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CANADIAN BREEDER and AGRICULTURAL REVIEW.

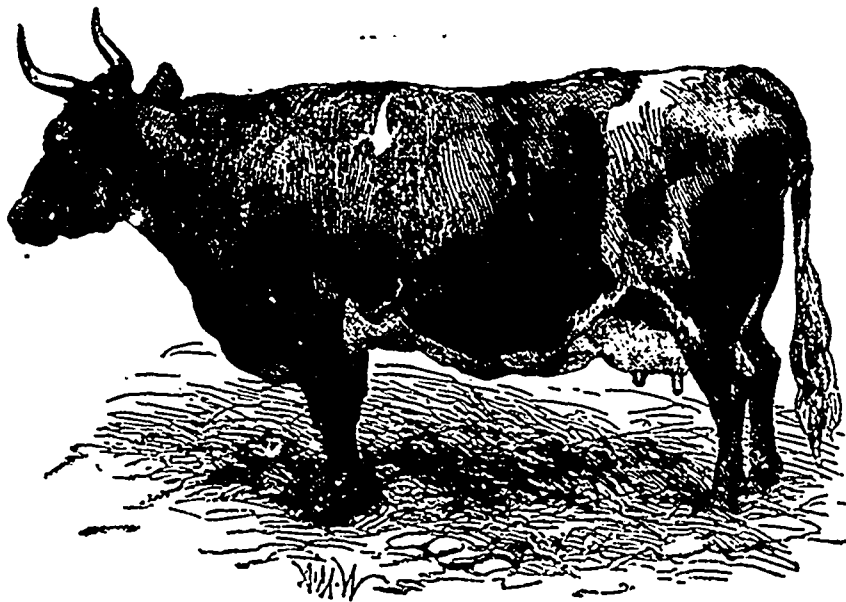
Vol. II.

TORONTO, JUNE 12, 1885.

No. 24.



AYRSHIRE COW LADY MACDUFF.



AYRSHIRE COW LADY MACDONALD.

The Property of Mr. E. A. Roberts, Woodland House, Greenhithe, Kent.
Lady Macdonald won the First and Lady Macduff the Second Prize at the
London Dairy Show in October, 1884.

THE CANADIAN BREEDER

AND AGRICULTURAL REVIEW.

Weekly Paper published in the Stock and Farming interests of Canada.

SUBSCRIPTION, - - \$2.00 per Annum

ADVERTISING RATES.

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CANADIAN BREEDER,

COR. CHURCH AND FRONT STS
TORONTO.

S. BEATTY, MANAGER.

Toronto, Friday, June 12th, 1885.

Advertisements of an objectionable or questionable character will not be received for insertion in this paper.

THE WESTERN CATTLE MARKET.

About four-fifths of the drovers and butchers of Toronto gathered on Tuesday at the Bull's Head Hotel for the purpose of discussing the proposal to remove the Western Cattle Market to another site. Ald. Frankland, than whom no one knows better the needs of the trade, occupied the chair and introduced the subject. The proposal has grown out of the fact that there are manifest defects in the present market, some growing out of the administration, others incidental to the location itself, while a third class arise from the fact of there being too little railway competition, and consequently restricted accommodation. Anything which will diminish the cost of handling cattle is of interest to the producer, and so when it is proposed to spend \$100,000 for the purpose of removing the cattle market, it is time to inquire on whom will fall the increased burden? and what will be gained by the expenditure? There can be little doubt that in the present—or even the prospective—state of the trade the raiser will have to shoulder the burden, directly or indirectly, and we are afraid that the advantages will not be commensurate with the outlay. There was a unanimity at the meeting certainly indicative of a community of interest, and there was a consensus of opinion that all the advantages to be gained by removal might be secured on the present site by the exercise of prudence and foresight. Perhaps the strongest argument which has been advanced for removal is the necessity for public abattoirs, but it was well pointed out that these may be had on the present site; while the acknowledged scarcity of covered pens may easily be remedied and sufficient accommodation made for years to come. The present market is about two miles from the centre of the city, and four from the east end, and it is proposed to spend \$100,000 in the removal to a place at least two miles further from a majority of those using the market. The objections to the proposal were

clearly put by the chairman, Mr. Joseph Ingham, Mr. A. W. Aikins, Mr. C. Flanagan, Mr. Honeyset, Mr. S. Burnett, and Mr. J. Cheeseman, and a resolution expressive of the views of the meeting was unanimously carried.

COMBINING AGAINST FARMERS.

Some time since we called attention to the fact that city retailers were reaping enormous profits in proportion to the amount of business they were doing. Any one passing through any of our cities must be impressed with the enormous number of small retail groceries and butchers' stalls found in every quarter. In order to exist at all on their very limited constituencies these small dealers are compelled to charge enormous profits, and these profits come out of the farmer and the consumer. The farmer receives less than he should receive, and the consumer pays more than he has any right to pay. For example, the quotations for choice dairy butter last week were 12c. to 13c., and these being dealers' prices, are presumably above those paid to farmers, and yet it is very difficult to buy decent table butter from the retailers for less than from 22c. to 24c. Cheese, in small lots, is quoted at from 9c. to 11½c., but the consumer must pay nearly double that figure for it. These are only samples of the outrageous profits charged by small dealers for handling farmers' produce, and these exorbitant charges continue from one year's end to another.

The question naturally arises, "Why do not the small dealers grow rich?" The answer is easily obtained, "There are so many retailers and the custom is so cut up that it takes these very large profits to keep the establishments afloat." But then comes the question, "Why does not competition put an end to extravagant prices which practically amount to robbery, so far as the consumer is concerned?" And this brings us to the very core of the whole difficulty. There are in every city unions or associations of one sort or another, and these combine to keep down the price to the farmer and raise it to the highest possible rate to the consumer. It is these societies or unions that keep up prices to consumers and keep afloat about double as many middlemen as it ought to take to do the business. The only way open to the farmers is to meet combination with combination. Let them leave these people severely alone, and make some arrangements of their own by which their produce will reach the consumer without affording more than a reasonable margin to the men who handle it.

IMMIGRATION TO THE NORTH-WEST.

It was to be expected that the troubles in the North-West would seriously check the tide of immigration, and in that expectation nobody has been disappointed. It is satisfactory to know, however, that the troubles are now nearly, or quite, at an end, and though there

has been a deplorable loss of life, the mortality attending them has not been nearly so serious as might have been expected when the character of the enemy with whom we had to deal is taken into consideration.

One feature of the whole affair must always be regarded with much satisfaction, and that is, that the rebel Half-breeds, and even the Indians, have not indulged in the atrocities which had been expected of them. With the exception of the Frog Lake massacre there has been little or nothing in the conduct of either Half-breeds or Indians that could be characterized as outside the usages of civilized warfare. Settlers coming into the country will in future have the satisfaction of knowing that the probability of their being massacred or caused to suffer anything more than temporary financial inconvenience in the case of another rising would be extremely remote. Pound-Maker has treated his prisoners quite as well as they could have expected had they fallen into the hands of a white enemy, while even Big Bear, well known to be an Indian of a very different stamp from Pound-Maker, has been guilty of no atrocities in this respect. But the security of intending settlers is not to be looked for at the hands of the Indians, though the possibility of any rising in the future is of the remotest kind, but owing to the present affair the Government will doubtless put a mounted force in the North-West such as will effectually prevent the possibility of any further trouble.

In the meantime, however, there is no doubt that many timid people will be disposed to leave the homes they have made for themselves in the North West for a very small consideration. Therefore, men who have the courage to face the difficulties and trials attendant on frontier life under the present circumstances of the North West will in all probability reap a rich harvest in the near future.

DOES BREEDING INJURE FORM AND ACTION?

A correspondent writes as follows:—"I have a promising young mare, just three years old, well developed, fifteen hands three inches high, come of the best trotting stock. Kindly say in your next issue if you would advise breeding her now, and if it would interfere with her trotting propensities hereafter."

It is the general custom not to breed promising fillies so long as they are eligible for turf education. Why this is so it might be difficult to determine. In the case of a young trotter one hardly cares to have her education neglected long enough to afford her time to raise a foal. It is of course just possible that at three years old a filly is not so far developed as to warrant her owner in subjecting her still immature anatomical conformation to such a severe strain as that incident to foaling. It is also possible, and even probable, that the reason why the custom of permitting "coming trotters" to drop foals at four years of age does not prevail is that the owners do not feel like having the animal out of

training so long, believing that such a course would materially retard its muscular development. In answer to our correspondent we would say that should he breed his filly this season, there would be no doubt that the development of his trotter would be at a standstill until she were done with her colt, but otherwise we are not disposed to think, the mare would be injured.

Correspondence.

VALUABLE IMPORTATION OF SHORTHORNS.

To the Editor of THE CANADIAN BREEDER.

DEAR SIR,—I had landed at quarantine, Quebec, on the 14th ult., ten head of Shorthorns, viz., seven females and three bulls. All were bred at Sheriff Hutton, except one bull bred by Mr. Bruce, of Braithwaite Hall, and are (except one) of the Sowerby family, which has won such distinction at the leading shows of England during the last sixteen years; until last year they monopolized all but one of the first prizes at the Royal Show in the bull classes. The cow Sowerby was purchased from Mr. Booth, at Warlaby, fifty years ago by my father, and these are the first females of this family that have ever been brought to this continent to my knowledge, or that were ever disposed of except to the butchers when too old to breed, or at the Sheriff Hutton sale in 1879. My father held the family in so high esteem that he would never sell a female, refusing offers as high as 300 guineas. The bulls of this family are remarkable for size and excellence, long bodies on short legs, deep, wide chests, good neck veins, deep flanks, good loins, and well-filled crops, grand masculine heads and horns, great girthers and great weighers.

I have seen it stated recently that Mr. J. J. Hill, of St. Paul's, Minn., U. S., is now the happy owner of Goldfinder, by Sir Arthur Ingram (32490) of the Sowerby family.

My purpose is to breed these heifers to Royal Booth, of the Torr-Bright family, which is the best bull I have ever seen on this side of the Atlantic for breeding purposes.

WM. LINTON.

Aurora, June 1st, 1885.

WESTERN CATTLE MARKET.

The following is a full report of the meeting of butchers and drovers regarding the removal of the Western Cattle Market, to which editorial allusion is made elsewhere :

A large, influential, and representative meeting of the cattle dealers and butchers was held Tuesday afternoon at the Bull's Head Hotel, for the purpose of discussing the proposal to remove the market from its present site to Brockton. Among those present were:—Ald. G. F. Frankland, Messrs. A. W. Aikins, C. Flanagan, T. Bonner, Sr., G. Cheeseman, S. Levack, T. Peers, W. Britton, W. Harris, W. Dennis, B. Honeysett, P. Kinnear, S. Burnett, W. J. McClelland, S. Sullivan, G. Guest, J. Wilson, A. Farr, Sydney Smith, Wm. Hamilton, R. Pugsley, P. McConney, T. Humphrey, L. Penny, E. Blong, Jos. Ingham, E. A. Bowes, L. Coffee, G. D. Morse, W. Levack, J. Lambert, Jas. Dunn, J. E. Verral, C. Zeagman, M. Booth, W. Kinnear, R. Conn, S. Hinds, J. Henderson, T. Beech, R. Wilson, R. Himber, W. D. Stoddard, J. Wilson, Sr., J. Hutchinson, W. Ritcher, and a number of others.

Ald. Frankland occupied the chair. Letters were read by the secretary from H. P. Frankland and others, regretting their inability to attend, but stating that they were entirely in favour of the cattle market remaining on its present site.

