

doubtless, a matter of the first necessity. Two principal gases are developed in the cowhouse: one arising from the respiration of the cattle, the other from the manure. As these gases do not rise in great quantity higher than 3 or 4 feet from the floor, it will be proper for the ventilators to descend low enough to aerate, not only the upper part, but, more especially, the lower level of the house. Of course, one concludes from this that the house should not be open in winter, but that air-tubes, a little narrower than the openings of the ventilators, should be placed in the lower part of the cowhouse opposite to ventilator-pipes, and a good distance from them. These air-tubes might pass under the ground, so that the air may get warmed a little before it gets into the house. A ventilator that only goes just through the ceiling would only remove part of the carbonic acid and ammoniacal gas.

Cleanliness, too, contributes greatly to the purity of the air in the cowhouse. An essential point is that the floor of the house (*under the cows?*) be water-tight, very short, and only raised 7 or 8 inches above the passage. In this way, the dung and urine will not fall on the floor where the cows stand, and they will always have a clean, dry bed to lie on.

The walls, as well as the divisions of both stable and cowhouse should be tarred up to four feet from the ground; the rest of the lateral surfaces (?), as well as the ceiling should be washed with lime and salt. Tar and lime will keep vermin and insects at a distance, and the general appearance of tidiness they exhibit will tend to induce the farmer to take the best possible care of his cattle.

OUR TRADE WITH ENGLAND

Interview between Mr. Stark of Liverpool and the Hon. Louis Beaubien—Importance of the butter trade—Packing—Necessity of regularity in the despatch of butter—Inspection—The best season for Canadian butter-sales—Faults of our cheese—Improvement in our egg-sales—Packing eggs—Great improvement in our apple-trade—Canada bacon much better than U. S. bacon—Letter from M. J. de L. Taché.

On the 10th of last January, Mr. Walter Stark, of the firm of Marples, Jones, & Co., of Liverpool, happening to be at Quebec, had an interview with the Hon. Louis Beaubien a propos of our trade in butter, cheese, bacon, apples and eggs, with England. According to this merchant, the policy of the government in encouraging the export of butter has already produced, and will continue to produce, the best effects. Our English butter-trade would have been utterly ruined had we not adopted plans for despatching this article in a fresh state, regularly every week. If we continue this system, the export trade in butter will become greatly improved.

Butter.—For packing, Mr. Stark prefers boxes to tubs. He says that the wood we use gives some of the butter a bad taste, in spite of the parchment paper with which it is surrounded. In Denmark, where the boxes are made of beech-wood, this fault does not exist, while in our boxes, or tubs, of bass-wood or some other soft wood, it does. Cannot we get rid

of this fault by using beech or maple for our butter-packing? The St. Hyacinthe Dairy-school should try experiments on this point.

Mr. Stark strongly advises the despatch of fresh butter regularly every week. Otherwise, we run the risk of having this article refused on the English market.

Last fall, he received 100 tubs of butter that had been kept several months in refrigerators at Montreal. He distributed it among the grocers in England, and ten of them, having lost several customers on account of the inferior quality of this butter, have decided to buy no more Canada butter.

By this we see what great need there is of making butter of the best quality and sending it over in good condition. Mr. Stark says it ought to be despatched within a week of its churning, and even sooner if possible, and it should reach the English market within three weeks of its manufacture. He recommends us to have our butter examined by an inspector, and each package should after inspection, be stamped by that official. In Australia, all the export-butter is inspected.

We should attend more to the Liverpool market than to that of Bristol. In the latter place, butter sells for a shilling the cwt. less than at Liverpool.

In Mr. Stark's opinion, the date of the making of the butter should not be stamped on the package. He approves of the freezing of butter, which, he says, does not at all injure its quality, though fresh butter is of course better than frozen butter.

In June and July, the Irish and the Danes send a vast quantity of butter to England. At that season, it is rather difficult to sell our butter, but, in spite of that, Mr. Stark advises us to keep on sending some of our fresh butter regularly every week, to make it known and appreciated. In August, less Irish and Danish butter arrives, and people begin to ask for Canada butter; this demand increases in September, but the best months for its sale are October and November.

Mr. Stark strongly advises the government to give a premium of 1 cent a pound for one third of the make from June 1st to November 1st, always provided that butter be sent fresh.

The drought of last summer diminished the product of butter in Australia by 25%, and the make of cheese fell off in about the same proportion.

Mr. Stark's visit to Canada has for its object the favouring of the organisation of refrigerators on a line of steamers between Canada and England. He will promise the whole of the trade of his firm to the company that shall provide their boats with refrigerating apparatus. He wants two separate compartments, one of which, for cheese, should have a lower temperature than the one for butter. He also intends to have cold-chambers at Liverpool.

Mr. Stark thinks that the government stamp for premium-butter should be affixed by the inspector alone, as, last year, these stamps were put on boxes or tubs of inferior butter that had never been inspected.

Cheese.—Mr. Stark states that, for the last three years, our cheese has been greatly improved in quality, but that there are still faults in it that need correction. It varies too much in quality, colour, and packing.

