

be cast in old barrels and shipped by rail to the dens of the tallow buttermakers, and then mangled and tortured into a wretched counterfeit, to be offered to consumers as a substitute for the fragrant product of the farm, is not a pleasant one to a person who takes pride in the history and progress of our grand dairy industry. And yet just such is the course of affairs." Referring to the above, the *New York Journal of Commerce* says:—"Notwithstanding the vigorous language here employed, the worst possibilities of the case are quite passed over. It is a fact, we believe, that oleomargarine is manufactured at a temperature below 120 degrees, that the stomachs of hogs form a part of the material used, and that the germs of septic organisms generally, and especially trichinae, require a much greater heat for their destruction. Consequently, if, in the indiscriminate collection of slaughter-house refuse the remains of diseased animals should chance to be included—and this is stating the contingency very mildly—the living germs of the disease must inevitably pass into the product, go 'alive and kicking' upon the breakfast table and into the stomachs of the unlucky consumers. Eminent chemists have certified strongly to the wholesomeness of oleomargarine, and doubtless the specimens tested by them contained no obnoxious germs; but the value of such certificates seems to be limited to the individual specimen under examination. The chemist might find one article submitted to him to be clean raw fat or tallow, which, of course, is not unwholesome, however repugnant to civilized tastes, but another tub might yield living trichinae, or other germs of disease, and the consumer of the second specimen would find the certificate of the most eminent chemist woefully insufficient to protect him from the insidious attack of the enemy taken into his system." The startling assertion is also made that "simple-minded dairymen appear themselves to be succumbing to the temptations which the 'new industry' holds out to those who are making haste to be rich without regard to means, and that many thousand pounds of tallow oil are now weekly shipped from New York city to farmers for use in adulterating the products of the churn and cheese factory.

The sooner the butter makers of Canada wake up to the fact that the great bulk of their butter has to compete with what is produced from such sources and sold as butter, the better; and what is more, much of this artificial butter is by far preferable to much of the genuine article, and the butter-makers themselves, not knowing whence it came, would pronounce in favor of the "tallow butter."

A Board of Agriculture

Has been established in the Province of New Brunswick. Hon. M. Wedderburn is appointed president, J. C. Fairweather, vice-president, and a secretary and full board of directors.

In accordance with the desire of a large number of the agricultural class of the province, the government has asked and received from the legislature permission to establish this board.

Their first meeting was in Fredericton, Nov. 14th. The president delivered an able and lengthy address, from which we abridge some of the principal facts. In speaking of the future of agriculture, he said: the farmers, as a class, must lay more stress on education, and the exercise of their mental abilities in the cultivation of the farm; this he made a very urgent point, and showed most clearly that those farmers who exercised their mind by studying their business, keeping if possible ahead of the times in all agricultural improvement were the men who were always the most successful farmers.

He then took up the subject of agricultural education, and said there was a great necessity of a better system than now exists in the Dominion.

True agriculture is essentially a science. But in a young country, beginning to a great degree at the initial lessons of scientific knowledge as to this industry, we must start out carefully and economically. While the establishment of a model farm and an agricultural college has already received much attention at the hands of the govern-

ment, as it will doubtless also receive from you, we can only move by the process of gradual and regulated progress, and must at once meet the perplexing problems suggested by the financial requirements and resources of the Province. But pending, and even after, the solution of these and cognate difficulties, I think the study of elementary agriculture, or rather the elements and principles of agriculture, may very properly and more generally be introduced into all the schools and colleges of the country, where and whenever the need of a distinctive course of study in that direction shall be deemed desirable or necessary—then the more advanced stages; nor can I see why a judicious and systematic course may not be prescribed, under certain limitations and regulations, in the Normal School, for perfecting the information of those student teachers who may reasonably expect to spend the years of their professional life in agricultural districts, and in supplement of the addition of "The Principles of Agriculture" to the syllabus examination for school licenses recently prescribed by the Board of Education. Until we reach the achievement of agricultural colleges and model farms, we may, I think, wherever necessary, take advantage of the educational machinery we have, and that without at all increasing the cost of our Provincial educational establishment. Why should, and how can, the agriculturist, be he ever so clever and intelligent generally, hope to attain success—success in its true sense—if we have not as much knowledge of his craft as hath the true botanist, chemist, geologist, architect or machinist of his? I do not say, however, that to be a successful farmer and to understand the instincts of stock and treatment of soils, he must be able to write learned disquisitions on veterinarian pathology, anatomy and physiology or agricultural chemistry and meteorology, but I do say he must know much more than a large number of his class know, or seem to care to study, of the true varieties, ingredients and possibilities of soils, of the proper principles of drainage, dyking and tillage, of deep and light ploughing and subsoiling, of cropping and the rotation of crops, of the uses and adaptability of phosphates and manures, of the pure breeding and proper grading and better housing and more regulated feeding of stock, and generally of labors vitalized and systematized by sound principles of agricultural economy; and while he may not become a profound professor he will, doubtless, attain the position of a prosperous and progressive practitioner—have his work pervaded and impelled by a stalwart common sense rendered more comprehensive and valuable by healthful mental discipline, and become a living benefit.