The chairman said they had met to discuss what he considered a very important question. They had to consider whether the accommodation of the market was sufficient, and what assistance the corporation was prepared to give to enlarge the market and provide sufficient accommodation for the requirements of the trade, it being agreed that there were not at present sufficient covered pens erected for that purpose. He was in sympathy with anything that would make the market profitable and secure. He wished them to understand that he represented an eastern constituency, St. Lawrence Ward—he not only represented that Ward, but also at least, 100 butchers, who felt that they had to go far enough now without having to go two miles farther away for their cattle. Personally he considered that if properly utilized and sufficient pens were erected the present market afforded every facility necessary for years to come. He believed that this meeting would have great weight with the city council, as it was the most influential gathering of cattle dealers that he had ever attended, representing at least four-fifths of the business done at this market. If slaughter-houses were required they could have them on their present site, as the city had plenty of land there now under lease. He believed if the market was removed it would cost the city at least \$100,000, and as the taxes this year would likely be 18½ mills on the dollar, he thought they would all agree with him that they had plenty to pay without further increasing their taxes.

Mr. Joseph Ingham was then called upon, and addressed the meeting in a somewhat lengthy speech in favor of the market remaining on its present site. He said they had assembled to ventilate and discuss this question, and to come to some reasonable conclusion as to what would be to the true interests of the trade. In connection with this question there were several things to be considered. They were not only there as cattle dealers but as citizens, and as our City Fathers would expect a good and truthful report, which would be a kind of guide to them in their decision of the matter, he hoped the meeting would be harmonious and decided. A very large amount of money would have to be expended in making the present location fit for the trade, and a still larger expenditure in purchasing lands and erecting new markets if it was resolved to remove them. They all knew as citizens and ratepayers it was a very serious question with them whether they ought at any time to enter into a very large expenditure of public money, more especially as the taxes are at present so high. The present markets were almost isolated from the business centre of the city, and there was ample drainage. Most of the cattle dealers had located in its immediate neighborhood, having purchased dwellings, feeling convinced that it would remain on its present site.

Mr. A. W. Aikins, the next speaker, said he had been given to understand that the Markets and Health Committee proposed to spend only \$800 this year to improve the market. He, for one could not comprehend why so many were in favor of removing the market, which would require at least \$100,000 of an outlay. He thought that with a little improvement, the present site with its many advantages could be made quite satisfactory for years to come. He dwelt at some length upon the loose manner in which the market had been attended to, and

blamed the city council for not having looked after it in a more proper manner, this being the best property owned by the corporation.

Mr. C. Flanagan said he would like to remind this meeting that when they went before the Markets and Health Committee, the previous day, they found some of the Aldermen who appeared to be altogether in favor of the removal of the market. He wished to know what object they could have in agitating for its removal. Had they come to consult those most directly interested in the trade? How many of them were present to hear the views of this large and representative meeting of the Cattle Dealers? He said, "not one, except their chairman." Surely, when four-fifths of the cattle trade, representing at least 19-20ths of the money invested in the business, desired to have the markets remain at their present location, the city council would not dare to go to the enormous expenditure which would be required to purchase new grounds and erect the necessary buildings. Even if the cattle trade had demanded it, it would be a very grave question for the council to consider the expenditure of so large a sum of money, with the taxation already 18½ mills on the dollar. Those who were agitating for the removal of the market claimed that a large majority of the retail butchers of the city were in sympathy with them, and had signed their petitions; he knew, however, for a fact, that many had been led to do so on account of the misrepresentations made to them. They did not then understand the matter; in fact two of them were present at this meeting, and stated that they were in favor of having the market remain where it is. He was much pleased at the harmony and unanimity prevailing at this meeting, and believed with the worthy chairman that it would have great influence with the city council.

Mr. Honeyset said that the promoters of the agitation for the removal of the market were doing everything in their power to assure the aldermen and retail butchers, that in its present location there was no possible chance of obtaining a public abattoir, as it was impossible to have it drained. This, he considered, a piece of gross misrepresentation, as they had one of the largest and best sewers in the city running through the very centre of the present market.

Mr. S. Burnett and Mr. S. Hinds also spoke in favour of the market remaining in its present site.

Mr. J. Cheeseman, representing the retail butchers, said that the statements made by the opposition to the present market, that the retail butchers were forced to purchase from middlemen, was all nonsense. He had dealt in the market for a great number of years, buying sometimes only one and two cattle at a time, and he had never been shut out from making his purchases as he liked, and from whom he liked, and had always been treated properly. He was of the opinion that a better location than the present could not be found within twenty miles of the city of Toronto. The ground appeared to have been naturally laid out, between two hills, the centre being well adapted for an abattoir, having a trunk sewer running through it.

The meeting was conducted throughout with the utmost harmony, all present being in favor of the existing market.

Resolutions expressing the views of the speakers were adopted, and the meeting adjourned.

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THE VALUE OF SULPHATE OF AMMONIA AS A MANURE.

BY F. J. LLOYD, F.S.C.

(Lecturer on Agriculture at King's College, &c.)

Of late the *Journal* has contained some interesting matter in reference to sulphate of ammonia. Perhaps, therefore, a few words on this subject from an agricultural point of view might not only prove of interest to its readers, but, while dispelling from their minds the false views regarding the future of nitrate of soda and sulphate of ammonia, both possess manurial value; and both owe this value to the same fact—viz., that they contain nitrogen. In the one, the nitrogen exists combined with hydrogen as ammonia; in the other, combined with oxygen as nitric acid. It is a well-known fact that 100 parts of commercial sulphate of ammonia, of 94 refraction, such as is now usually sold for manurial purposes, contains about 20 parts or more of nitrogen; while the detrimental impurities, the various cyanides, which used twelve or more years ago to be somewhat prevalent in sulphates of ammonia, are now seldom met with. On the other hand, commercial nitrate of soda, of 95 refraction, contains little less than 16 parts of nitrogen. Hence, unless it can be shown that the nitrogen in sulphate of ammonia is less valuable to the farmer than the nitrogen in nitrate of soda, it is evident that so long as a ton of nitrate of soda can be bought for £10 (which is approximately its present price), sulphate of ammonia is worth £12 10s. a ton. Now, is the nitrogen of ammonia as valuable to the farmer as the nitrogen of nitrate? In order to answer this question, which lies at the root of the whole subject, it is necessary to briefly state some facts regarding the function of the roots of the plant, and the properties of the soil. The majority of plants take most, if not all, their nitrogen from the soil as nitric acid. There can be no doubt, therefore, that nitrate of soda will act upon vegetation more rapidly than sulphate of ammonia. But it is equally certain that every properly cultivated soil possesses to a high degree the power of nitrification—that is, it converts all nitrogenous substances gradually into nitric acid. Ammonia is one of the substances most easily so converted. Hence it is certain that, when sulphate of ammonia is used as a manure, the soil will gradually convert the ammonia into nitric acid, and supply to the plant nitrogen really in the very same form as is supplied by nitrate of soda. So far it is evident, then, that nitrate of soda is only more beneficial than sulphate of ammonia inasmuch as it acts upon vegetation more rapidly.

Next let us consider the action of the soil on these two substances respectively. The late Dr. Voelcker, among his valuable additions to agricultural chemistry, let none more valuable than his researches upon the action of soils on manures. By analysing the water flowing from the drains of large fields, where crops were cultivated under varying conditions and manures, he proved that nitrate of soda is washed rapidly through the soil by rain, so that a large quantity of the nitrogen so applied to the soil is never taken up by the roots of the plants; and during the time there is no crop growing, the nitrate of soda is being merely washed away. Not so with sulphate of ammonia. Only once or twice, in all his experiments, did he find ammonia being washed through the soil into the drains, and then only in minute quantities; and this was found to be the case even where the land had been manured with 4 or 5 cwt. of sulphate of ammonia—far larger quantities than are usually employed. What, then, became of

the ammonia? It was found that all fertile soils had the power of retaining ammonia, which became only gradually converted into nitric acid; and then only, and not until then, was it washed out of the soil. Meanwhile, any plant growing in the soil would be well able to take up the nitric acid as it was formed, so that less would be lost than where the nitrogen had been applied as nitrate of soda. If, then, nitrate of soda is more active than sulphate of ammonia, still the latter is more lasting and less wasteful. It is evident that manure manufacturers are well aware of this fact; for one seldom finds nitrate of soda admixed in compound manures, except for special and forcing purposes, while sulphate of ammonia is largely and rightly used for mixing with phosphatic manures.

Practice in the field confirms these scientific conclusions. The experiments of Sir John Lawes and Dr. Gilbert at Rothamsted, and by the late Dr. Voelcker, for the Royal Agricultural Society, at Woburn, yielded the following results, where equal quantities of nitrogen were applied as sulphate of ammonia and nitrate of soda respectively:—

	ROTHAMSTED.		WOBURN.	
	Sulphate of Ammonia.	Nitrate of Soda.	Sulphate of Ammonia.	Nitrate of Soda.
	£ bush.	Wt. per 4 bush.	£ bush.	Wt. per 4 bush.
Barley	11 1/2	55	11 1/2	55
Wheat	31 1/2 ... 63 1/2	37 1/2 ... 59	27 1/2 ... 57 1/2	28 1/2 ... 56 1/2
	Av. of 13 yrs.	Av. of 13 yrs.	Av. of 6 yrs.	Av. of 6 yrs.

At Rothamsted the ammonia salts were applied in the autumn; but at Woburn in the spring. In both cases the nitrate was applied in the spring; and it is evident that there is an apparent superiority of nitrate of soda over sulphate of ammonia (and chlorides, for they were mixed) at Rothamsted. I have, however, brought forward these results because they illustrate very forcibly how much the value of a manure (and especially a manure like sulphate of ammonia) depends upon the time of its application. Undoubtedly the best time to apply sulphate of ammonia is in the spring—early spring—and in damp weather. And this is why the Woburn experiments yield more favorable results. Had the nitrate of soda at Rothamsted been applied in the autumn, it would have been largely washed out of the soil, and proved useless; and the sulphate of ammonia would probably have yielded much larger crops than the nitrate. The fact that the sulphate remained in the land all through the winter, and produced a crop very nearly as good as the nitrate applied in spring, is a strong proof of its great value as a manure. In fact, the only legitimate conclusion which can be drawn from the preceding is that the nitrogen in sulphate of ammonia is every whit as valuable as the nitrogen in nitrate, provided the sulphate be properly used. But there is another advantage possessed by sulphate of ammonia, as opposed to a direct disadvantage under which nitrate of soda labors. It is this: Nitrate of soda will often prove of more harm than good on stiff clay soils; while on such soils sulphate of ammonia proves a most valuable manure. Indeed, there is no soil upon which sulphate of ammonia has proved to have any injurious effects; while there is evidence of farmers having found nitrate of soda injurious on their wet stiff clays.

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BRITISH VS. AMERICAN FARMING.

From the Chicago Breeders' Gazette.

An Englishman some time in this country, writing home to the *Mark Lane* (London) *Express*, uses this expressive sentence:—"The American farmer owns his land and has no rent day to compel him to keep no stock that does not pay. The most improvident can get a living." Undoubtedly one who has a personal acquaintance with the agricultural methods of both countries can point out some striking contrasts. These, in the main, are the natural outgrowth of the different conditions to which the agricultural classes have been subjected.

The English farmer, burdened with taxes to an extent which would make American farmers "wince" if they were called upon to contribute at an equal rate for the support of public burdens, is compelled to pay in addition a rent for the land equal to one-fourth to one-half the price the land itself would bring in many well-settled portions of this country; and he has to make it out of the land, and if he cannot do that he sinks at once to the level of the common laborer. He is compelled therefore to ascertain and adopt such means as will bring the land into the very highest production, studying closely the peculiarities of the farm as to its adaptability and the adaptability of the various portions of it to different crops. Then when the most has been made from the land in this direction an equal vigilance and intelligence is enforced in the other, of making the most out of the products which have been secured. And long experience has demonstrated that under the necessities thus imposed live stock becomes the main reliance of the farmer, without which he would quickly go to the wall. He cannot devote the whole land to grain, because that would exhaust it, and the root crops which he can grow to advantage in the intervals would be practically valueless for animal food if there were no supplies of more concentrated food to use with them. Live stock therefore enables the farmer to purchase concentrated feeding stuffs in the market to use with his abundant root crops, transforming them into a valuable marketable product, and at the same time providing large quantities of manure with which to maintain the fertility of the soil; but the farmer must have returned the money he pays for his feeding stuffs and he has to have the value of his turnips, and is quick to see that an animal which will not bring this money is maintained at a loss; and he cannot afford to keep an animal simply to make manure to put on the land and raise another crop to make more manure. This will not answer the purpose at all. The rent has to be paid, either out of the land or out of the pocket, and actual profit must be realized and actual money coming. So the English farmer, no matter what his degree of intelligence, education, or enterprise, was long ago compelled to observe that there was a great difference in the capacity of certain breeds of stock to pay back with added profit the money they receive in home-grown and foreign-purchased feeding stuffs; and he was likewise compelled by his necessities to have the best, and to improve on that if he could. No two-and-two-make-three way of figuring would keep him out of the poor-house, but he has to set it down that two and two equal five, and make it. Handicapped by this rent burden, compelled by necessity to make the very utmost from the farm, the British farmer has improved the ox from 400 weight at four years old to 1,200 weight at two, and given the world the splendid races of improved cattle, sheep, and swine, and also some races of horses which are contributing untold

millions to the agricultural prosperity of every clime.