He lays great stress on the uniformity of colour in the cheese of each factory; otherwise the sorting (*triage*)

takes too long. On account of this want of uniformity, he prefers *white* cheese. (1)

The Quebec boxes are inferior to those of Ontario; they are not strong enough and are generally too large for the cheese they hold; a fault not found in Ontario packages. The branding of the boxes of our province is done in an irregular and often clumsy manner. Sometimes, the boxes are disfigured by the lettering being too big: the factories ought to see to this.

Our cheese is richer than Ontario cheese, and by still more improving its manufacture, it will be before long in great demand. It is better than the Dutch cheese, and a good deal of that is sold in France, we might, perhaps supplant the Dutch in the market of that country.

In Mr. Stark's opinion, the exports of butter and cheese to England from the States will continue to fall off.

Eggs.—The trade in eggs between Canada and England increased greatly during last season. Eggs ought to be sent off very fresh, in refrigerator-compartments, with the cheese, but not be allowed to freeze. If this is seen to, Mr. Stark believes that this trade will improve greatly.

Eggs are packed in boxes holding 30 dozen; these boxes are divided by white card-board, which is better than black, as the latter colour imparts a bad flavour to the eggs. The best season for the export of eggs is from August 1st to the close of navigation.

Last year, the price varied from 6s. 6d. to 9s. 3d. per 120 or ten dozen. Each dozen ought to weigh at least a pound and a-half. Small eggs should never be sent.

At the above prices, the exporters should have received from 12 to 18 cents a dozen. The fresher the eggs the easier the sale.

Apples.—Canada apples are still greatly sought after in England, especially the *Canada Red*, and the *Baldwin*. The demand for these is practically unlimited.

Hay.—The trade in hay is always uncertain on account of its greater or less abundance, depending on the weather of each year.

Bacon.—Last year, the price of bacon was low, but Canada bacon is still considered superior to the States' bacon.

A LETTER FROM M. J. de L. TACHÉ.

Packing butter—Defects and remedies.

At the close of the above interview, the Department of Agriculture requested M. Taché to give his opinion as to the bad flavour that it appeared was given by the boxes or tubs to the Canada-butter sent to England.

M. Taché replied as follows:

St-Hyacinthe, Jan. 28th 1896.

Dear Sir,

The trouble complained of by Mr. Stark—a bad taste imbibed by the butter from the boxes—proceeds more from certain exterior conditions than from any defect in the quality of the wood.

White spruce (*épinette blanche*), the wood exclusively employed for boxes and tubs, in this province, is satisfactory enough when the packages are treated properly.

(1) All the fine English Cheddar used to be white. Is it so now?—Ed.

It is hardly necessary to say that the wood should be carefully selected. Good spruce is plentiful, but the makers should be told not to use too large a proportion of the sap-wood (*botanically, laburnum*) in the best class of packages. Also, when the boxes are to be sent not put together, great care must be taken about the drying of them, and they should be carefully protected against wet in transit; otherwise, they would be likely to get mildewed. Still, the best makers are generally pretty careful; and, beyond these accidental causes, the root of the trouble must be sought elsewhere.

I will first run over the causes, and then point out the remedies.

1. The butter that takes on a bad taste from the box or package, is, almost invariably, defective in its manufacture.

2. The temperature of the store-room, or of the cars or steamers in which it is forwarded, causes a deterioration of its qualities by contact with the wood of the package.

3. The perfect or imperfect preparation of the box or tub also has its effect.

It being granted that the tub or box is of the ordinary good quality of these packages, and of white-spruce, attention must be paid to the following points:

1. **THE MAKING.**—All the advice given as to the building and the management of creameries, as well as to the making itself, must be most carefully attended to; and as what you have said pertains especially to the export-trade during the hot season, it would be wise to use more ice than usual in the treatment of the cream, and during the making throughout.

2. **TEMPERATURE DURING THE TIME OF KEEPING AND TRANSIT.**—The bad flavours that the butter acquires are assisted by the action of the *bacteria* or by mould. The practical way of stopping the work of these destructive agents is to paralyse them by cold. The ice-house of the factory must be improved, and even then the butter should not be kept any longer than is unavoidable, so that it may reach the intensely cold ice houses as soon as possible. The belief that butter will keep under the conditions in which it used to be placed, and in which we still persist in placing it, is the mistake which has cost us so much in the past: hence arose the loss of our butter-trade. The sooner we are converted on this point, the more easily shall we regain our position. It is because the Australasian colonies provided ice-houses on land and on the steamers that they succeeded in establishing their butter-trade, for without those conditions, it would have been an impossibility. I know, from good authority, that part of the butter that Mr. Stark's firm received was sent to Quebec by the ordinary trains and not in ice-cars, and it travelled from Quebec to Liverpool in steamers that had no refrigerators; it is also said that, in one case, it was placed *by the side* of the refrigerators in one or two boats.

This fact alone is enough to explain the complaint that has been made.

3. **PREPARATION OF THE PACKAGES.**—The box is a more recent package than the tub, and our makers have perhaps not been so particular about its preparation as they ought to have been.

A box should be, if possible, soaked, like the tubs. It is a good plan to allow both tubs and boxes to soak for two or three days, in order to admit of the juices that are soluble in water dissolving; but, in my opinion, this preparation should conclude by a