal prizes given at the leading shows. Expert supervision and veterinary inspection of all stallions allowed for public service is established, and farmers encouraged to breed only the best class of horses. In this regard both Germany and France set a good example for Canadians.

Sugar Beets for Lambs.

Sugar beets are likely to be put to a new use. The people of certain portions of Texas are now shipping to the market what they call "sugar lambs." These lambs are fed on sugar beets, sugar beet pulp, and finally finished on corn. This feed is said to give a flavor to the young mutton, which is superior to that produced by any other feed known. The lambs prepared as above bring from five to ten cents per hundred lbs. more in the market than when prepared in any other way. In Texas sugar beets bring at the factory \$4 a ton, and sheep men from the Pecos Valley say that the beets used for fattening the lambs are really worth \$4.50 to \$6 per ton. As a result of this new industry there will be hundreds of acres more of beets planted this year than last season. In some of the Western States, notably in Northern Colorado, lamb feeders are particularly anxious to secure a supply of sugar beets for next fall's feeding.

This subject is of vital importance to Canadian sheep feeders. Sugar beets can be easily grown here, and if they will do what is claimed for them in the way of producing a finely flavored mutton it will pay our farmers to give attention to the matter. Moreover, if the sugar beet pulp will serve the same purpose as the sugar beet, the fattening of lambs in connection with a sugar beet factory would be a profitable adjunct. It would, perhaps, make a sugar beet factory a profitable concern even if the present low prices for sugar continue.

Wool in England.

The Canadian wool-grower is not the only one who is feeling the effects of the wool depression. A writer in *The English Farmer and Stockbreeder*, writing from Bradford, the centre of the English wool and textile trade, says: "Dealing specially with English growths, nothing but a desperate state can be chronicled, and, when compared with a month ago, prices are again weak and lower. Local dealers and merchants are full of stock, not because they are unwilling to sell, but because they never get the chance. This condition of things has prevailed with more or less severity since last July, and there are to-day large quantities of wool which were piled up at that date, and have never been stirred since."

This may be taken as a pretty accurate description of what the present condition of the English wool trade is. The price asked for what are technically known as Lincoln hoggs and wethers is 8¾d. With the exception of a short time in 1892, when Lincoln wethers were at 8½d. per pound, all English and Irish wool is lower in price this season than at any other time in the history of man. The consumption for coarse wools is almost entirely gone, fashion having completely changed on to fine-grown wools. This seems to be the contention here also. The demand for coarse wools has very much decreased of late, and in the United States, our chief market for wools, only the fine-grown varieties are wanted.

JAMES JACKSON, Scugog, Ont., writes: "We look forward every week to the arrival of FARMING with interest, as it is an up-to-date paper."

HAY-MAKING NOTES.

No specific rules can be laid down for making hay. There are so many conditions to be considered, such as the weather and the heaviness or lightness of the crop, that no definite plan can be adopted throughout. One of the chief points in which many farmers fail is in not commencing to cut hay soon enough, especially when there is a large area to be covered. If a large crop is to be taken off, cutting should be commenced soon enough to enable the whole lot to be cut before the last field is too ripe. Very often the fall wheat harvest comes on before the hay is all cut, with the result that a field or two have to be left till after the wheat is in the barn. When such is the case, this over-ripened hay is not of much more value than good straw as a food.

Clover should be cut as soon after the full bloom as the weather will permit. It is much more difficult to cure clover than timothy hay. Clover should never be cut when wet or when the dew is on, as it will dry off better standing than when cut down. The time required for curing clover will depend largely upon the weather and the condition of the crop. A writer in *The Rural New Yorker* gives his method of making clover hay as follows:

"Supposing the weather promises fair and all is in readiness, I start the mower after the clover has become dry in the forenoon, if I am likely to be rushed, if not, I do not start till the afternoon, and cut until night. The next day, about 11 o'clock, I start the tedder with the rake, and cock up in not very large cocks; I let these remain the next day, while I repeat the operation of making more. The next day I simply turn over the cocks so that the air may circulate and dry the bottom of the heap, and haul to the barn at once. Just here, many make a mistake. This hay that I have so made does not seem dry, but sticky; but, never fear; haul it in to the mow, tramp solid, and it will come out ideal hay, not being discolored—purple blossoms and green leaves adhering to the stems."

This plan should work well only there seems to be extra labor involved in putting the hay in cocks. It may be wise in the case of clover hay to do so, especially if it is to be stacked, but farmers having hay loaders would not care to take the trouble to put the hay in cocks and then spread them out for loading on the wagon.

There are differences of opinion as to the best time to cut timothy. Some authorities claim that it should be cut when in the first bloom and others not till after the second bloom has appeared as then there will be more weight and greater bulk. But bulk or weight is not the main thing. The chief thing in hay making is to get as palatable a food as possible. And this can be better secured where the timothy is cut a little on the early side.

DO NOT STOP THE CULTIVATOR.

As a rule, as soon as hay-making and harvesting begin, the cultivator is thrown aside, and the roots, corn, etc., are left to look after themselves. True, the bulk of the cultivating and weeding should be done before the harvesting or haying begins; but the cultivator may be kept going till nearly the end of harvest, and it may pay to lay off from harvesting half a day in order to run the cultivator through the corn crop. Corn is one of the most valuable

fodder crops on the farm, and its value will depend largely upon the degree of maturity it has attained when the autumn frosts appear. Cultivation and loosening the soil around the corn plant assists its growth and gives it a better chance to mature. Corn should be cultivated, if possible, once a week, with a light cultivator, at least, until the tassels begin to appear.

Roots will also thrive better under frequent cultivation. A loosening of the soil around the plant enables it to take in nourishment and moisture from the atmosphere, and especially is this true of the corn plant. And so, though haying and harvesting is a busy time, the farmer cannot afford to stop the cultivator altogether. Neglect at this juncture, when the plants may need attention, will materially lessen the value of the corn crop for ensilage or feeding purposes.

THE KIND OF BUTTER WANTED IN ENGLAND.

The following letter to the *Elgin, Ill., Dairy Report* from Hodgson Bros., Liverpool, England, will be of interest to Canadian dairymen:

We have pleasure in acceding to your request, and if you can persuade the farmers or factorymen in your centre, or where your paper circulates, to adopt our suggestions, we think they would find the result in the end very satisfactory. In the British market there is an almost unlimited outlet for dairy produce, especially butter. In latter years Denmark has been the chief source of supply for finest qualities, augmented by shipments from Australia, and by the home make in Ireland, and—to a smaller degree—by imports from Canada. The Canadians, during the last few years, have been specially catering for this trade, and they have had a large measure of success. They are learning the lesson that if they are to gain the top price they must send their produce forward week by week, while it is strictly choice and fresh. The package that is most in favor is the square box containing fifty-six pounds net, and the butter should be put up parchment lined, lightly salted (just sufficient to preserve the butter), and of *very pale color*.

The great objection to States butter, especially for finest grades, has been the large percentage of coloring matter, and we cannot too strongly impress upon Americans that the English public must have pale butter, the paler the better, though not dead white—and, of course, must have it perfectly fresh. We are so well looked after here that we can afford to be particular, and will only have the best of goods, for which we are willing to pay. Butter that is held over, and when it arrives here shows any staleness in flavor, is at once depreciated in value 10% to 20% per cwt. from the price of absolutely fresh-made goods.

At the present moment values are low. Fancy Danish quoted only up to 90s. to 92s. and Canadian up to 84s. Of course, later in the season better prices will prevail.