The American farmer has been under no such necessity. His taxes have been light, his "tithes" and "rates" nothing, and no exacting landlord has placed him under annual tribute. Under such circumstances too many farmers have not manifested that desire for improvement, or made that effort to bring up the productive capacity of their farms or to secure such live stock as could turn its products to best account, which they would surely have manifested if their circumstances had been less favorable, or if they had been compelled to maintain themselves under some such unfavorable conditions as those which have since the "memory of man" rested upon the British farmer. Too many of them have not even felt the need of examining seriously the merits of the live stock question, and such surplus money as they may have comes to them in such a way and at such long intervals that even when convinced too many are still reluctant about making a change. It is not a lack of industry which can be laid, as a rule, at the door of the American farmer, for no more faithful class of workers can be found, neither can it be said they are in anywise lacking in intelligence. But too generally there is among them a strange apathy, which somehow makes men indifferent as to whether beyond a narrow margin above bare expenses they receive any return for their labor and capital. If the British farmer is compelled to use the *best* class of stock, and can pay his rent, tithes, and rates with no other, why cannot the American farmer see the utility of the same kind of stock to save him what the Englishman pays? If the British farmer is driven to its use to preserve his capital, is it not clear that the American can by similar methods add to his capital an amount equal to the extra burden the British farmer bears? If the most improvident can "get a living," is there any reason why a farmer of snap, brains, and ambition should content himself with no more?

SWEDE-SOWING.

English Agricultural Review.

In more respects than one the swede occupies a middle place between the mangold and the common turnip. It flourishes on heavier soils than are altogether suited to the growth of the common turnip, but is not so well adapted for culture on stiff clays as the mangold. In point of seed-time, also, as in nutritive value, it takes the middle place.

As regards soil, the best results with swedes are, no doubt, obtained on the lighter class of soils, where the climate is moist; but in a drier climate, a clay soil of even considerable stiffness is found to yield satisfactorily. In either case it is essential that the soil should be deep, finely pulverized, and free from stagnant water. The system of the best cultivators is to plough the land in autumn, or, at any rate, sufficiently early for the frost to thoroughly disintegrate the surface soil and form a proper depth of mold. As early in spring as the weather will permit, the land is well harrowed, and worked with the cultivator as deep as it was ploughed. This retains the moisture. By spring ploughing the soil is often rendered so dry that the germination of the seed when sown is entirely dependent on rain.

The rainfall of the last week or ten days has retarded swede-sowing in clay-land districts in the north, but on lighter soils it has been proceeding more generally. The time of sowing swedes in Scotland may be said to begin about

the 10th of May, and it continues till about the end of the first week in June. In England the time for sowing is fully a fortnight later. In the south of England it is scarcely safe to sow swedes before the middle of June, or at least the second week in June; as, if sown earlier, they either run to seed or become mildewed.

The alternative of ridge or flat cultivation has often been the subject of a paper war. Ridge cultivation is universal throughout Scotland, Wales, the North of England, and Ireland; while in Southern England cultivation on the flat is equally general. Humidity of climate, or the contrary, must be the test point here as in many other agricultural practices. In a dry climate, the flat culture is undoubtedly the most suitable; in a dry season it would be best for the north as well as for the south. Where artificial manure is used, the flat culture allows it to be drilled in under the seed at one and the same operation by means of the ordinary seed and manure drill.

It was formerly the rule to cultivate swedes and turnips in rows 27 inches apart. The tendency now is, however, to narrow the drills to 24 inches, and grow the plants closer so as to secure firmer and sounder roots. There are great variations in the quantity of seed sown. In Scotland, three to four lbs. per acre is generally used. With later sowings in the south, two or three lbs. of seed is found sufficient. When ready for singling, the plants are thinned out to nine-inch distance in the rows. The horse-hoe or drill-grubber should be once used previous to singling, and it should afterwards be used once a fortnight or so until the leaves of the plants begin to meet in the rows.

The young swede turnip bears transplanting very well, which is a great help often in filling up blanks after attacks of fly, &c. Occasionally we have seen a whole field transplanted when the season was getting late, and good plants were being thinned out in an adjoining field. But in transplanting one point is very important—care must be taken not to bury the crown of the young plant. It is also very necessary to fix the plant firmly in the ground, and if a careless planter is strictly charged to do this he is apt to pay little attention to the means by which the object is accomplished. The thing is done easily enough if you cram the lower stalks of the leaves below the surface. But this brings the soil, with the first rain at least, over the crown of the plant, and then it will never *grow* at all; it will just *live*, without increasing in size one single jot. Care, therefore, must be taken of this. The fixing is to be effected by applying the point of the dibble to the point of the root. Not to fix the plant is a great fault, and to bury the crown is a much greater; for if this be done the plant is sure to die.

SLAKED LIME ON PLOUGHED LAND.

In his usual lucid and practical style, Mr. H. Stewart gives reasons and directions for liming land at the rate of forty bushels per acre, as he avers that eighty pounds of lime require twenty-seven pounds of water to slake it, when its bulk is increased three-fold by reducing it to a white powder.

Having spread many loads of lime, and slaked many hundred bushels, I will describe the process. Instead of taking the lime slaked from the kiln, and heaping it in the field, it is piled in heaps like the ridge of a barn or shed, in any quantity from fifty bushels upward. These heaps of stone lime are made about six feet wide, and of any length, and slaked in the

following manner: Begin at one end of the heap, spread out the stones or lumps four or five feet wide, and only one tier thick on the ground. They should not be covered, as this would prevent the water falling on the clods. The lime being on the ground, covering a space of say four by six feet, shower on the water with a rose watering pot till the stones of lime begin to crack and seethe. Let this melted lime lie for half an hour, then rake out the unslaked lumps, and water again. Now shovel the powdered lime five feet from the heap to make room for another unslaked batch, which is spread without allowing one stone to cover any other, and treated as before. Two hours' practice will show when enough water has been applied, the quantity required varying somewhat with the degree of burning, quality of raw stone, etc.

Lime is stronger when applied fresh, or as soon as slaked, and keeps quick much longer in large heaps than small ones. In small heaps or large, lime slakes very unevenly. It is a tedious operation to place forty small heaps on each acre, or even on a ten-acre field. In fact, it takes more time to measure out one load in this manner than to draw and empty four loads in one or two large piles.

In drawing lime, either from the kiln to the field, or to spread soon after it is slaked, a two-wheeled cart with tilting device, is far preferable to a farm wagon. The lime is loaded into such a cart at the kiln in the same manner that coarse gravel or chestnut coal is loaded. The cart load of lime, on arriving at the slaking place, is tilted out at the hind end, after taking the end board out, and the cart is ready to return for another load in about five minutes.

A tilting device is very convenient, and even necessary on a cart used for spreading slaked lime. For this work it is best to leave the end-board in its place, as quick-lime runs very freely, and would fall in too great quantity on the land, if it were taken out. But a narrow end-board can be used instead of the full width, after most of the load is spread. The cart should not be more than three-quarters full, so that the fore end can be raised till the lime can be reached with a shovel over the hind end. The proper quantity to draw can be found when loading the lime into the cart with a shovel.

It matters not which way of the land the loaded cart is drawn, but it is important to draw it in such direction that it will blow away from the person spreading it. A thin gauze veil or piece of mosquito bar, to keep the lime dust from the eyes, is suitable in windy weather. The cart being loaded it is drawn along the center of a strip as wide as can be reached in spreading both ways from the back end of the load, say a strip twelve yards wide, or six yards on each side.

It is best to spread the lime in calm weather, or when there is only a gentle wind. Of course it is not very material whether the quantity applied is at the rate of thirty-eight or forty-two bushels per acre. But is desirable to spread the quantity applied as evenly as practicable. In England, I have seen hundreds of thousands of bushels slaked in the manner described, and drawn in carts with tilting gear.

As the lime is strongest and most effective when fresh slaked, it should be harrowed—not ploughed—in each afternoon on the day of spreading, and the nearer to the surface it is kept, after most of it is covered, the more effective and beneficial the dressing will prove in making inert matters in the soil available as food for plants,

IRISH BUTTER.

From the Agricultural Gazette.

We have been for some months eating good Irish butter, which has cost us, carriage and all, about 1s. a pound. It was potted last summer, and with little more of salt than ordinary fresh butter receives, it remained so good to the very last, some time in February, that, having then to pay 1s. 3d. a pound for fresh butter, we sent to our correspondent in Ireland for another small cask—also, of course, the produce of last year. This is even better than the last; and receiving an enquiry the other day, how to make potted butter for use months hence, we applied to two Irish correspondents, one of them the maker of the butter just referred to, for information on the subject; and the following are their replies:—

1. It is with pleasure I shall tell your friend the way I manage my dairy. I cool the milk well, then put it all together, enough to make a churning, and let it lie for a day and two nights and churn in the morning. I then get the butter, wash it well, salt it with three quarters of a lb. of salt to every 10 lb. of butter, then wash it again, and slap the water out of it with my hand; then pack it well in the firkin. When full, I put a little pinch of saltpetre on the head, and a lot of salt. I often keep butter from June till November. The best time for putting by butter for winter is September. I churn cream and milk together; that is all.

2. Our mode of dairying is general in a large district round here. The milk is brought from the cow-house and strained through a very fine strainer into tin dishes or coolers, the quantity put into them being guided by the temperature of the time, say about three gallons generally in each. If the coolers were placed in cold water during hot weather it might be an improvement. We allow the milk to remain in them as near to 12 hours as we can, or from milking to milking. It is then thrown into a medium-sized tub, ours are generally 2 ft. 4 in. by 13 in., so that three of them will make a churning. The tubs require great care in scouring and scalding, so as to be perfectly sweet before each using. The milk is allowed to lie in the tubs until it becomes thick and a little sour. We sometimes have nine on the floor, owing to the weather being cold, &c. When it is fit it is put into the churn, three tubs together, and allowed to lie there from evening till morning, when it is churned by horse-power, which generally occupies two hours, according to the temperature of the milk, which has to be regulated by hot or cold water put into the churn. When churned, the butter is put into a large keeler, with a plug hole in the bottom, and the usual hand labor given to its making, mixing with a churning of 30 lbs. 13 pints of fine block salt and three teaspoonfuls of saltpetre. When made it is packed in firkins, tubs, or cools, according to the market you intend it for, using plenty of salt round the inside to make pickle, and when the cool is full, coating the top of the butter well with salt, placing it on a cool flag floor; looking well to it through the summer, and fresh pickling it with a strong brine. We like to have it swim in pickle if the vessel holds it. Cover the top of the cool with calico, and then any old paper to keep off dirt or air. We begin to make it to hold over as soon as the cows get on pasture, and to sell about Christmas next. I cannot say how long butter will keep. From the market falling very suddenly and heavily one season, I have had it for two years stored in Dublin for the summer, and it paid me very well. I don't say but we must change our system, for it has not done well the past year in paying. The keeping quality of butter,

I think, greatly depends upon the pasture the cows run on. Strong upland pasture makes a bad keeping butter, I should say.