In speaking of the Expert Cattle Trade, he urged the necessity of a speedy infusion of new and pure blood, and of careful selection, in view of producing the best.

One great necessity to the success is cheaper and more accessible and expeditious means of transportation to the English market. Were it not lamentable, the present principle route would be simply laughable. It is high time we had a line of steamers adapted to this and other branches of trade, from New Brunswick to Great Britain, and, I think, it will be the duty of this Board, in unison with other well directed methods, to press, by all legitimate means, upon the Federal Government the immediate necessity and absolute justice of a sufficient subsidy in aid of so important a work.

After the address, the board proceeded to regular business. After much discussion, among other things, they resolved,

That this Board do at this session take such steps as they may deem advisable to secure an importation of breeding stock for 1881 by strongly recommending the importance of the same to the favorable consideration of the Government.

They then selected several breeds of cattle, sheep and swine, and recommended same to the government; total cost of same to be \$12,750.

They also recommended to the government the introduction into the schools and colleges of such a system of agricultural education as will be beneficial, without greatly increasing the expenses.

LEPROSY IN CALIFORNIA.—Notwithstanding the efforts of the authorities of San Francisco to prevent leprosy among the population by sending back all Chinese lepers that could be found, it appears that the terrible disease has secured a foothold there. One physician reports that sixteen white lepers, of both sexes, have applied to him for treatment within a short time, and all of them incurable.

Desirable Points of Cattle.

The late Mr. McCombie (the great Scotch cattle breeder and dealer), in speaking of Galloways, says:—On poor land they are unrivalled, paying a better profit than any others except the small Highlanders. Although they are a good cattle to graze, they are not so easily finished as the Aberdeen or Angus. They have too much thickness of skin and hair, too much timber in their legs, too thick in the tails and deep in the neck, and sunken in the eyes, for being fast feeders. It is difficult to make them ripe. You can bring them to three-quarters fat, and there they will stick. It is difficult to give them the last dip. If, however, you succeed in doing so their beef commands a high price. He says, a perfect breeding or feeding animal, no matter to what breed it belongs, should have a fine expression of countenance, which should be mild and gentle. The animal should be fine in the horn, with clear muzzle, a fine tail and not ewe-necked. Short in the legs. It should have a small, well-put-on head, prominent eye, a skin of medium thickness, which should be covered with silky hair, should have a straight back, be well ribbed up its hook bones, should not be too wide apart. A wide hooked animal, especially a cow after calving, always has a vacancy between the hook-bone and tail, a want of the most valuable part of the carcass. No animal should put on its flesh in patches, but should distribute it evenly over the carcass, should have deep thighs, prominent brisket, deep in fore-ribs. Its outline ought to be such when in good flesh, that if a tape line is stretched from the foreshoulder to the thigh, and from the shoulder along the back to the extremity, the line should touch all parts, showing no vacancies, and from the shoulder-blade to head should be well filled up. Thick legs and tail, sunken eyes and deep neck, with thick skin and bristly hair, always point to a sluggish feeder.

Highland Cattle

Are a breed which has been bred among the highlands of Scotland for a very long time. They are small and hardy, producing the best quality of beef, which commands the highest price in the markets where it is sold. They are essentially a beef producing breed, not being suitable for dairy purposes; they are generally allowed to suckle their own calves. The late Mr. McCombie pronounces them very good as grazers, but totally unfit for stall-feeding, on account of their wild and restless disposition. We do not think they would be suitable for any portion of our Province, as it is necessary to stable during winter. In the mountainous regions of the West they would, no doubt, be found very profitable, provided the climate did not necessitate their being closely housed.

Mr. G. Mander Allender, Managing Director of the Aylesbury Dairy Company (limited) of London, has been elected by the Royal Agricultural Society of England, Steward of Dairying, for the next show to be held at Derby, in 1881. It will be Mr. Allender's desire to exhibit all processes of cream raising, cheese making, and every new improvement in dairy utensils, also the best plans of cooling dairies with or without the use of ice. All systems and machines will be practically tested during the show.

CATTLE FOR THE ENGLISH MARKET.—The *Drovers' Journal*, Chicago, says: The daily presence of buyers here who are constantly making purchases of cattle for the English markets is now a marked feature in our trade—it is well known that only cattle of the best quality that can be produced will meet the demand for the English trade, which has now grown to formidable proportions. Well matured Short-horn graded cattle are the kind that have been mostly purchased for the English trade, though Hereford grades are readily taken when they appear in the market good heavy old fashioned cattle are in good demand.