For medium-grade butter we have learned to look for a large source of our supply to the States, and it looks as if we shall have to continue importing from there for some time to come. Most of this undergrade butter is used for confectionery purposes, such as biscuit and cake making, and large quantities can be taken. It is a matter of indifference whether the goods are put up in boxes (as mentioned above) or in the tub containing from sixty to sixty-five pounds net. This grade of butter can take a little more salt, and the color is not a matter of so much importance, although on the whole the pale butter is the more saleable, but people on your side must learn to make an article containing less water. The authorities are becoming more particular here, and look like fixing a standard as to the percentage of water that butter will be allowed to contain. The great thing is to send the butter sweet and solid. These are two points to remember, solidity and sweetness, and the man who pays attention to them is the one who will get most for the article he puts up.

There has been considerable outcry lately in this country as to the use of preservatives in butter, and it looks as if we are likely to

have shortly a law passed which will prohibit the use of preservatives altogether, and the use of boracic acid will have to be discontinued.

There is a demand here for medium-grade butter from 50s. up to 70s., with an almost unlimited outlet. The chief place for the trade is the port of Liverpool, which is in close touch with all the large manufacturing districts and the great centres of population, and is far and away the best place for the distribution of the goods.

If you can induce the dairymen of your district to pay attention to the points to which we have referred, we have little hesitation in saying that the result will more than pay them for the extra trouble in putting up a first-class article suitable for the requirements of the English market.

HODGSON BROS.

Liverpool, Eng., June 1st, 1898.

TESTING MILK AT THE FAIRS.

During the last few weeks we have given considerable attention to the question of "Milk Tests at the Fairs." In this connection it will be interesting to note the methods of conducting tests in Great Britain. At a recent meeting of the British Dairy Farmers' Association the following scale of points was adopted for awarding prizes at the milking competition to be held at London, Eng., on October 18th, 19th, 20th, and 21st next:

"One point for every ten days since calving, deducting the first forty days, with a maximum of fourteen points.

"One point for every pound of milk, taking the average of two days' yield.

"Twenty points for every pound of butter-fat produced.

"Four points for every pound of 'solids other than fat.'

"Ten points shall be deducted each time the solids other than fat fall below 8.5 per cent.

"Ten points shall be deducted each time the fat is below three per cent."

This scale of points is practically the same as that used at the milking tests here with the exception of deducting ten points for each time the percentage of solids not fat fall below 8.5. The maximum allowed for days in milk is lower. This method of awarding the prizes in a milking competition seems to meet the wishes of the English dairy breeders, as with slight modification this scale of points has been used for years. At the Provincial Fat Stock and Dairy Show, to be held in Brantford this fall, the pounds of milk will not be considered in making up the total score, excepting in estimating the pounds of solids in the milk.

Another interesting feature of the London Dairy Show will be a test of cows for butter production, and which might be copied by some of the exhibitors here to advantage. It would be a great educational feature of a show to have cows milked on the spot and the milk separated and made into butter in the presence of the visitors. The farmer would better understand the value of a cow, if he saw how much butter she made per day, than in knowing what percentage of fat she gave. Such a feature could be made an object lesson, not only in showing the value of different breeds of cows for butter making, but in showing how milk should be handled and worked in order to make good butter. The following is the scale of points for awarding the prize in the butter test:

One point for every ounce of butter; one point for every completed ten days since calving, deducting the first forty days. Maximum allowance for period of lactation, 12 points. Fractions of ounces of butter and incomplete

periods of less than ten days to be worked out in decimals and added to the total points.

In the case of cows obtaining the same number of points, the prizes to be awarded to the cow that has been the longest time in milk.

No prizes to be given in the case of:

(a) Cows under five years old failing to obtain 28 points.

(b) Cows five years old and over failing to obtain 32 points.

NOTE.—In Mr. George Rice's letter in last week's issue the clause, "testing 2.5 per cent. of fat and 9 per cent. of solids not fat" should have read "testing 3.5 per cent. of fat, etc." Owing to a typographical error the mistake occurred.—EDITOR.

FEEDING MILLET TO HORSES.

Two tests have been made with horses at the North Dakota Station to study the effect of feeding millet as a coarse fodder. In the first trial two geldings in good health were fed hay and grain for about two weeks. Millet was then substituted for hay for about ten days. The same ration as at the beginning was then fed for four days. The temperature of the air, the temperature of the horses, the amount of food and water consumed, the weight of the horses, and the amount of urine excreted were determined. During a number of days the specific gravity, and in some cases the total solids, nitrogen, and ash in the urine were determined. All the horses were driven daily for exercise.

The second test was similar to the first, and was made with two mares. One of the mares became very lame and could hardly stand, and suffered from time to time from retention of the urine. She was killed and a post-mortem examination of the carcass was made. The other mare did not show as marked symptoms during the test. However, when fed millet for about three months, she would become so lame in the joints of the hind legs that it was almost impossible for her to walk. When feeding millet was discontinued she would recover. The lameness was again produced by millet feeding. After about two years of alternate periods of millet and hay feeding she became practically worthless. Circular letters were sent out to farmers asking for information concerning millet feeding for horses. A number of replies were received. The following conclusions were arrived at: Feeding millet alone as coarse fodder is injurious to horses. It produces an increased action of the kidneys and causes lameness and swelling of the joints. It causes an infusion of blood into the joints and destroys the texture of the bone, rendering it soft and less tenacious, so that the ligaments and muscles are easily torn loose. The experience of many farmers confirms the experiments.—*Exchange*.

CARE OF YOUNG LIVE STOCK.

There is not enough thought given to the young things on the farm. It is considered that they should grow without care. In too many cases the weanlings are almost as wild as though they were not included among domestic animals. In the case of pigs, lambs and calves it is advisable that they should be given a little meal or small grain, such as oats, rye and corn mixed, as soon as they will take it. It is surprising to note the avidity of pigs with sweet pure slops made from meal

and shipped stuffs, and the independence acquired by the time their mother discards them is highly gratifying. By a gradual increase of the ration of grain or ground food, the youngsters are weaned without any reverses in their progress of growth. The feeding process requires familiarity with humanity, and relieves the young creatures of any fear. The advantages of gentleness among the domestic animals are too many to be enumerated. Providing a well-balanced ration is also desirable. The framework of meat-producing stock and the organs of digestion and assimilation are better maintained by a moderate grain ration once daily for the thrifty-growing youngsters. The quality of the meat when it goes on the market will be enough better to more than meet the additional expense. With a half ration of grain once a day, a larger number of young things may be grazed on a given number of acres. This permits increasing the amount of live stock; or, on the other hand, the increase of the acreage of the farm for grain.

In the case of calves and lambs, it is particularly needful that they be provided while grazing with dry hay, straw or fodder, which will enable them to leave at any time the grass and relieve a discomfort of bloating by eating the dry provender. Only a small quantity of this is required to prevent many of the serious ills which come to the pasture ground. Convenient access to drinking water must be provided. If there is not a flow from a natural stream, if possible nature's liquid should come from a deep well. As a rule, it is not advisable to spare expense in having numerous tanks or lengthy troughs, which will enable the timid to satisfy as promptly as their stronger fellows.

The returning prosperity of business warrants extra attention to the colts. Four or five years from this time, the tiny colt of this season will be in demand. The requirements of a mature horse at that time will date back to the present.

It should be made thoroughly familiar with men, women and children, as well as many other things with which, as a mature animal, it will come in contact. At six months of age it should be as fearless of ordinary sights and sounds as it ever need be. A few moments' patient attention to these details daily will accomplish all that is desired for the future welfare of the little fellows whom we are prone to neglect when they most need the teaching which their docility permits.—*Farm, Field and Fireside.*

FORAGE FOR SHEEP.