ARTIFICIAL MANURES.

English Agricultural Review.

The principal constituents of plant food that require to be supplied in manures are nitrogen, phosphoric acid, and potash. Besides these, however, there are various other mineral elements found, more or less, in nearly all plants—soda, lime, magnesia, chlorine, iron, manganese, and silica. Of these, the manganese, iron, magnesia, soda, and chlorine are found in the plants only in small quantities, and will almost always exist in sufficient abundance in the soil. The silica exists abundantly in the soil, but not always in sufficient quantity in the soluble form. Hence one of the indirect benefits of putting quick-lime on the land on which grain crops or grass crops have to be cultivated. The lime renders the silica soluble, and the crops named require a great deal of silica. Lime is also a direct source of nourishment to plants, and all soils which are naturally deficient in this element of plant food require occasional supplies of it. Without this, applications of nitrogen, phosphoric acid, and potash may be wasted in a considerable degree.

It has been customary to talk of "lime plants" and "potash plants;" of "nitrogen for corn crops," and "phosphates for turnips;" but every day's experience only shows more clearly that, although certain classes of plants make special demands on certain elements or classes of food, yet the presence of all the essential elements are equally necessary in a manure—that, in fact, the weakest, and not the strongest, link in the chain is the test of its strength.

Forty years continuous wheat-growing at Rothamsted shows (1) that mineral manures alone added very slightly to the produce grown on unmanured land; (2) that manures containing nitric acid alone, or some compound of nitrogen which is easily nitrified, considerably increased the crop; and (3) that manures consisting of potash, phosphoric acid, and ammonia or nitrates are competent to grow large crops of wheat continuously. An average crop of wheat contains about 45 pounds of nitrogen and 22 pounds of phosphoric acid, and 27 pounds of potash per acre. Oats contains rather more potash, and rather less nitrogen.

Barley, from the fact that it is a short-lived, shallow-rooted, surface-feeding plant, is more susceptible than wheat or oats to the influence of artificial manures. Where barley follows a turnip crop that has been consumed on the land by sheep, any extra manure would probably be wasted; but where barley follows barley or some other grain crop, as is now often the case, an application of manure may be very desirable. Nitrate of soda and superphosphate are found to give the best result. Half a cwt. to one cwt. of the latter will be a liberal dressing on most soils. The superphosphate is best harrowed in along with the grain; the nitrate of soda is better bestowed as a top-dressing when the young braird is covering the soil. On some soils an addition of kainit would be necessary.

Beans, clover, and the leguminous crops generally, as compared with cereals, contain about double the amount of nitrogen and potash, and about the same quantity of phosphoric acid. The nutrition of these crops, however, is less perfectly understood than some others. The chemist can tell us how much nitrogen any of these removes from the soil or leaves in the land; but he cannot tell us where some of

this nitrogen comes from, nor why it is required.

A crop of hay requires nearly twice as much potash, rather less phosphoric acid, and about the same amount of nitrogen as a wheat crop. On land which is impoverished by grazing, the exhaustion is more likely to be due to the absence of nitrogen and phosphate than to a deficiency of potash; but here time, too, is all important.

Sir John Lawes, while apparently of opinion that the use of complete artificial manures involves too great cost for their employment in the growth of ordinary farm crops, thinks that an exception might probably be made in favor of potatoes, a crop which requires a large supply both of potash and nitrogen. At Rothamsted, larger crops of potatoes have always been obtained from the use of mineral manures alone than where nitrogen has been used without minerals, "though, in the next field," we are told, "salts of ammonia applied without minerals for 39 years in succession have grown larger crops of wheat than mineral manures without ammonia." The chief minerals required in the growth of a potato crop are potash and phosphoric acid; among the constituents of secondary importance are sulphuric acid, chlorine from salt, lime, and magnesia. The two latter substances accumulate largely in the leaves. A ton of potatoes takes up about 14 lbs. of potash, and 4 lbs. of phosphoric acid. On an average, one ton of potatoes requires as much potash as is contained in 1 cwt. of kainit. With the exception of phosphoric acid and lime, kainit contains all the constituents of the ash of the potato, and the missing constituents can be supplied by bone or mineral calcic phosphate. At the same time, nitrogen must also be present in sufficient quantity before a full crop of potatoes can be grown.

The same principle holds good in manuring for turnips, swedes, or mangolds—minerals and nitrogen are both needed; and if they are not present in the soil in the required quantity, they must be added before the soil can attain its maximum of productiveness. For mangold $\frac{1}{4}$ cwt. of nitrate of soda, 5 cwt. of superphosphate, and 5 cwt. of kainit; and for swedes and turnips $\frac{1}{2}$ cwt. of nitrate of soda, 4 cwt. of superphosphate, and 2 to 3 cwt. of kainit, will, as a rule, be a fair dressing. If possible, one-half of the nitrate should be given after the plants are thinned, when it can be worked into the soil around the roots by the hoe. In all these cases, of course, we are assuming that the crops are to be grown by the use of artificial manures alone. At Rothamsted much larger applications of nitrate of soda have been used with profit in the growth of mangolds, but success in this has been found to depend upon the amount of available minerals in the soil, and the absence of weeds amongst the growing crop.

HOW TO TAKE OFF HIDES.

A Boston firm, dealers in rough leather and skins, and large calf-skin dealers, complain that they have great trouble with improperly taken off skins, and a desire to show how to and how not to take off a skin to bring it to the tanner in the best condition prompted them to issue a circular giving the necessary instructions. Very few butchers or farmers realize the actual loss to them in improperly removing the hide of the animal, and it is a matter of the greatest importance to the farmer or hide dealer that they should be shown how to do it to the best advantage, as by so doing better prices may be obtained. The instructions referred to are as follows:—

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In the first place, don't kill a calf until it is at least three days old.

In taking off a hide or a calf-skin never cut the throat crosswise in the least. Slit the skin from the brisket to the tail, and from the brisket to the jaw; then cut around each leg to the hoof. Slit the hind-leg from the hoof up directly over the gambrel, and the forward legs in the front, directly over the knee, to the top of the brisket bone. This leaves the hide or skin in the proper shape for finishing.

Skin the head and legs carefully, to avoid cutting them; then, commencing at the head, draw or fist off the skin without any further use of the knife, thereby avoiding the holes and cuts that almost spoil so many calf-skins. Some farmers use a windlass to draw off their dairy skins, and others use a horse; but one or two men can do it quickly and easily.

When taken off, lay the hide or skin flat upon the floor in a cool place where the sun cannot shine upon it, and cover it with salt, rather fine salt being better than too coarse salt. Don't roll it up, but let it remain in the salt until you take off another; then place that one upon the first, salting freely as before, and so on until you get enough to make quite a pile; then commence another pile in the same manner. Do not be afraid to use salt freely; what the skins do not require will shake off and can be used again.

If you prefer to dry out your skins before selling them, be sure that they are thoroughly cured with salt before drying them; and then, that they are thoroughly dried before being baled up for shipment.

Never dry out a skin without having it salted as described, to preserve it from moths and other injury on the hair side, which is liable to occur if the skins are not properly salted before being dried out.

If your skins remain on hand very long after being dried out, before delivery to the tanner, even if salted, watch them carefully to detect any indications of moths or worms on the hair side, and if any are discovered, have the skin vigorously whipped with a stick so often that they shall be wholly eradicated from the entire lot of skins, as they often work serious injury in a very short time.

SHEARING AND TRIMMING SHOW SHEEP.

Correspondence of the Agricultural Review.

This may be termed the shepherds' fine art. The sheep should be clipped as early as possible, but not before they can be shorn on the new wool. Blocking them out on the old wool is often done, but it must be remembered that any old wool left may disqualify a winner.

Begin by making a sheep stand in a perfectly natural position, letting it be held the while by an assistant. Then proceed to cut into the wool at the tail-head, level with the back. Clip along the centre of the back, making it as level as possible, and not too bare. Then the point of the shears may be turned down the sides, commencing at the head, and working from head to tail gradually down to the belly, which last it is best to shear first, turning up the sheep for the purpose. The shearer must thoroughly understand the shape a perfect model of the breed he is dealing with should be; and ever keeping his head and eye in concert, will make good or bad work, according to his knowledge of the art.

Trimming is the dressing or clipping from time to time of the already rough-shorn sheep. They may be trimmed once a fortnight up to the last, when they may get an extra or final trim, a week or a day, according to the breed,

before the show. Before they are trimmed they should be washed; but too many washings are not advisable. Two washings are as much as are necessary, and for some breeds one is sufficient. Choose a bright fore noon for washing, and then there is no fear of a chill. Soft soap and water slightly tepid may be freely used, rinsing off with clean water. Three or four days should elapse between washing and trimming, so as to give the wool time to set. If trimmed too soon there is a danger of cutting holes in the fleece, which can never be taken out again without much hurt. The first trimming should only be to mark or cut out the block in rough shape. As the wool grows opportunity is afforded to give the final mould and polish.

To be able to trim well, it is necessary to be a good judge of sheep; but the quickest and surest way of becoming a good judge is to practise trimming; and unless a man can trim, and understands trimming, he is not by any means fit to be a judge. There are some very dexterous hands with the shears, and the art they can display is very fine. We have seen a ram bought at a public sale, and handed over to one of these skillful operators to be trimmed; after which, it was put back into the same sale-ring and sold the second time the same day for ten guineas more money than it fetched the first time.

Coloring is the art of painting the wool on the sheep's back, so as to give the animals a better or a more characteristic appearance. We alluded to this in an article on "Preparing Sheep for Market," last week. The color, if any be used, is best put on with a fine syringe. The substances used for coloring are usually red and yellow ochre and burnt umber, dissolved in water.

POULTRY ON THE FARM.

From the Spirit of the Farm.

The number of fowls a farmer may keep is to be determined by his success with them through a series of years. This is perhaps as near as one can get to a general rule. His success will depend, too, not entirely on the weather, nor the price of food, nor the abundance of grasshoppers, nor the changes of the moon, but on his tact, perseverance and good judgment. One who has the knack of doing most of his poultry work at just the right time can make a pretty large flock profitable, but as experts are an exception in all callings, the average man or woman is safest with a small flock—say from thirty to a hundred. If it is intended to let them run at large at all times, except when the hen has small chickens, it is a kind of happy-go-lucky enterprise which each farmer must choose on his own responsibility. If he can endure the annoyance with patience and doesn't care to know the cost, let him go ahead. He may sell a good many eggs and raise hundreds of chickens, but he will never know whether there is a profit about it or not. There will be an apparent income, perhaps quite a large one; but from the way that some flocks loaf about the kitchen door, or roost on the piazza, or rob the pigs, run down the grass of the meadows, raid the garden, the cornfield, the buckwheat patch, and other grains, destroy flower beds, and upset milk pails or pans when exposed for a moment, seems to be raising poultry at a disadvantage. Still, thousands think it the preferable way, and follow it as if there were no other way. I like better a system which controls the flock at least a part of each day, and that the earlier part, and which will enable one to control them always on occasion. It is pitiable to see an already over-worked wife forced to leave

her morning work every few moments to drive fowls out of the garden or out of her kitchen, or flower-beds, simply because her husband, or possibly her own want of forethought, has provided no place of confinement for them at such hours as enable them to be the greatest possible nuisance. Of course they should not be fed in a place which they are not wanted to frequent, but even if never fed about the kitchen or cellar-door, it is in the nature of things to find considerable there which they like, and so they will come uninvited, like loafers to a saloon. But if shut up part of each day, a great annoyance is not only avoided, but a damage also, and the opportunity gained to make the fowls much more serviceable than is otherwise the case.

THE AMERICAN SOUTHDOWN ASSOCIATION.

The fourth annual meeting of the American Southdown Association was held in Springfield, Ill., on the 3rd inst. The large number of prominent cattle-men and fine stock breeders in attendance at the Central Illinois series of Shorthorn sales made this meeting of the Association one of unusual interest.

Communications from members unable to attend, fully confirmed the expressions of those present that the production of more and better mutton is a growing demand of the day in America. The low prices received for wool during the last few years have certainly been very disheartening to wool growers, yet to Southdown breeders it was a matter of congratulation to know that Southdown wool brings a few cents more per pound than that yielded by the long-woolled mutton sheep.

Among letters recently received was one from Mr. Henry Woods, manager of the well-known Lord Walsingham flocks at Merton in England. Mr. Woods, in common with others who have examined Volume I. of the American Southdown Record, speaks in high terms of the value of the work. The purchase of it by so many breeders of Southdown sheep, and the use made of it by them in the selection of breeding stock from distant flocks, are the best evidences that could be had of the wisdom of having founded such a record.

No other than the most favorable reports were given by members who spoke of the results of the lambing season just closed.

As is well known, the supply of recorded rams for use next fall is quite limited, and some anxiety was expressed as to what the result would be. It was hoped, however, that the present scarcity would not cause breeders to save for breeding purposes another year all the ram lambs, whether good or bad, that have come this spring.

The importance of reporting promptly to the secretary all sales or transfers of recorded animals was admitted without debate.

The secretary's report showed an encouraging number of entries for record in Volume II.

The treasurer's report was received and referred to the auditing committee, who before the close of the meeting reported it back as correct and as showing the finances of the Association in good condition.

The election of officers resulted as follows:—For President, J. H. Potts, Jacksonville, Ill.; Secretary, S. E. Prather, Springfield, Ill.; Treasurer, D. W. Smith, Bates, Ill.; Directors for the next three years, Geo. Pickrell, Lanesville, Ill., T. W. Harvey, Turlington, Nebr., J. H. Potts, Jacksonville, Ill. Henry E. Alvard, Mountainville, N. Y., was chosen a director for the unexpired term of M. F. Collier, deceased.

DANGER TO CONSTITUTION FROM PROLONGED MILK TESTS.

Farmers Review

During the recent meeting of the Holstein Breeders' Association, Mr. C. W. Horr took occasion to deprecate the prevailing custom of dairy cow owners, who in feeding for great butter and milk tests do so at the sacrifice of constitution. Many a grand cow has been lost after performing some great feat in the arena of butter test conflicts, and many a grand calf has never come into existence for the same reason. What avails it if we gain the honor but lose the cow? Doubtless the honor is to be valued, but if the cow is lost, the best part of the honor dies with her; whereas had she been moderately fed, and not overstrained in her milking capacities, she might have added many a profitable animal to the herd, and in dying leave behind her, not merely a record of surprising magnitude, but a family of young things of equal merit as herself. If it be looked upon from the standpoint of dollars and cents, the question to be answered is, whether is the advertisement of having a cow with the best record of the day less or more valuable than the calves which would have been produced in the ordinary course of the laws of life, taking for granted that had she not been lost in making a record she would have proved herself a profitable breeder. We do not intend to say that all cows that have been forced to produce these great records have speedily died—we know that many of them have lived to a good old age: but who will say that their constitution was not impaired by the strain which they endured while undergoing a twelve months' test? The prevailing tendency in competing for these test honors is to unnaturally develop the stomach and milk vessels of the cow. Let us look at the picture of the last prodigy of the milk pail, Princess 2nd, 8046, and we shall see that she is a good representation of the big record cow of the present day. The figure is wedge-shaped, light before and heavy behind. This doubtless indicates wonderful milk-producing qualities, but at the same time the narrow girth round the heart, the drawn-up chest, the dull, sleepy look of the whole animal speak plainly of a weak vitality and sluggish liver. The heart and lungs in the natural animal have plenty of scope in which to work; for they are required when the owner runs at large for the purpose of respiration and heat production. Pampered from generation to generation, receiving little exercise as they do, these animals become deformed until only the milk producing parts are in working order. These, however, are in a highly nervous, feverish condition from overstraining, and thus the animal is liable at any time to contract disease of the lungs or die from parturient apoplexy.

Would it not be better if possible to give cows a less severe test than that of twelve months? Surely, the capacity of the cow could be ascertained in less time, whilst a good, healthy calf would pay the expenses of the test.

What with records for fast trotters and milch cows, the goddess of agriculture must get many a surprise, and some day the "latest out" in trotters will vanish into sparks and smoke at starting, and the cow will produce fine butter instead of milk.

THE CANADIAN BREEDER AND AGRICULTURAL REVIEW circulates through the entire Dominion, and has a large and increasing circulation in the United States and Great Britain.

THE IRISH BUTTER TRADE.

From the Dublin Farmers' Gazette.

We learn from various sources that the farmers of the south of Ireland are becoming quite alarmed at the present state of the butter markets, and the look out seems very dark for the future of the dairy interests of the whole country. The cause of the present state of affairs is not very far to look for: depression in business in the manufacturing districts of England necessarily causes a smaller consumption of the luxuries of life, and the demand from cross channel is, therefore, bad. This, it is to be hoped, will right itself in time. But there is a very much more serious cause of low prices for butter, which it is a disgrace to the name of England to allow. We, of course, allude to the sale of butterine as pure butter. Canon Bagot has lately stated that he sent round to several shops in Dublin and asked for Cork butter, and the stuff sold him under this title was butterine, as examined by Dr. Cameron, without a trace of natural butter in it. Several of these shopkeepers were brought before Mr. C. J. O'Donel, at the Northern Police Court, the other day, and fines of £10 were inflicted on the parties; but this is not going to stop so profitable a trade. When a dealer can buy butterine at 7d. a lb. and sell it as butter at 1s., the profits on a few days' sales in a large concern would pay the fines. If the present state of affairs goes on long, we shall have half the farmers and dairymen in the country in a state of bankruptcy, and the depression must run its course to the landlord and merchant as well. Then, what is to be done? Are we all to sit down quietly and let this avalanche of ruin demolish us? It is all very well for Mr. Chamberlain to tell us that the consumer has protection under the Sale of Food and Drugs Act; but poor people who buy their pound or half pound of butter cannot be expected to take action in the matter, and these are the people who consume the bulk of the butterine in Dublin. We can expect nothing from the Board of Trade, which not only refuses to put down this bogus butter, but actually encourages it by giving facilities for its importation, it being actually classed with butter in the official import list. Canon Bagot made a suggestion in our presence—we think at the Dairy Conference of Gloucester last year—viz., that an association be formed for the purpose of ferreting out these cases of adulteration, and prosecuting the parties. At the time this was suggested butter was much higher in price than it is now, and farmers were heedless about it. Perhaps, if the Canon would take the matter up now he might receive more support.

FEEDING COWS WHILE AT PASTURE.

From the American Dairyman.

It will soon be time for the old question to recur to the dairyman, whether or not it pays to feed meal to the cows that are living on good flush pasture. While it is a fact that taken alone there is no better food for a cow than good pasture, yet the experience of many of the best dairymen throughout the country is in favor of quite a liberal feeding with corn meal and bran even while the cow is on the best of pasture and apparently doing as well as could reasonably be expected of her. It has been found that while green grass furnishes the finest of flavors and deepest of colors to the milk, a moderate supply of cornmeal to the cow will put into the milk. It also helps to enlarge the flow of milk, even though the cow has apparently been doing her best. When the cow has been living on grass alone, if sh

is suddenly given a heavy feed of meal while at pasture she is very apt to slacken up in her supply of milk, and the new experimenter immediately comes to the conclusion that meal may do for other people's cows while at pasture, but his cow does better without it. The fact generally is that the violent change has disarranged the cow's digestion, which naturally stops the flow of milk. There is a right way and a wrong way to do everything, and the right way to feed a cow meal, not only while she is at pasture, but at any time, is to begin moderately and increase the quantity gradually, so that the cow can assimilate her digestive organs to the demand that is made upon them. The fact may be observed if the meal is suddenly taken away from a cow, only to a more marked degree.

TRANSFERS OF THOROUGHBRED STOCK.

American Borkbire Record.

Sallie Cardiff XVI., 13230, and Elenwood Duke XX., 13531, Springer Bros., Springfield, Ill., to Wm. Mack, New Orleans, La.
 Duchess XXII., 13918, N. H. Gentry, Sedalia, Mo., to R. A. Jones, La Grange, Tenn.
 Eureka Beauty, 13497, N. H. Gentry, to R. J. Gray, Eureka Springs, Ark
 Black Hawk, 13499, N. H. Gentry, to W. K. Hocker, Hocker's, Ark.
 Lida, 13498, and Echo Hopeful II., 13500, N. H. Gentry, to A. R. Collins, Dennison, Tex.
 Lakeside Sallie, 13507, Pearl of Cazenovia, 13508, and Western Marquis, 13509, T. R. Proctor, Utica, N. Y., to Smiths. Powell & Lamb, Syracuse, N. Y.
 Charity, 11917, W. W. Mock, Martinsville, Mo., to J. L. Solomon, Martinsville, Mo.
 Champion, 4565, Scott's Hagar IV., 9288, Renfro's Hagar I., 9290, Renfro's Hagar V., 10,545, Duchess of Clinton, 12127, Renfro's Hagar VI., 12402, Gipsy Queen, 12432, and Fancy, 13,417, J. J. Renfro, Collinsville, Ill., to J. J. Renfro & Sons, Collinsville, Ill.
 Lady Glasgow, 13515, W. Warren Morton, Russellville, Ky., to John G. Smith, Glasgow, Ky.
 Alice Bowling, 13535, and Cedar Hill Sambo VII., 13538, W. T. Miller, Bowling Green, Ky., to W. E. Settle, same place.
 Mary Crown, 13536, and Cedar Hill Beauty V., 13539, W. T. Miller, to Settle & Rodes, Bowling Green, Ky.

SHORTHORN SALES.

The Central Illinois series of Shorthorn sales opened at the Springfield Fair Grounds on the 2nd inst. On that day Messrs. H. E. Gardner, Bradfordton, Ill., and J. S. Highmore, Rochester, Ill., sold 30 cows and heifers for \$3,140, an average of \$104.66; and 14 bulls for \$1,020, or an average of \$72.85. The total aggregate was \$4,160, making the average of the whole \$94.54. The highest priced cow was Nelly Bly of Inghurst. She brought \$280. The two highest price bulls were sold to L. C. Carlin, Edinburg, Ill., and Philemon Stout, Cotton Hill, Ill., at \$100 each.

On the 3rd inst. the sale was resumed in the forenoon at the same place, by J. N. Brown's Sons, Berlin, Ill., who disposed of 17 cows and heifers for \$2,500, an average of \$147.05, and 5 young bulls for \$745, an average of \$149. The total amount for which the 22 animals sold was \$3,245, or an average of \$149.

The highest priced cow was a Bates Barington that sold for \$270. The highest priced bull was 11th Duke of Athol, 38284, sold to W. H. Fulkerson, Jerseyville, Ill., for \$400.

In the afternoon D. W. Smith, Bates, Ill., sold 15 cows and heifers for \$770, averaging \$51.00, and 3 bulls for \$710.00, an average of \$236.66. Total aggregate \$1,480.00, being an average of \$185 each. The highest priced cow was Miss Washington 8th, sold to La Fayette Funk, Shirley, Ill., for \$230.00, and the highest priced bull was Mazurka Bean 2nd, 52751, sold to Geo. M. Caldwell, Williamsville, Ill., for \$330.00.

S. E. Prather, Springfield, Ill., sold at same time 11 cows and heifers for \$1,520.00, or an average of \$138.18, and 6 bulls for \$1,770.00, or an average of \$295.00, the total aggregate being \$3,290.00, an average of \$193.52. E. F. Iles, Springfield, Ill., bought the highest price cow, Water Lily 9th, in Mr. Prather's lot at \$250.00, and his highest priced bull, Prince William, was taken by H. B. Scott, Sedalia, Mo., at \$530.00.

After the above were disposed of, 8 other bulls catalogued for other parties were sold at an average of \$140.62 each.

The attendance during the second day was better than on the first, and the prices were more satisfactory to the sellers. Considering the high quality of most of the animals sold, the buyers must certainly be satisfied with the prices paid.

OLD OR POOR COWS.

National Live Stock Journal (Chicago).