By PROF. THOMAS STUAW.

The question of growing summer forage for sheep is yet in its beginnings. For the past two seasons we have pastured sheep at our State farm on forage grown thus, and with very much success. On ten acres of light soil with a sandy and gravelly subsoil we pastured eighty-six head of sheep and lambs from May 1 to November 5. The major portion of the soil had not been given any manure for years, although cropped every season for at least six successive years. In addition to the forage thus furnished, nine tons of cured food and six tons of green food were taken from the same land.

The sheep had plenty of food, inasmuch that they kept in fine condition, and the lambs made a good growth. The latter weighed one hundred and thirty pounds on an average when sold at less than one year old, and they brought at the experiment station five and a half cents per pound live weight. One of the lambs served at the dining rooms of the Commercial Club in St. Paul, was pronounced by good judges of the very highest quality, as good as the best that England can produce.

The chief of the foods grown were clover, winter rye, corn and rape grown together, sorghum and dwarf Essex rape. The sheep were pastured on these in turn. The winter rye furnished an excellent bite for fall and spring. Next came a plat of peas, oats and rape sown together. This plat was eaten down three times. After these came corn and rape. The corn and rape furnished an excellent food. The sheep were put on to it when it was about a foot high. The weak point of this pasture was that it did not come again. After the corn and rape, sorghum followed. And rape followed sorghum. Thus the sheep had abundant supplies of food during all the season. When the forage was wet from rain the sheep were pastured on the grass. Movable fences were used.

This system of growing forage for sheep will some day be adopted in all arable sections of the United States, that is to say, it will be adopted in a modified form. Farmers who keep sheep will sow one or more kinds of pasture for them to tide them over the dry period that usually follows the spring months. The advantages of the system include the following: (1) It enables the farmer to keep a much larger number of sheep than it would be possible in the absence of such forage. (2) It enables him to grow a better quality of mutton because of the succulence of the food. (3) The system is death to every form of weed growth. (4) It does not impair the fertility of the land, and (5) The crop that follows such depasturing is sure to furnish an abundant growth in a normal season. Minnesota alone by adopting such a system generally could grow all the sheep in the United States without using one acre of land now under cultivation.

SPRAYING TO DESTROY LICE.

Every reader knows the composition of kerosene emulsion, as it has been given repeatedly, and many of them have had experience in the work of spraying. Now, kerosene emulsion is sure death to lice, and is much cheaper than unadulterated kerosene. While it is understood that by spraying the poultry-house twice a week with the emulsion, thoroughly saturating the floor, walls, roosts, nests, yards, fences, etc., lice will be destroyed, yet it is not an easy matter to get the lice completely off the bodies of the hens. Dipping them in the emulsion is not satisfactory, for unless extra care is taken that the emulsion is perfect (no free kerosene) the hens will come in contact with the kerosene which floats on the top, if unmixed, which is very irritating to their bodies. To avoid this, have an assistant hold the fowl by the legs, head down, and spray the emulsion well into the feathers, com-

pletely saturating the bird, wiping off the head and face and turning it loose. Every louse will be destroyed. Do this once a week until you are satisfied that your object is accomplished. Always anoint heads with a little melted lard or vaseline each time. When you actually deluge the poultry-house with solutions for destroying lice, and finish a hard day's work in so doing, you must not conclude that you have settled the lice problem. Those who combat lice make only a partial attempt. There is no such thing as getting rid of lice by one effort. Lice must be kept out; and, as they multiply rapidly, the work necessary for cleaning the premises of their presence must be done as regularly as cleaning a stable, though not so frequently. The easiest way to get rid of lice is to first deluge the house with the kerosene emulsion. In two or three days deluge it again. Then once a week the house may be lightly sprayed with the emulsion. Always dust with air-slaked lime after the house has dried off. If this is done regularly, the work of keeping down lice will be a simple matter, and require only ten minutes' time.—*Poultry Keeper.*

A HANDY EGG TESTER.

To make an egg tester to use with a common lamp, follow these directions as given in the *Fanciers' Review*: Take a pasteboard box about seven inches long, six inches wide and six inches deep. Cut a hole in the bottom big enough to fit the large part of a lamp chimney, and a hole opposite in the top just large enough to let the top of the chimney through. Next cut a hole about the shape of an egg, but rather smaller, in one end, so that it will be opposite to the lamp flame when the tester is slipped over the chimney. Now cover the box outside with any dull, black cloth, so that no light can get through, and you are ready for business. Light the lamp, place the tester in position, and the egg to be tested over the oval opening in the side. Turn it gently as you look, and its condition will be clearly exposed to view.

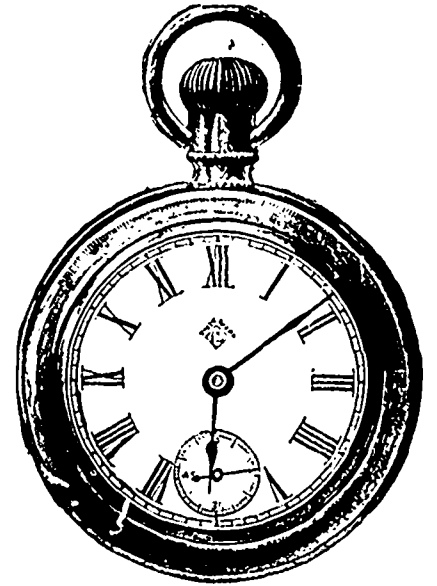
FARM NOTES.

The Delaware County, N.Y., Farmers' Institute, recently adopted the following as expressing the minds of those present as to the best work on the farm:

1. That grass is the best crop on the farm.
2. To maintain the fertility of the soil without grass is practically impossible.
3. That no more than one third the farm should be under plow at one time.
4. That a rotation of crop for six years is the best for our county.
5. The rotation shall be as follows: Two years in corn, one year in oats, two years in meadow, one year in pasture.
6. That a permanent pasture made on the native sod is best.
7. A pasture that will not pasture one grown animal on one and one-half acres is incomplete.
8. That level culture in corn is preferable.
9. That shallow cultivation is recommended when the land is first in good order.

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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.

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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 20,000 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. HODSON, Secretary.
Parliament Buildings Toronto, Ont.

Farmers' Institute Department.

Reports concerning the work of the Farmers' Institutes in Ontario will be published weekly under this head; also papers prepared for this department by Institute workers. Secretaries and officers having announcements to make are invited to send full particulars to the Superintendent.

GRAIN FARMING vs. DAIRYING.

By JOSEPH E. GOULD.

GRAIN GROWING.