He who has tried to fatten old cows that have reached the age of twelve or fourteen years, and have lost the power of the assimilating and digesting of food, knows enough to ever after put his grain to a more profitable use. These old pieces of farm furniture should be patched up and removed to the butcher before they have lapsed into that decrepit state which makes them mere exhaust machines for your corn cribs. The better plan is never to permit an animal to get old upon your hands. Failing qualities in a cow of eight or nine years of age should be anticipated sufficiently to permit you to make good beef out of her carcass. The dairyman who carefully tests each individual in his herd will not fail to distinguish very quickly those animals that are not profitable to him as dairy cows. Some, on making this discovery, are prone to neglect the feed of the delinquent, and let her remain in poor flesh, thus rendering her doubly unprofitable. This is a mistake. That most practical dairyman, Mr. H. B. Gurler, of DeKalb, says:—"When I discover that a cow is falling off, and that it will not pay to keep her in the dairy herd, I immediately proceed to dry her off, and increase her feed; I give her the last mouthful she will eat, and it is astonishing how soon she will get fat, and how fat. If you dry her off, letting her remain poor, it is terribly hard to get her in good flesh afterwards. By the first plan I come near getting my money back every time—sometimes do get it back and more—from the butcher."

A BUTTER TEST.

"By that means I convince my customers that I don't sell oleomargarine," said a white-aproned buttermilk man, pointing to two China sauce-boats that stood in a conspicuous place on his counter in the Farmers' Market, to a Philadelphia Times reporter. In each sauce-boat lay a little coil of common lampwick, one end of which hung out of the nose of the vessels. "Now," said the dealer, pointing to two firkins, "one of those contains oleomargarine, made in Connecticut, and the other holds salt-packed butter from Ohio. See if you can detect the genuine from the imitation." The re-

porter tried and failed. In flavor, smell, and appearance they were identical. The buttermilk man continued ".....The oleomargarine will deceive nine buyers out of ten, but I will expose it for you." He dropped a lump of the oleomargarine as large as an egg into a tin cup, and in another cup he placed a similar sized piece of the salt-packed. The cups were held over a blazing little charcoal furnace until their contents were melted. Then the oleomargarine was poured in one sauce-boat and the butter into the other. Both burned readily, and the butter sent up a faint and pleasant smoke. From the oleomargarine, however, came the nasty and unmistakable stench of burning rancid grease. "Since I began showing the difference between butter and oleomargarine," said the dealer, as he snuffed out the wicks, "my business has doubled."

CURE FOR A KICKING HORSE.

At McFarland's stables on Monday we saw a contrivance to cure a horse from kicking. It was nothing but an old wheat sack filled with hay, and suspended by a rope from the ceiling, so that the sack hung just at the heels of a vicious horse as he stood in his stall. When the sack was first placed in position the kicking equine let fly both feet at it as soon as it touched him, but after ten or twenty minutes of that kind of work he came to the conclusion that the sack would return as often as he struck it, and he finally gave up trying to "knock it out." This same horse, which has a reputation as a kicker, can now be hitched to any vehicle, and he will not kick at anything that happens to strike his heels. John McEnerney, who prescribed the treatment, says that any horse can be cured by it. One good feature about it is its cheapness.—Exchange.

MEASURING FIELDS.

- Five yards wide 968 long contains an acre.
- Ten yards wide by 484 long contains an acre.
- Twenty yards wide by 542 long contains an acre.
- Forty yards wide by 121 long contains an acre.
- Seventy yards wide by 69½ long contains an acre.
- Eighty yards wide by 60½ long contains an acre.
- Sixty feet wide by 720 long contains an acre.
- Sixty-six feet by 660 contains one acre.
- One hundred and ten feet wide by 397 long contains an acre.
- One hundred and thirty feet wide by 363 long contains an acre.
- Two hundred and twenty feet wide by 198 long contains an acre.
- Two hundred and forty feet wide by 181½ long contains an acre.
- Four hundred and forty feet wide by 99 long contains an acre.

With a slight alteration in the figures the following from Texas Stockman would fit this country:—"The business squeeze is kept up unnecessarily by men whose interest it is to keep it up. When 'Old twelve per cent.' gets a poor devil in the 'nine hole,' where he can bleed him a little extra, he don't care whether times ever ease up or not. When he gets the lemon squeezed dry, which in the natural course of things must be soon, we should not be at all surprised to see money easily obtainable in Texas at eight per cent. Then speculation will run rife, men will borrow money,

turn it loose, create a boom, get hopelessly in debt, when 'Old twelve per cent.' will begin to turn the crank backwards till the crash comes, and the borrower be busted—in favor of 'Old twelve per cent.' It is the old, old story, often learned, and soon forgotten."

Live Stock & Kindred Markets.

OFFICE OF THE CANADIAN BREEDER AND AGRICULTURAL REVIEW, TORONTO, JUNE 11th, 1885.

There has been no striking change in the condition of the British cattle trade since last report, but the tone has developed more unfavorable symptoms, which have rendered it very difficult to maintain values, although there has been no quotable decline. Receipts from Canada and the United States have continued heavy, but the fact that supplies from other sources have been light has prevented a serious break. Latest cables report trade generally dull and having a tendency to lower prices. The demand was very weak and irregular and a slow dragging trade was done at nominally unchanged prices. Considerable numbers were held over on Monday's market. Dressed beef in Liverpool was cabled lower at 4½d., against 5½d. last week. A London cable quotes refrigerated beef at 3s. 4d. for hindquarters and 1s. 8d. for forequarters per 8 lbs. by the carcase.

Quotations at Liverpool on Monday, being calculated at \$4.80 in the £, were:—

Cattle—	\$ c.	\$ c.	
Prime Canadian steers.....	0 14	to 0 00	per lb.
Fair to choice.....	0 13½	to 0 00	"
Poor to medium.....	0 12½	to 0 00	"
Inferior and bulls.....	0 9½	to 0 11	"

TORONTO.

The run of live stock on the local market this week is lighter than it was a week ago. The market is, on the whole, steady, and everything has been selling well. The receipts on Tuesday were 16 loads against 30 same day last week. The falling off is chiefly in shipping cattle.

CATTLE.—Shipping cattle are in steady demand, but owing to light supplies there has not been as much business done this week. A good many loads are going forward, but have been bought in the country, and are not offered for sale here. We hear of no sales as high as 5¼c., but choice loads would bring that figure. Among other sales are 20 cows and heifers, 1,300 lbs., at \$65 each; 8 steers, choice, 1,400 lbs., at 5½c. per lb.; 7 do., 1,325 lbs., at 5½c.; 1 bull, 1,570 lbs., at 4¼c.; 21 mixed shippers, 1,300 lbs., at \$63 each. The demand for butchers' keeps up. The supply, however, has been rather better this week, and is about equal to the demand. Prices are not as firm as they were on Friday last, but are steady at an advance of ¼c. per lb. on a week ago. Choice butchers' sold to-day at 4¾c. to 5c. The following may be taken as representative sales:—21 butchers', weighing 1,050 lbs., at \$54 each; 14 do., 900 lbs., at \$41; 22 do., 975 lbs., at \$44.50; 14 fair quality, 1,050 lbs., at \$46 each; 3 fat cattle, 1,150 lbs., at \$55 each. About 40 milk cows were offered. The demand was just fair, a good many remaining unsold. Sales were made at \$26 to \$50 for common to choice grades.

SHEEP AND LAMBS.—Sheep were in pretty good supply, but there were none too many offered yesterday. Among the sales were a bunch of clipped weighing 120 lbs. each at \$5.25; 23 with wool and 4 without, middling quality, 100 lbs., at \$6. Prices are steady. Spring lambs are not offering very freely. Good are wanted. Prices are unchanged; 3 common sold yesterday at \$7.

CALVES.—Are in good fair supply, and are selling fairly well. Among the sales this week were 12 at \$6 each; 2 at \$16; and 2 at \$10.

Hogs. The demand for light fat hogs is somewhat improved since Friday last, and prices have advanced 4c. per lb. to 4 1/2 to 4 3/4 c. a few sold yesterday at 4 1/2 c. Heavy fat hogs meet a slow market, and nothing over 4c may be expected. Store hogs are wanted, the supply being very light at 5 to 5 1/4 c. per lb.

The following are the receipts of live stock at the cattle market here for last week and to date, with comparisons:

	Cattle	Sheep and Lambs.	Hogs.
Week ending June 6.....	1,630	259	157
Week ending May 30.....	1,101	29	185
Cor. week, 1884.....	499	192	149
Cor. week, 1883.....	571	104	140
Total to date	20,332	3,408	2,360
To same date 1884.....	14,123	4,983	2,741
To same date 1883.....	13,324	4,668	2,007

Quotations are as follows

Cattle, export choice.....	5 1/2 to 5 3/4	per lb
" " mixed.....	5 1/2 to 5 3/4	"
" bulls.....	4 to 4 1/2	"
" butchers', choice.....	4 1/2 to 5	"
" good.....	4 1/2 to 4 3/4	"
" common.....	3 1/2 to 4 1/4	"
Milk cows.....	\$26 to 50	
" stockers.....	3 1/2 to 4 1/2	"
Sheep with wool, choice, per head.....	5 50 to 6 50	
" secondary qualities, per head.....	5 50	
" clipped.....	4 00 to 5 50	
Spring lambs, per head.....	2 50 to 4 25	
Hogs, fat, off the car.....	4 to 4 1/4	per lb.
" store.....	5 to 5 1/4	
Calves, choice, per head.....	\$6 00 to \$8 50	
" common.....	2 to upwards.	

MONTREAL.

The exports of cattle from Montreal continue heavy, in fact are the largest in the history of the trade. Last week 4,651 head went out, making the total exports to date 13,745—an increase of 2,991 head over 1884, and an increase of 1,864 over 1883. Since Thursday there has been a good demand from exporters, who seemed anxious to buy, and the decline noted has been nearly recovered. As most of the receipts have been on through shipment the offerings were unable to supply the demand—hence the advance. On Monday the market was well cleaned off at the advance, and all desirable stock was quickly disposed of. Sales of choice heaves were made up at 6c. per lb. live weight, and some fine lots were placed at 5 1/4 c., with fair grades at 5c. to 5 1/2 c. We quote 5c. to 6c. per lb. live weight, as to quality. Last year at this date export cattle sold at 5 1/2 to 6 1/4 c. Freight space has been in good demand at 60s., while freights from Boston remain at 40s. Export sheep were quoted nominally at 4c. per lb. live weight. Live hogs were steady at 5 1/4 to 5 1/2 c. per lb. At Viger market on Monday the receipts were 200 head, for which a fair demand existed. Prices were steady and the offerings were all cleared out. Good to choice heifers and steers sold at 4 1/2 to 5 1/4 c. and common to fair at 3 1/2 to 4 1/4 c. per lb. live weight. There were 100 sheep offered, which sold at from \$3.50 to \$4 each as to quality. Lambs were in active demand, there being 200 head offered, which brought \$4.50 to \$5 each. Receipts of calves were moderate and prices easier, some 200 head selling at from \$2.50 to \$3 each, according to quality. There were 80 young pigs, which sold at \$1 to \$2.50 each.

PRODUCE

The week has been a period of continued dullness with buyers and sellers apart; offerings of different goods ranging in amount, but generally considerable. Prices also have varied in tendency, and in some cases there cannot be said to have been any other than nominal prices ruling. Outside advices show English markets generally to have been weak, though the actual decline small, and States markets firmer. Local stocks in store sold on Monday morning as follows:—Flour, 3,125 barrels; fall wheat, 155,915 bushels; spring wheat, 71,199; oats, 16,719; barley, 21,002; peas, 8,862; rye, nil. Wheat in transit for England shows a decrease on the week, standing on the 5th ult. at 3,225,000 quarters, against 3,125,000 on the 28th ult. In the States the visible supply of wheat stood at 37,234,000 bushels against 36,773,000 in the preceding week, and 16,365,000 last year.

PRICES AT LIVERPOOL ON DATES INDICATED.

	June 2.	June 9.
Flour.....	00s 0d	00s 0d
R. Wheat.....	7s 2d	7s 0d
R. Winter.....	7s 3d	7s 2d

No. 1 Cal.....	7s 0d	7s 0d
No. 2 Cal.....	6s 8d	6s 8d
Corn.....	4s 6 1/2 d	4s 6 1/2 d
Barley.....	00s 0d	00s 0d
Oats.....	00s 0d	00s 0d
Peas.....	5s 9d	5s 8d
Pork.....	58s 0d	57s 0d
Lard.....	33s 3d	34s 0d
Bacon.....	28s 6d	28s 6d
Tallow.....	31s 3d	31s 6d
Cheese.....	40s 0d	36s 0d

FLOUR.—There has been scarcely any business at all done; and there has been none of the little done that was reported. Values have continued tending downwards; and at the close superior extra was offered at \$4.10 and extra at \$4.00 with no bids.

BRAN.—Has been steady; sold at equal to \$10.50, which price seemed likely to be repeated at the close.

CAIMFAL Inactive; cars usually held about \$4.25 with no sales quoted, small lots ranging from \$4.50 to \$5.

WHEAT. Inactive, but held steadily in sympathy with the firmness in the States. No. 2 fall sold towards close of last week at 89 and 90c. f.o.c., but this seems to have been about the only business done. No. 1 spring would probably have been taken at about 91c. and No. 2 at 88c. had they been offered, and at the close 90c. was again bid for No. 2 fall. On street receipts have been on the increase, with prices firmer at \$7 to 89c. for fall and spring, and 75 to 77c. for goose.

OATS.—Have been offered freely and sold slowly, and when sold only at a fall. Cars on track went off at the close of last week at 35 and 36c., but at the close of the market 35c. seemed to be the top price being paid. On street prices closed at 38 to 39c.

BARLEY.—There have been a few small sales on the street at 55c., but lots neither offered nor wanted.

PEAS.—Scarce and unchanged, No. 2 being held at 68c. with buyers at 66 1/2 to 67c. Street receipts very small at 64 to 65c.

RYE.—Nominally unchanged at 70 to 71c.

HAY.—Pressed has been steady at \$16 to \$17 for timothy in car-lots. Market receipts irregular but closing with a good supply in; prices ranged from \$9 to \$13 for clover, and \$15 to \$19 for timothy.

STRAW.—Has been in good supply but all wanted at steady prices, closing at \$7.50 to \$8.50 for loose and \$11 to \$12 for sheaf.

POTATOES.—Inactive and very weak, cars being offered all week at 25c. and some said to have sold lower. Street receipts very slow of sale about 25c. per bag.

APPLES. Little or nothing doing, but good fruit wanted and higher, being worth \$3 to \$3.50, with inferior selling down to 2c.

POULTRY.—Very quiet; a few spring chickens have sold at 60 to 75c. per pair, and a few turkeys at \$1 to \$1.50, but beyond this nothing has been done.

TORONTO MARKET.

Flour, p. brl., f.o.c., Sup. extra.....	\$4 10	10 80 00
" " Extra.....	4 00	10 00 00
" " Strong Bakers'.....	0 00	10 00 00
" " S. W. Extra.....	0 00	10 00 00
" " Supertine.....	0 00	10 00 00
Oatmeal.....	4 25	10 00 00
Cornmeal.....	0 00	10 3 50
Bran, per ton.....	10 50	10 00 00
Fall wheat, No. 1.....	0 00	10 00 00
" No. 2.....	0 90	10 00 00
" No. 3.....	0 86	10 0 87
Spring Wheat, No. 1.....	0 91	10 00 00
" No. 2.....	0 88	10 0 89
" No. 3.....	0 00	10 00 00
Barley, No. 1.....	0 00	10 00 00
" No. 2.....	0 60	10 00 00
" No. 3 Extra.....	0 55	10 00 00
" No. 3.....	0 50	10 00 00
Oats.....	0 35	10 00 00
Peas.....	0 67	10 0 68
Rye.....	0 70	10 00 00
Corn.....	0 00	10 00 00
Timothy Seed, per bush.....	2 00	10 2 15
Clover.....	6 75	10 00 00
Flax, screened, 100 lbs.....	0 00	10 00 00

PROVISIONS.

BUTTER.—There has been some little movement effected in old for shipment; a few lots of selected have changed hands at 7c., at 7 1/2 c., and at 8c.; but these were really good lots which would usually be considered up to the mark for city tables. New has come forward slowly and has not been very highly

complimented for its quality; both rolls and tubs have usually sold at 12 to 13c. On street pound rolls have gone off freely at 15 to 16c. but no tubs offered.

CHEESE.—Some trade lots of new have been sold at 7 1/2 and 7 3/4 c.; small lots easy at 9c. for new and 11 to 11 1/4 c. for really fine old.

EGGS.—Unchanged; all offered have been taken at 12c. for round lots. Street prices 13 to 14c.

PORK.—Easy at \$15 to \$15.50, with small lots selling.

BACON.—Very little moving and prices apparently weak. Long-clear in car lots not worth over 7 3/4 c., and cases selling at 8c.; Cumberland quiet at 7 1/4 to 7 1/2 c. Rolls and bellies firm at 9 1/2 to 10c. for rolls and 11 to 12c. for bellies.

HAMS.—A good demand has been maintained; one lot of 2,000 pickled sold at 10c.; smoked in small lots steady at 11 1/2 to 12c. but no large sales quoted.

LARD.—Weak at 9c. for tinnets and 9 1/2 c. for pails but more taken at these prices.

HOPS.—Offerings small and prices firm at \$6 to \$6.75 at the close.

SALT.—No Liverpool dairy yet in, but Canadian in 56 lb. bags selling in its stead at 50c. Liverpool fine has been in rather better demand at \$1.45 to \$1.50, and coarsers quiet and unchanged.

DRIED APPLES.—Trade-lots not much wanted and dealers selling small lots only slowly at about 5c. for these and 7 1/2 to 8c. for evaporated.

HOPS.—There have been a few single bales of good quality sold at about 12 1/2 c., but nothing else doing.

TORONTO MARKETS.

Butter, choice dairy, new.....	0 12	10 0 13
" good shipping lots.....	0 07	10 0 08
" inferior, &c.....	0 05	10 0 00
Cheese, in small lots.....	0 09	10 0 11 1/2
Pork, mess, per brl.....	15 00	10 15 50
Bacon, long clear.....	0 08	10 0 00
" Cumberland cut.....	0 07 1/2	10 0 07 1/2
" smoked.....	0 00	10 0 00
Hams, smoked.....	0 11 1/2	10 0 12
" cured and canvassed.....	0 00	10 0 00
" in pickle.....	0 10	10 0 10 1/2
Lard, in tinnets and pails.....	0 09	10 0 09 1/2
" in tierces.....	0 09	10 0 00
Eggs.....	0 12	10 0 00
Dressed hogs.....	6 00	10 6 75
Hops.....	0 10	10 0 15
Dried apples.....	0 04	10 0 05
White beans.....	0 75	10 1 20
Liverpool coarse salt.....	0 65	10 0 75
" dairy, per bag 56 lbs.....	0 50	10 0 00
" fine.....	1 45	10 1 50
Goderich, per barrel.....	0 95	10 0 00
" per car lot.....	0 90	10 0 00

HIDES, SKINS, AND WOOL.

HIDES.—Green steady but unchanged at last week's decline; with offerings of fair amount; cured readily taken with sales at 8 1/4 c.

CALFSKINS.—Have been offered steadily and been taken readily at former prices.

SHEEPSKINS.—There has been only a very small business done all week; prices much as before at \$1.40 to \$1.50 for the best green, and country lots almost nominal.

LAMBSKINS.—Have been in fairly good supply and have sold as before at 25 to 30c. for the best green.

WOOL.—There has been a good deal offered by farmers through the week and it has all been readily taken at 17 to 18c. for new fleece. No trade lots have been yet offered; nor has any demand for pulled wools been heard, values remaining nominally unchanged.

TALLOW.—Has shown no change; offerings fairly good but all taken at 6 1/2 c. for rendered and 5 1/2 c. for rough.

Hides and Skins		
Steers, 60 to 90 lbs.....	50 08 1/4	10 50 00
Cows.....	0 07 1/2	10 0 00
Cured and inspected.....	0 08 1/2	10 0 08 1/2
Calfskins, green.....	0 11	10 0 13
" cured.....	0 13	10 0 15
Sheepskins.....	1 00	10 1 40
Lambskins.....	0 20	10 0 30
Pelts.....	0 00	10 0 00
Tallow, rough.....	0 03 1/2	10 0 00
" rendered.....	0 06 1/2	10 0 00

Wool		
Fleeces, comb'g ord.....	0 15	10 0 18
" Southdown.....	0 21	10 0 22
Pulled combing.....	0 17	10 0 18
" super.....	0 21	10 0 22
Extra.....	0 25	10 0 27

CANADIAN PACIFIC RAILWAY STOCK YARDS AT MONTREAL.



High Ground, well Drained.
Most Modern arrangements for Feeding
and Watering Cattle.

Convenient to City Markets and Shipping
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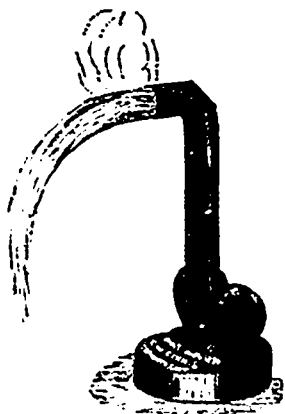
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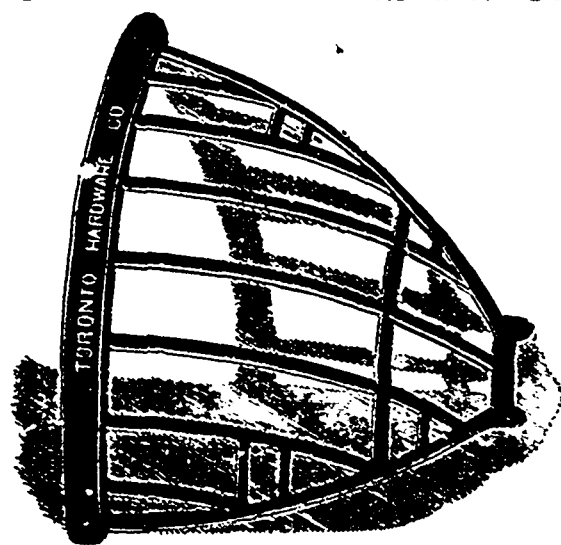
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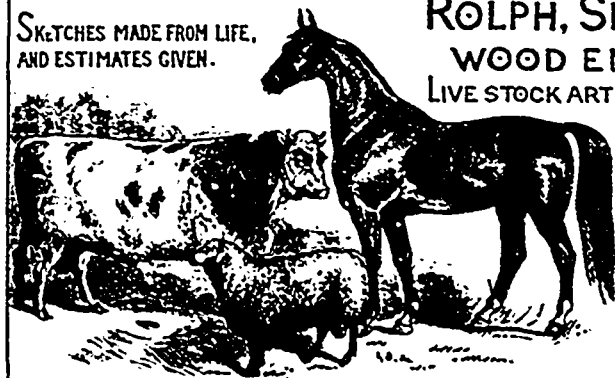
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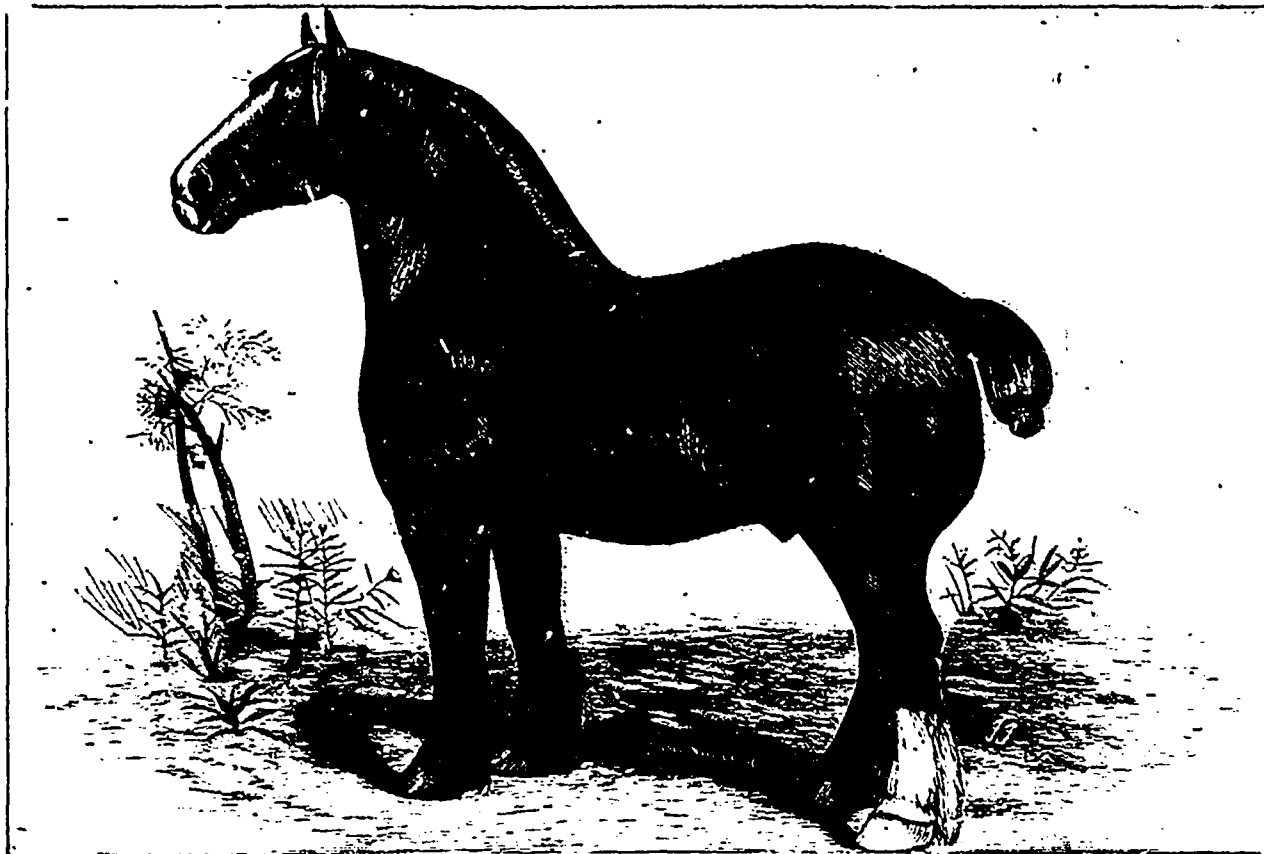