Under this head I do not class farmers who are engaged in mixed farming, nor do I include those who keep a couple of cows to make butter for their own use, but those who grow grain and cart it to the market expecting to get their chief returns therefrom. We are sowing to-day the same varieties of grains that were sown 300 years, yes, a thousand years ago. Forty years ago the farmer in this section grew from thirty to fifty bushels of fall wheat to the acre, and sold it at from \$1.25 to \$1.50 per bushel. What is being done now? Take the statistics for 1895 and we find the average yield of wheat for Ontario is less than fifteen bushels per acre, which was sold for less than seventy cents per bushel. Ask your selves if this is a march in the right direction. Let us consider this deplorable state of affairs for a moment and see if we can find the cause thereof. First, as to the yield. Forty years ago when this section was settled the land was new, nature had been storing up the fertility of the soil for centuries. Once the land was cleared it was only necessary to tickle the soil with a plow, and it responded with abundant crops of golden grain. But we have been improvident. Have we sold the fertility in handfuls? No, we carted it away in wagon loads of wheat to feed the hungry; in wagon loads of barley to quench the thirst of the thirsty, and in wagon loads of rye to raise the spirits of the same; so that there is no longer the necessary plant food left in the soil to nourish the seed and carry it forward to a successful harvest. Continued cropping and selling the crop without any return to the soil have so exhausted the plant food that the inevitable result has followed. It

has been stated that the farmer who follows these lines sells annually eight per cent of his land. These are the causes of the decline in yield. Second, if you go into a modern hotel during room at meal time you will see a man seat himself at the table, a waiter comes forward with a bill of fare, the man gives his order and the waiter brings him his food, and when he has finished he foots the bill. Now the man at the table represents England, and nearly every country in the world are more or less the waiters. Forty years ago the only countries of consequence exporting grain were Russia and the United States. Lately other countries have gone into the business, India, Argentine Republic, Uruguay, our great North-west, and some other countries to a smaller extent. The man at the table demanded (the average yearly, 1891 to 1895) 350,000,000 bushels of wheat in addition to all he grew. During that period we in Canada supplied only an average of 10,000,000 bushels annually. Now I ask you what chance we have to affect the price even should we, on the one hand, double our output, or, on the other hand, not ship a single bushel. The law of supply and demand regulates the price. We cannot affect the price as our contribution to the vast amount is so small. Did you ever figure the cost of growing an acre of grain? I have, but I give you D. M. McPherson's estimate. He is an authority on agricultural subjects. He places the cost at \$10.00 per acre. If we take the average yield for 1895 at fifteen bushels of wheat (and the report says less), and the price at seventy cents (and we didn't realize that), we have the sales of the acre of wheat amounting to \$10.50, an apparent margin of fifty cents after paying expenses. But this is only an apparent margin, as we have sold from \$4.50 to \$5.00 worth of fertility. We see, therefore, that grain growing is a losing speculation and unless a radical change is made the Sheriff will change the occupant of the farm, as he has already done in hundreds of cases, and hand over the land to loan companies and interest sharpers.

DAIRYING.

Now, let us turn our attention to a more inviting subject, dairying, and note the progress in that branch of agriculture during the present generation. The old brindle cow has given place to the dairy animal as finely bred as a racehorse. The slab-covered shed and the leeward side of a snake fence has given place to the modern cow palace, with its summer temperature and thorough ventilation, ensilage, clover hay, and abundance of suitable fodder, giving the cow summer conditions the year around, has taken the place of the straw stack and the browse in the woods. The seven months' milker, with five months' rest and about 75 pounds of butter a year, has given place to the 10½ months' milker with from 350 to 450 pounds of butter in the same time. Education along these lines has kept pace with other callings. Cheese and butter, in the creameries, are now made on scientific principles, and there is no chance of failure in making good articles, except carelessness and incompetency on the part of the maker. Paternal governments have worked wonders in the education of the dairymen and the sure result has followed. At the Chicago Exhibition Canada took 9.1 per cent. of the prizes in cheese, and did nearly as well in creamery butter. And why should we not? We have the best country in the world for dairying, a country with a good climate, a country free from contagious diseases, from violent storms and floods which cause destruction of life and property in other climes, a hardy and intelligent class of citizens, and the best water in the world. The man at the table demands annually, in addition to what he produces, nearly \$30,000,000 worth of cheese, and we in Canada furnish him with about 52 per cent., or about \$15,000,000 of what he buys. How is this brought about? The government has passed wise legislation prohibiting the manufacture for export of filled or skimmed-milk cheese, so that none but first-class goods are allowed to be exported. The result is that when our cheese is put on the English market branded "Canadian Cheese" it sells readily, because no person in England ever bought a pound of poor Canadian cheese.

As to our butter trade the results have not been so satisfactory, and the reason is not hard to see. I have no doubt that there are some ladies who make as good butter as is made in the creamery, but where there is one such the country over, there are nine who do not. The fault lies largely with the merchant who pays the same price for good, indifferent and bad butter. These are all mixed together by the shipper and shipped in hot cars and hotter holds of vessels, and, when it arrives in England and is put on the market as "Canadian butter," it is a guarantee of its quality, for it is not fit for wagon grease. However, a brighter era is dawning. The Dominion Government have completed a system of cold storage, by which

means our creamery butter (and no other should be shipped) can be put on the market of England in the same condition in which it leaves the creamery. The man at the table demands \$56,000,000 worth of butter in addition to his own product. Denmark supplies about 44 per cent. of that amount. Our percentage is very small. In 1895 we shipped \$860,000 worth, but in 1896 we had more than doubled our output (\$1,890,000). This is a very small percentage of the \$56,000,000 paid by England for this commodity. There is no reason why we in Canada should not make as good a showing in butter as we do in cheese. We can and do make in our creameries as good butter as is made in the world, and with a system of cold storage it only requires more cows and more creameries to effect the result. To sum the whole matter up, grain growing as I have shown you is a losing occupation and will continue to be so; whereas dairying, if conducted with skill, intelligence, and industry, keeping none but paying cows, weeding out all unprofitable servants, and feeding judiciously, is a sure road to success. It enriches the soil and enables the farm to grow heavier crops instead of exhausting the land.

Another most important thing to be considered is that the grain-growing farmer has so much to contend with. He commences to cultivate the ground as soon as the past year's crop is in the barn to get ready for the next year's crop; he works continually until the frost stops him; he is then idle for about five months, and has to spend a great part of his time sitting around the house, the village grocery, or sometimes in the bar-room. When he gets on the land in the spring he again works until the harvest is ended. He has all the vicissitudes of nature to contend with—late spring, too early a spring and followed by frost, spring too wet or too dry, summer ditto, occasionally thunderstorms and wind leveling the grain crop, and many other discouragements. And, if he escapes all these and has a good crop, he has had to work and wait for twelve months for his returns. And he never knew with any degree of certainty what he was likely to realize until the grain was sold and delivered. With dairying, on the other hand, affairs are different. The dairymen is not so subject to the changes of weather. He can under almost any conditions grow sufficient fodder to feed his cows. The feed is his raw material and the cow is his machine. He delivers his raw material to his machine in the morning and the machine deposits the product in the pail at night, and he knows the market value of it. He can thus regulate his expenses by his income, and does not have to run in debt; and, if he has a mortgage to lift, he can lay by each month the amount necessary to meet the engagement when it falls due. His employment continues the year round, no loafing around the bar-room or the corner store, but continuous occupation with the satisfaction that he sees a sure return every day for his labor.

REMEDIES FOR CABBAGE AND CURRANT-WORMS.

The cabbage-worm, the larva of the common white butterfly, may be easily destroyed in several ways. That of hand-picking, if begun before the first brood has passed into its perfect state, is effectual. We have also found that pure pyrethrum powder mixed with five times its bulk of plaster, and dusted into the centre of the leaves with sulphur or Woodason's bellows, is certain destruction to every worm. The application of insecticides in liquids to the cabbage has not been satisfactory on account of the peculiar structure of the leaf surface, which allows the water to roll off in drops and not adhere to any part of it. Paris green is unsafe to use after the leaves have become four inches in diameter.

The currant worm should be destroyed when small by dusting the bushes when covered with dew in the morning, so that the material will adhere, with hellebore or pyrethrum. The latter, being absolutely harmless, is the more highly recommended.

WASTE LAND ON THE FARM.

On almost every eastern farm there is some land that, either by nature or because its fertility has been exhausted, must go to waste. If this land is infertile or rocky, naturally it may not pay to reclaim it. But if its fertility has been exhausted it can almost always be cheaply restored. It is more likely to be deficient in mineral plant food than in nitrogenous. Supplies of phosphate and potash alone will make clover grow, and, when there is once a good clover seeding, nature will do whatever else is needed to restore fertility.

BOOKS AND BULLETINS RECEIVED

Dairy Bulletin. By the Dairy School, Guelph. Published by the Ontario Department of Agriculture. It contains an introduction and specific information by Professor Dean on the methods of sewage disposal as applied particularly to cheese factories and creameries. The subjects of milk-testing, care of milk for cheese-making and creameries, a starter, separators and the separation of milk, butter-making in the creamery, butter-making on the farm and cheese-making are treated in a practical way by the various instructors in these branches.

THE WESTERN FAIR.

We have received the prize list, rules and regulations for the Silver Jubilee Exhibition of the Western Fair Association, which will be held at London this year September 8th to 17th inclusive. Entries will close on Wednesday, September 7th, but in order that ample time may be given for the examination of papers and the correction of errors the entries should reach the secretary's hands not later than September 1st.

WINNIPEG'S GREAT FAIR.

The managers of the Great Western Fair, which will be held at Winnipeg July 11 to 16, have spared no pains to give those who attend it full value for the money and time expended. The live stock and agricultural exhibits generally promise to be exceptionally good; in fact, indications show that it will be one of the best exhibitions in this respect ever held in Canada. Visitors, especially those who were familiar with the conditions of agriculture in the Northwest some few years ago, will be astonished at the evidences of development which will be shown this year in every department. The writer was present at the first exhibition held in Manitoba, and is

able to appreciate the advances made. All who are interested in the country's prosperity and progress should not fail to see the great object lesson which the Winnipeg exhibition will furnish this year. The other attractions will also be very brilliant and quite abreast with the times, and will include a grand display of fireworks—"The Relief of Lucknow"—every night. Monday will be Bicycle Day; Tuesday, Children's Day; Wednesday, Farmers' Day; Thursday, Citizens' Day; Friday, American Day, and Saturday, Ladies' Day.

MATTHEW MOODY & SONS.

"A man is best known by what he does, not by what he says," is an axiom peculiarly applicable to the firm of Matthew Moody & Sons, of Terrebonne, Que. They are not distinguished for ostentatious pretensions or high-sounding declarations of achievement, although known as one of the oldest, as well as one of the largest, manufacturers of agricultural implements in Canada. Their machinery speaks for itself, and its reputation for intrinsic merit, thoroughness of construction, and effectiveness in operation is the very best advertisement possible. We give below a short description and some interesting information respecting a few of the implements turned out of their establishment.

THRASHING MACHINES. The most popular threshing machine made is probably the two-horse tread-power threshing machine. It will thresh from forty to sixty bushels of oats per hour, and other grains in proportion. For a farmer's personal use, with ordinary care, the machine will last a lifetime. Many of them which have been in use every season for fifteen years have not required \$5 in repairs on them since they left the factory. Recently a carload of three-horse tread-power machines were sent by the firm to Edmonton, and a purchaser of one of them writes that he has threshed 1,100 bushels of oats in one day, and another purchaser writes that he has threshed 450 bushels of wheat in the same period. With these machines the danger of fire is avoided, the machine is ready to start at a moment's notice, and the work may be done by the ordinary hands about the place without any outside help. Four persons are usually sufficient to work a two-horse machine. They may be placed on the barn floor in rough weather, with doors closed, and the work done under cover, when no other work is available. Another advantage is that these machines require no water, and there is no danger of them freezing up in excessively cold weather. In some cases two or three farmers have combined in the purchase of one of these machines for their own use, and find this arrangement works very satisfactorily. The firm have been manufacturing tread-power threshing machines for more than forty years. The use of these machines is almost universal in the Province of Quebec, where the steam thrasher is a rarity.

TREAD POWERS.—These are made in three sizes for one, two or three horses, and are guaranteed to develop at a fair elevation twice as much power as the same number of horses in a sweep power. If any machine sold does not fill this guarantee the firm will take it back. In other words, the firm are confident that two horses will do as much as four can do on a sweep power and with much less fatigue to the two horses than the four horses will undergo on the sweep. There are many im-

portant advantages on these tread power machines which we are unable to notice here, but one is that the middle roller affords a bearing on each side of each horse on the machine, and prevents the lag woods and lag rods from bending, thus avoiding friction and loss of power. These powers may be obtained in any width desired, no extra charge being made for extra width. But the fact should not be lost sight of that unnecessary width involves a loss of power from friction and adds materially to the weight of the machine. A perfectly satisfactory speed regulator can be obtained for these powers.

HAY PRESSES.—The full-circle steel hay press made by the firm weighs 4,000 lbs., bales 17 x 25 inches, and makes two strokes of the plunger to one complete turn of the horses. They can be operated anywhere and can be telescoped for removal by two horses. An alarm gong is attached to the machine to indicate when dividing blocks require to be inserted.

GRINDERS.—We regret that our space will not permit of a sufficiently detailed description of these machines. But they have a very wide reputation for effectiveness. The conical combined grinder grinds shucked corn, corn cobs, and small grains, and can grind corn on the cob and small grain together if required. It is made in three sizes for two or three horse tread power, for five to eight horse-power engine, and the largest size for more ample power still. The firm also supply elevators with these machines. Other machines, such as binders, reapers, mowers, rakes, etc., etc., are also made by the firm.

Publishers' Desk.

Lancaster Feed Cutters.—Read the testimonial of Mr. David A. Grant on the front cover of this issue. Mr. Grant says the Lancaster Feed Cutters are perfect in every respect and will do their work better and with less power than any other machine he has ever seen.

The Arctic Butter Box.—Attention is directed to the advertisement of Messrs. Harvie & Co., of 223 Queen St. East, Toronto. This firm manufacture a specially useful contrivance for shipping butter. It is made of spruce lumber with galvanized iron tank for ice and is strong and durable. There is nothing equal to it for making shipments of either large or small packages.

The Ottawa Exhibition.—Undoubtedly the up-to-date stock buildings erected by the Central Canada Exhibition Association at Ottawa two years ago will be completely filled at this year's fair in September. Farmers know when they are well treated. One has only to glance over the prize list of the Central Canada Fair to see that it is a good show for the farmer or breeder. The prizes in every class are of splendid value, and there are also offered in the live stock department thirty-four "specials" including thirty-two gold medals (or in many cases \$20 cash). A special prize of \$50 is offered for a milk test during the fair. Among the new classes in the Swine Prize List this year is "hogs suitable for export trade." A class for heavy-draught horses owned by farmers only has also been added to the premium list. In the poultry department the values of the prizes have been greatly increased, and the pigeon classes in which prizes will be given are double last year's figures. Farmers who have not yet exhibited at Ottawa's great fair should get a hustle on and make their entries at once. The fame of the Capital Exhibition is spreading rapidly just now, for the directors are commended by all their patrons. Write E. McMahon, Secretary, for all information.