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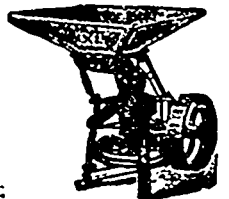
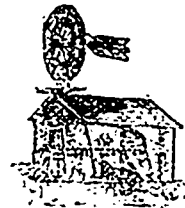
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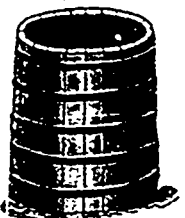


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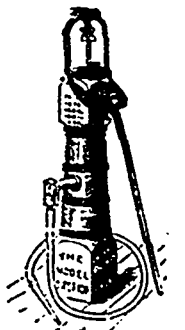
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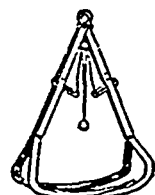
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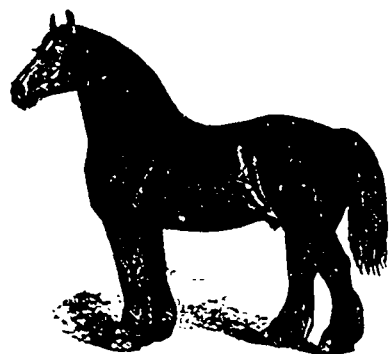
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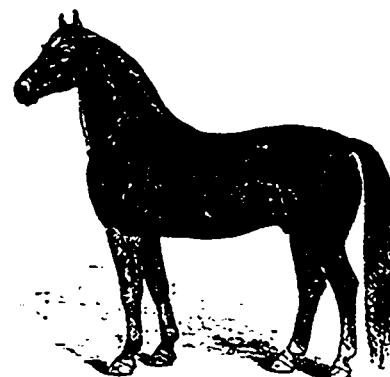
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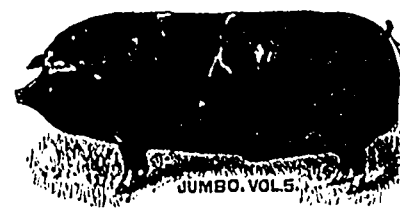
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13 to 15 hands. Very hardy and perfect in
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Bred from imported stock—the boar in use
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SEVERAL PRIZE WINNERS
In stock. Address:
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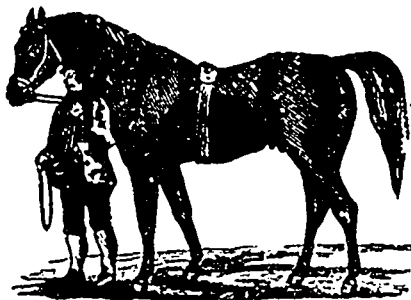
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This property will be sold cheap and on easy
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100 ACRES.
Stone Dwelling, Barns, Stables, Sheep
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Soil clay loam. Water good and abundant.
All in good order.
This farm is in one of the best counties in
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MILESIAN AND ORIOLE OAKRIDGES. WILL STAND FOR MARES AT THEIR OWN STABLES.

MILESIAN, by Imported "Mickey Free," dam "Mama Hampton," has been the best horse over hurdles in America...

ORIOLE, now 5 yrs old, by "Emin Chief," dam thoroughbred mare "Mouena," by imported "The Fester," grand dam by "Val Paraiso," is for appearance and speed admitted to be superior to his celebrated sire.

TERMS:

To insure a Foal, Single Leap, \$15 10 Mares taken to pasture and carefully attended to on reasonable terms.

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IMPORTED STALLIONS YOUNG HERO (SUFFOLK PUNCH)

AND ST. ELMO (NORFOLK COACH HORSE.)

NOTICE.

Having met with a severe accident a few weeks ago, I will not be able to travel my imported Stallions, "Young Hero" and "St. Elmo," over the route which I had intended during the coming season.

They will be kept for service, however, at their own stables, at the IMPERIAL HOTEL, GALT, where every facility will be afforded those who wish to breed from these fine animals.

Galt, April, 1885.

WM. SADLER.

THE OLD HORSE

TERROR

Will Stand at his own Stables,

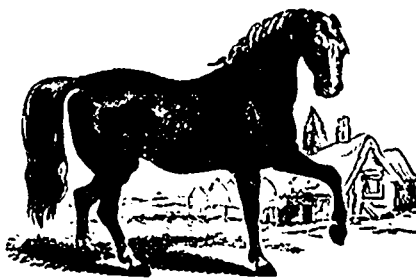
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FOR THE SEASON.

TERMS:

To insure Foal \$20 00 Thoroughbred 25 00 Single Service 10 00 Season Mares 15 00

\$5 00 to be paid at the time of service. Pasture provided. Will not be responsible for escapes or accidents.



SEASON OF 1885.

CLEAR GRIT STALLION

The Major.

Sorrel horse foaled June 16th, 1881; bred by Mr. James McMullin, of Seaford, the home of old "Clear Grit," sire of Abber, 225; Little Billy, 225; St. Patrick, 226; Clothas Pin (trial), 222; Flora F., 224; Billy M. (sacer), 219; Fuller (sacer), 213. The Major is a beautiful golden sorrel, with white on all of his feet and white blaze on face, stands 15 1/2 hands good, and weighs 1,100 lbs., being a splendidly developed horse of great bone and muscle, with the fine, slashing gait characteristic of the great family of Clear Grits. He also took second prize last fall at the Industrial Show against a field of eighteen. He has never been handled, but a brother of his, twenty months old, trotted 1 mile this winter in 15 seconds.

The Major's dam, Aunt Betsy, by Harper by Lexington, out of a Black Hawk Morgan mare, Aunt Betsy being one of the best roadsters in Western Canada, and being recently sold to Mr. George Jackson, of Minneapolis, U.S., at a large figure, for breeding purposes. The Major is considered by the best judges to be the finest bred colt left from his renowned sire, old "Clear Grit."

The Major will be located at the CITY HOTEL, STABLES in GUELPH, for the season of 1885, where he will serve a limited number of mares, being stinted to 25 mares.

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Bred by H. O. Goodrich, on the Farm of Alden Goldsmith, Orange County, N.Y., the owner of "Volunteer." A dark mahogany bay, 16 hands high, and weighs 1,275 lbs.

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By Goldsmith's Volunteer; first dam Lady Diamond, by Billy Rix, by Gifford Morgan, by Woodbury, by Justice Morgan, second dam by Gamble's Grey Eagle, Grey Eagle by Woodpecker, first dam Ophelia by Wild Medley, second dam by Sir Archy, third dam Lady Chesterfield by Imp. Diomed, fourth dam Lady Bollingbroke by Imp. Pantaloon, fifth dam C des by Wormsley's King Herod.

Goldsmith's Volunteer by Rysdyk's Hamboldtman, by Abdallah, by Mambrino, by Messinger, &c., dam by Young Patriot.

Terms - For the Season, \$20, payable 1st of January, 1886. Mares not proving in foal can be returned next season free of charge, providing Chicago Volunteer is living and in my possession. All accidents at owner of mare's risk. Good pasture at \$2.50 per month. All expenses at risk of owner of mares.

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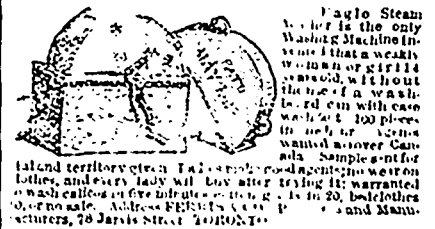
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What is Catarrh?

Catarrh is a mucous purulent discharge caused by the presence and development of the vegetable parasite ameba in the internal lining membrane of the nose. This parasite is only developed under favorable circumstances, and these are: Morbid state of the blood, as the blighted corpuscle of tubercle, the germs of syphilis, mercury, toxemia, from the retention of the effete matter of the skin, suppressed perspiration, badly ventilated sleeping apartments, and other poisons that are generated in the blood. These poisons keep the internal lining membrane of the nose in a constant state of irritation, ever ready for the seeds of these germs, which spread up the nostrils and down the fauces or back of the throat causing ulceration of the throat up the eustachian tubes causing deafness, burrowing in the vocal cords causing hoarseness; usurping the proper structure of the bronchial tubes, ending in pulmonary consumption and death.

Many attempts have been made to discover a cure for this distressing disease by the use of inhalations and other ingenious devices, but none of these treatments can do a particle of good until the parasites are either destroyed or removed from the mucous tissue.

Sometimes since a well known physician of forty years' standing after much experience, succeeded in discovering the necessary combination of ingredients, which now fails in absolute and permanently eradicating this horrible disease, whether standing for one year or for forty years. Those who may be suffering from the above disease should, without delay, communicate with the business manager of MESSRS. A. H. DIXON & SON, 305 King Street West, Toronto, and get full particulars and treatise free by enclosing stamp. - Mail (Canada.)

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The Government will defray the cost of freight in conveying Canadian Exhibits to Antwerp, and from Antwerp to London, and also of returning them to Canada in the event of their not being sold.

All Exhibits for Antwerp should be ready for shipment not later than the first week in March next.

These Exhibitions, it is believed, will afford favourable opportunity for making known the natural capabilities and manufacturing and industrial progress of the Dominion.

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By order,

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Secy., Dept. of Agric.

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