LIST OF PRINCIPAL CANADIAN FAIRS FOR 1898

- Industrial Fair, Toronto . . . August 29th to Sept. 10th
- Winnipeg Exhibition, Winnipeg, Man. July 11th to 16th
- Western Manitoba, Brandon, Man. July 19th to 22nd
- Stanstead Live Stock Assn, Stanstead, P.Q. Aug. 24th and 25th
- Eastern Exhibition, Sherbrooke, P.Q. Sept. 5th to 10th
- Western Fair, London, Ont. Sept. 8th to 17th
- Quebec Exposition Co., Quebec, P.Q. Sept. 12th to 21st
- New Brunswick Exhibition Co., St. John, N.B. Sept. 13th to 23rd
- Central Canada Fair, Ottawa. Sept. 16th to 21st
- Southern Fair, Brantford Sept. 17th to 22nd
- Provincial Exhibition, Halifax, N.S. Sept. 22nd to 29th
- Markham Fair October 5th to 7th

Fruit.

Trees and Vines become hardier, and their products better colored and better flavored when liberally treated with fertilizers containing at least 10% actual

Potash.

FREE An illustrated book which tells what Potash is, and how it should be used, is sent free to all applicants. Send your address.

GERMAN KALI WORKS,
123 Nassau St., New York.

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 3.30 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 10s. 11 1/2d), 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 basis. At the rate of 3 per cent. per annum (or in strictness 1 1/2 per cent., half-yearly) a present payment of \$2,320.36 would represent an annuity of \$100 for 40 years, \$50 payable each half-year.



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
OLINTON ONT

MARKET REVIEW AND FORECAST.

Office of FARMING,

44 and 46 Richmond street W., Toronto.

June 27th, 1898.

Although there is a lull in many lines of trade just now, owing to it being between seasons, the general trend of trade is good. One good feature of the advance in all lines of trade is that it is not due to the war to a very great extent. It is now evident that, had there been no war, nearly all trades would have witnessed the same revival that has shown itself during the past few months. Crop prospects continue favorable, and Canada, at least, is likely to have a harvest this season that will exceed anything for several years back. A great deal will depend upon the weather from this out. Haying has already commenced in some sections, and harvest is likely to be several days earlier than usual.

Wheat.

The wheat market is still on the downward grade, though it is believed now that when July wheat touched 70c. during the week at Chicago it was below the intrinsic value of the article. In a "boom" time the market always goes to the extreme. When the boom was on, prices were inflated beyond the actual value of the wheat, and now, when the boom has collapsed, they have dropped below what is the real actual value of wheat. A great deal will depend upon the next few weeks what the price for this season's wheat will be. If the expectations of a few weeks ago regarding the yield are fulfilled, we are not likely to have very heavy prices. Reports from all over Canada continue favorable; but during the week the situation in the Western States has not been so favorable. In many sections, where harvesting is on, the yield is somewhat disappointing for winter wheat, though spring wheat continues to show good prospects. The total world's supply of wheat in sight is now 63,509,000 bushels, as compared with 30,673,000 bushels at the same time last year. In London the wheat market continues disappointing. Values have declined 1s. 6d. to 2s. per quarter during the week. Supplies continue to be liberal, and it is felt that dealers there will be injured considerably because of the Leiter campaign.

The market here continues inactive. There are not very large supplies of Ontario wheat coming in. From 78c. to 81c. have been the ruling figures during the week where any business was done. Manitoba was one cent lower at the end of the week, and the quotation was \$1.04 for No. 1 hard at Toronto.

Oats and Barley.

Oats in England show a decline of 6d. per quarter, though at this reduction there is a much steadier feeling. Receipts at Montreal have not been so large. The market has been quiet with some sales at 32c. to 32½c. afloat. Oats here have been fairly steady with an easier feeling towards the end of the week when the quotations for white went from 26½c. to 27c. These were quoted at 27½c. to 28c. at the beginning of the week.

No change in barley here from last week's quotations. At Montreal the market is quiet at 44c. to 45c. for feeding and 48c. to 53c. for milling.

Peas and Corn.

The prices for peas in London are still too high to admit of business being done. At Montreal the market is dull and sellers have to accept lower prices. Sales are reported at 60½c. all at. The Toronto market has been dull and easier at 48c. to 50c. west.

Corn here has been ruling fairly steady at 33c. to 35c. for Canadian yellow, and 41c. for American at Toronto. At Montreal receipts have been heavy, but nearly all on through shipment; No. 2 Chicago mixed being quoted at 39c. to 40c. afloat.

Bran and Shorts.

The Montreal market is tinner for bran at an advance of 30 cents per ton. Considerable is being sent to the United States. Car lots sell for \$12.50 in bulk. Shorts are quoted at \$13.50 to \$14.50. The quotations here are \$11.50 to \$12.50 for shorts, and \$9 to \$9.50 for bran west.

Eggs and Poultry.

The London market for eggs still continues firmer and higher with a good demand at an advance of 3d. to 6d. per 120. There are not many fresh Canadian going forward. These

are not expected till next month. Most of the pickled stock is placed for autumn shipments. The Montreal market is fairly steady. Nearly all the receipts are second grades which bring from 8½c. to 9½c. Choice fresh stock bring from 10c. to 10½c., as to quality. The Toronto market is firm with a good demand at 10½c. to 11c., seconds bring 8 cents. The Toronto market for poultry is steady at 8c. to 10c. for turkeys, and 40c. to 60c. for chickens.

Potatoes.

Are dull and lower. Early in the week they were selling for 50c. on track and 60c. out of the store, and at the end of the week the quotations were only 35c. in car lots on the track and 45c. out of store.

Hay and Straw.

At Montreal the deliveries of poor feeding hay has been very large. This quality brings from \$3.50 to \$5. No. 2 is quoted at \$8 to \$8.50. There is no No. 1 coming in. The Quebec crop promises to be very large. The market here is quiet and unchanged at \$8 to \$8.50 for bale hay, and \$4 to \$4.50 for straw in car lots on track.

Fruits.

The apple crop just now in Ontario and Quebec promises to be the largest for many years. Though the caterpillars have done considerable damage in the Montreal district, the fruit is well-formed and the danger from frost is now over. Though the supply of strawberries at Montreal has been large, the demand has been good. Canadian cherries are selling there at 90c. to \$1.50 per basket. Strawberries have been plentiful in Toronto during the week, and prices have ruled a cent lower, at 2c. to 3c. Cherries are quoted at 15c. to 75c. The quality has not been of the best: 100 much unripe fruit.

Wool.

The wool market continues dull and inactive as well in the United States as here. In the former manufacturers seem loth to put in a stock of wools though present values are comparatively low. Here there has not been much doing and farmers seem inclined to hold a while. The ruling figure for unwashed is 10c. to 10½c. and 16 cents for washed. It is reported that one cent more than these figures is being paid at country points.

Cheese.

The London market has been quiet, though a firmer feeling at Liverpool is reported, where prices have advanced 1s. 6d. to 2s. per cwt. Higher prices are looked for at London. The situation on this side has greatly improved, and prices have advanced from one half to three-quarters of a cent. Eight cents was reached at one or two local markets during the week, and the trade all around is very much more active. The advance here seems to be backed up by cable reports, so that the rise is not due altogether to a speculative demand on this side. June quality is always worth considerably more than May goods; but, aside from this, there is a much better feeling. Shipments from Canada and the United States continue to show a large falling off as compared with last season. Up to June 18th the total shipments from Montreal and New York were 249,134 boxes, as compared with 415,750 boxes for the same period last year, showing the large decrease of 166,616 boxes. Should this same ratio continue till the end of the season it would mean a decrease of 700,000 boxes. The ruling prices at local boards west of Montreal have been from 7½c. to 7¾c. Montreal quotations are from 7¾c. to 8c. There is very little stock in Montreal this season, whereas there was between 40,000 and 50,000 boxes at this time last year. The cheese situation, on the whole, has a much brighter outlook.

Butter.

The exports of butter continue on a much larger scale than for years back. The total shipments from Montreal up to June 18th amounted to 21,248 packages, as compared with 6,296 packages for the corresponding period last year, an increase of 300 per cent. Notwithstanding this the market shows a decidedly better feeling. Considerable butter has been bought during the week at Montreal for local and export account. The quotations there for choice creamery are from 17c. to 17½c. Under grades 16½c. to 16¾c. A year ago choice June creamery was selling at 16½c. to 17c. The London market is decidedly firmer owing to a large falling off in supplies. There is a good demand for Canadian creamery and 4s. to 5s. more is being paid for it than could have been obtained a week ago. Offerings are comparatively light. A large

portion of current receipts are going into cold storage. Quotations for fancy creamery are 85s. to 87s. 6d.; one fancy lot brought 90c. The Toronto market continues about the same at 17c. to 18c. for prints, and 16½c. to 17c. for tubs. Choice June dairy brings from 12c. to 13½c. Ordinary quality brings from 11c. to 12c.

Cattle.

The cattle situation is somewhat brighter, though at some American points an easier feeling prevailed. The London market is firmer and higher at an advance of 2d. per stone of 8 lbs. The market here has been active, though supplies early in the week were large.

Export Cattle.—There has been a steady demand and the offerings have all been taken. The ruling figures for the best cattle have been from \$4.50 to \$4.75, though on Friday some fancy cattle touched \$4.80. Rough cattle sold for \$4.40. Bulls bring from \$3.40 to \$4 per cwt., as to quality and weight.

Butcher's Cattle.—Grass cattle are coming forward more freely and these sell for less money than the stall-fed stock. The market has been firm, and all offerings have been taken. The best quality bring from \$4.40 to \$4.50 per cwt., the ruling prices being from \$3.50 to \$4.30, common cattle and cows being from \$3.25 to \$3.50.

Stockers and Feeders.—Light stockers are quoted at \$3.40 to \$3.90 per cwt., with some touching \$4. Feeders weighing from 1,000 to 1,050 lbs. bring from \$3.25 to \$4.25 per cwt.

Bulls.—Good bulls are wanted. Export quality were quoted at \$4 per cwt. early in the week, and butchering from \$3 to \$3.50.

Calfes are easier. The ruling figures are from \$3 to \$7 each. Common calves bring \$2.00.

Milk cows and springers.—Market firmer. Fancy, newly-calved cows bring from \$45 to \$46 each, with the ruling figures at \$25 to \$40.

Sheep and Lambs.

The London market shows a decided improvement at an advance of 2d. per stone. The American markets are active, especially for lambs. The Buffalo market for these was 15c. to 20c. higher early in the week. Sheep,



The Maple Leaf Churn

EASIEST AND BEST

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

WILSON BROS. COLLINGWOOD, ONT.

however, were a little easier. Here the market is if anything a little easier. Spring lambs bring from \$2 to \$4 each. Sheep, both export and butcher bring from \$3 to \$3.30 per cwt. Bucks are dull at \$2.75 per cwt.

Hogs.

At American markets hogs ruled easier early in the week. At Chicago the market was "panicky," owing to a report of yellow fever in the South. The Buffalo market for heavy hogs was slightly firmer. Canadian bacon is more in demand in the old country, and is growing in favor. There is not much change in the market here. Choice selection of bacon hogs bring from \$5.15 to \$5.20 per cwt.; light hogs, \$4.75; heavy hogs, \$4.75 to \$4.80, and sows \$3 to \$3.30.

Horses.

There is a quieter feeling in the London market, though desirable Canadian animals sell well at auction. The supply of Canadian horses is more liberal. The Buffalo market has been fairly active with prices ruling about the same. Receipts are declining at Chicago since the government contracts were filled. The retail trade is just fair.

M. DOUGALL'S

SHEEP DIP ..

And Cattle Wash. No. n-poisonous and reliable. Mail orders promptly supplied. Imported and for sale by

S. E. STONE, GUELPH, ONT.

Read, Mark, Learn, and Inwardly Digest

Professor Dean states that he has much pleasure in sending us this unsolicited recommendation.

(copy)

Dairy Department,
Ontario Agricultural College,
Guelph, Canada.

MESSERS. RICHARDSON &
WEBSTER,
St. Marys, Ont.

Dear Sirs,—We have now used the Reid Pasteurizer for about two weeks and it has given entire satisfaction. I consider it the best pasteurizer that I have yet seen. It is simple, and does its work perfectly.

Samples of the whole milk before heating, when tested bacteriologically, contained millions of germs, while the heated milk and cream did not show a sign of life. A pasteurizer is almost a necessity in the winter creamery.

H. H. DEAN.

March 22, 1898.

Cheese Factory and Creamery Supplies

The "MONTREUIL" Card Cutter.

The Best in the Market

The space between the small cutters is ¼ inch, and the large blades cut ¼ of an inch in thickness.

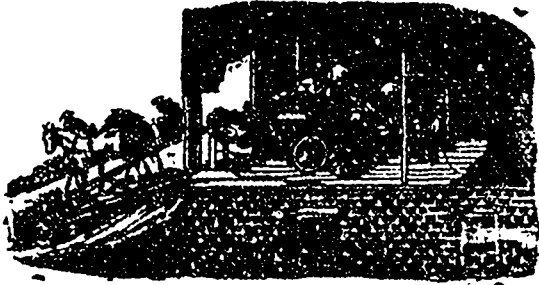
Butter and Cheese Factory Outfits a Specialty.

Correspondence Solicited



THE PLESSISVILLE FOUNDRY
PLESSISVILLE, QUEB.

A Steel Hay Press



A Full Circle Press. We have been manufacturing them for two years and have sold them from the North West Territories to Prince Edward Island.

A first-class machine in every respect.

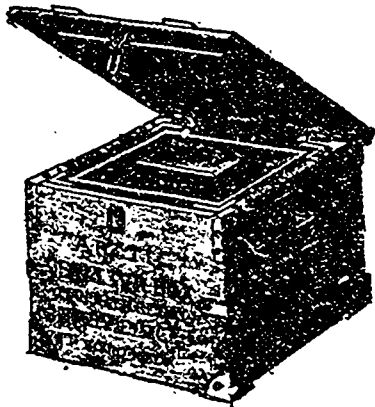
....We Manufacture also....

TREAD POWERS, FEED GRINDERS,
CIRCULAR SAW MACHINES,
FEED CUTTERS, Etc., Etc.

MATTHEW MOODY & SONS,

Send for Catalogue.

TERREBONNE, QUEBEC.



Harvie's "Arctic" Butter Shipping Box

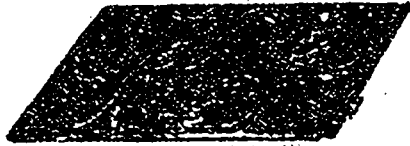
Made of spruce lumber, with galvanized iron ice tank, malleable iron hinges, handles, hasps, and corner plates, almost indestructible. Made in sizes to hold

40 lbs. in Summer, or 48 lbs. in Winter	—\$3.00.
60 " " " " " "	—\$3.50.
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223 QUEEN ST. EAST, TORONTO.

New Metal Roofing...



Patent Safe-Lock Shingle.



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.

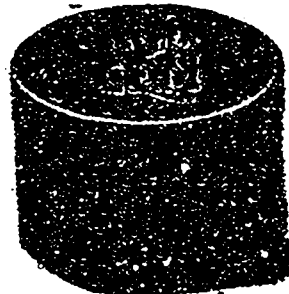
Buildings covered with our roofing look pretty, are fire and lightning proof, and will last a lifetime.

Samples and Prices Sent Free Upon Application

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PRESTON, ONTARIO

Gem Butter Packages



Anti-septic
Odorless
Cheap
Durable

Have you seen the "Gem" packages? The latest thing used by farmers for shipping butter to cities and towns. Sizes 1 to 20 lbs. each. Send for sample and price list free.

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DO YOU KNOW

What your cows are doing? Every factory should have

DILLON'S

Milk Pass Book

Secretaries of cheese and butter factories will find that Dillon's Improved Milk Book Combined with Dillon's Milk Sheets and Dillon's Pass Books

ARE THE BEST AND CHEAPEST

For sale by all Dealers in Dairy Supplies, or

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W. C. EDWARDS & CO. Breeders and Importers

PINE GROVE STOCK FARM,

Rockland, Ont.

On the C.P.R. and G.T.R. Railways. Special bargains on young bulls of superior merit and select Scotch breeding. Also thick young heifers at the right prices.

Ayrshires, Jerseys, Shropshire Sheep, and Clydesdale Horses.

Post Office, Telegraph Office, and Steamboat Landing, Rockland, Ont., on the C.P.R.

JOS. W. BARNETT, Manager.



LAURENTIAN STOCK and DAIRY FARM,

North Nation Mills, Que.

Ayrshires, imported and homebred herd headed by imported Tam Glen 2nd, No. 1310 D. A. H. B. Jerseys all of the celebrated St. Lambert family; herd headed by Lisgar Fogs of St. Anne's 25704 A. J. C. C. Berkshire Pigs. Young stock of all the above breeds for sale.

Post Office, Telegraph Office, and Railway Station, North Nation Mills, P.Q., on the C.P.R.

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Ingleside Herefords

Largest herd of choice-bred Herefords in Canada. Winners of both the first and second herd prizes at Toronto, Montreal, and Ottawa, 1895, 1896, and 1897; also silver medals same years for best bull and best female. This herd is of the "up-to-date-beef kind," combining early maturity and quality.

TAMWORTH SWINE.

Orders booked for Spring Pigs. Pairs not adkin

H. D. SMITH,

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GLENHYRST POULTRY YARD.

EGGS FOR SALE.

White Wyandotte, White Plymouth Rock, Cornish Indian Game, Black Minorca, Houdan, Black Langshan, White Langshan, Barred Plymouth Rock, Silver Laced Wyandotte, \$1.50 for fifteen, or \$2.50 for thirty. Packed in patent boxes. Will replace at half price any not fertile. Also poultry supplies. Will exchange any of the above for first class Tamworth pigs or light Brahma Pullets, say at will. Dozer and Shropshire sheep, Tamworth pigs, Shetland ponies, Jersey cattle all ages. Registered. Prices right. STRATFORD BROS. Brantford, Ont.

Norman G. Moodie, Chesterville, Ont. Breed- Barred Plymouth Rocks. Eggs \$1 for 15. You can- not get better blood. Satisfaction guaranteed. Please mention FARMING.

Advertisers can best reach 100,000 farmers

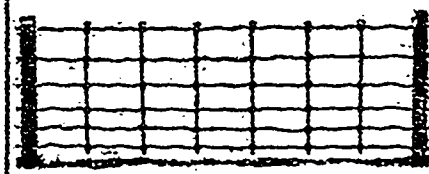
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Co-Operative Farmer

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a neatly printed, sixteen-page semi-monthly, and the only exclusively agricultural paper in that part of the Dominion. Write to the publishers for sample copy and adv. rates. Address CO-OPERATIVE FARMER, Sussex, N.B.

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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.

THE RANKIN FENCE CO.

275 St. Martin St., MONTREAL

CREAM . . . SEPARATORS

THE ALEXANDRA

Hand and Power. Capacity 160 to 2,000 lbs. \$50 to \$350.

THE MELOTTE

Hand Style only. Capacity 330 to 850 lbs. Price \$100 to \$185.

Up-to-date Dairy Machinery and Supplies.

AGENTS WANTED.

R. A. LISTER & CO., Ltd.,

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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 125 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 1897, and the Spring of 1898, 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 those escape the dreaded San Jose Scale so prevalent in the States. There is no more reliable, healthier, hardier, or more complete assortment than mine. Good reliable salesmen wanted in a number of fine townships, to start work at once. Complete outfit free. Address E. D. Smith, WINONA, Ont.



THE FARMER

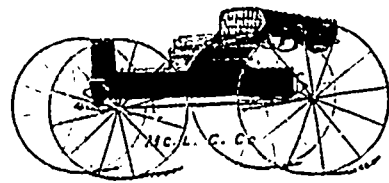
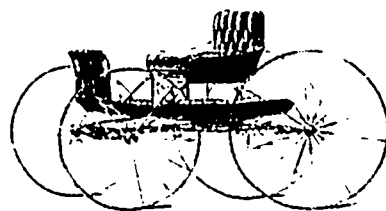
Is a shrewd buyer. He always endeavors to get the best return for his money.

Massey-Harris

Implements and Machines are used by the most successful farmers in America.

If you want good returns from your soil you will do well to call on the agent of

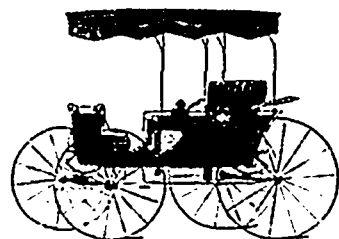
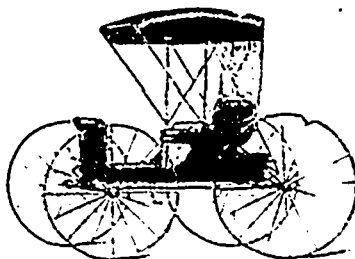
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83 STYLES

McLaughlin Carriages are Good Carriages

83 STYLES



BICYCLE PRICES..

Are a consideration when means are limited

Cleveland Bicycles

\$55.00

\$70.00

\$80.00

30-inch Wheels \$100.00

Are made in a factory possessing absolutely unequalled facilities for accurate and durable construction, and will meet, in some model, any price you wish to pay.

Agents Everywhere. Write for Catalogue.

H. A. LOZIER & CO.

Sole Representative TORONTO JUNCTION.
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July 11th to 16th.

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July 10th to 22nd.

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WINNIPEG, JULY 11th to 16th

\$15,000 offered in prizes \$15,000

Competition open to the world. Live stock and other exhibits carried free. Grand Stand accommodation for 5,000. Brilliant and entertaining attractions daily. All interested in the growing West should see this great object lesson of the country's advancement.

Prize lists, programmes, and all information can be obtained on application to

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Alberts' Thomas-Phosphate Powder

THE BEST TOP DRESS FOR GRASS LANDS AND NEW CLOVER MEADOWS.

J. W. ROBERTSON, Norton, N.H., Canada, writes: "The Thomas-Phosphate Powder purchased from your agent has given splendid results. I tried it on newly seeded timothy, with the result that where I put your fertilizer is now a mass of red clover, yet on the land that did not have the Thomas-Phosphate there is no clover. I also tried it on old land badly run out, the result is a mass of red clover. I also tried it with good results on other crops, and shall use five tons for top-dressing my meadows this fall. You may publish this if you wish."
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