

so will be a national blessing, increasing the fertility of our farms and enriching our farmers, on whom the prosperity of the Dominion depends. Should American cattle be imported to be slaughtered, even for export alone, it will certainly have a tendency to lower the price of Canadian live stock, as they will have to compete with the poorer grades of American stock and sell for an equal price; or else American cattle, if allowed to come in, will supply the entire number killed by such concerns as that proposed at Three Rivers.

Americans have tried for a long time to ship their inferior goods abroad under the name of Canadian products. Surely our government is not going to now aid them in this nefarious design, thus injuring the good name of Canada abroad. Looking at the question from a sanitary point of view our government ought at once to prohibit American cattle from passing through Canadian territory as heretofore, except those that have been duly quarantined, as required by cattle arriving from Europe. The Americans have long been anxious to obtain free access to the British market, such as is enjoyed by Canadians, but have been denied for very good reasons. Failing in gaining access they endeavored to have us also scheduled. If they now succeed in sending their cattle through the length and breadth of Canada, as now proposed by our government, our own herds will soon be diseased, and we will lose free access to the English market, now worth \$2,000,000 annually to Canadian cattle growers. If Canadian cattle were scheduled and had to be killed on landing our best bullocks would be worth \$20 per head less than farmers are now receiving. The store cattle trade would entirely cease. It is often discussed by farmers whether cattle pays now. What would become of the industry if we lost the English market? For many years pleuro-pneumonia prevailed only in a few seaboard states in the American union, but by an innocent practice as the Canadian government now proposes, it was scattered far and wide, not only pleuro-pneumonia, but other diseases to be dreaded also, as the following extract, just cut from an American paper, declares:—

#### MORE SICK CATTLE.

"Burlington, Iowa.—The mysterious hoof and mouth disease that is so prevalent among cattle in Northwestern Iowa is in full force in Des Moines County, nearly 200 cases having been reported. The disease is found in all parts of the country, and is quite prevalent over in adjacent Illinois counties. The dairies around Middletown, Danville, Augusta, and other places have been attacked, and the healthful supply of milk is greatly diminished. The State Veterinarian has been notified of the situation, and has signified his intention of investigating the trouble. There is a great deal of uneasiness regarding the use of infected milk. But as a strict quarantine is kept on the diseased animals it is not probable that any sickness will result to the people through the use of the milk from infected cows, as almost the first symptoms were a drying up of the milk glands; in the less severe cases the flow of milk is not entirely suspended and begins again during convalescence. There is more danger in the milk drawn at such time, as has been demonstrated in the case of calves, which become sick after having been allowed to suckle from convalescent mothers."

Some of these diseases are terribly infectious. Writing of pleuro-pneumonia, Prof. James Law, a well-known American authority, in his able work writes:

"That contagion through infected buildings is so exceedingly common that an apology would be needed for referring to it were it not for the hardihood in some in denying all *mediate contagion*. Distillery stables, where the cattle of many owners mingle, soon become infected in infected localities, and from that time onward they remain infecting, though all sick animals are excluded. Dealers' stables suffer in a similar way; and thus, after a dealer has kept an infected animal in his place, he

continues for months or years to disseminate cattle that infect others, though it may be impossible to find a sick beast on his premises at any time in the interval. One or two cases may, however, be particularized:

John Miller, Farmingdale, L. I., traded with a Brooklyn dealer, January 1st, 1879, for a cow, which, soon after, fell ill and died. He shortly after purchased another cow, and placed her in the same stable, but she also sickened and died. After this, he placed a calf in the stable, but this also perished; and at the present the stable remains unoccupied.

Mrs. P. Gregory, 12th street, Brooklyn, had two cows and one calf in her stable in the end of February, 1879. When visited, one cow was very sick, and both were destroyed, the stable being afterwards washed with disinfectant liquids. The calf was disposed of for veal. Two months later, Mrs. G. purchased a new cow from a man who had kept her as a family cow for some years, and put her in the same stable in which the first had stood. Ten days after, she showed symptoms of disease, and, when slaughtered, showed the characteristic lesions of lung fever.

Mr. Addick, Sunnyside, near Dutchills, L. I., kept on an average of twenty-two cows, and for two years has lost heavily. Early in the present year he left the place, and the stable was let to Patrick Hollihan, who bought in fresh cows. Some of these he got May 1st of J. & J. Wheeler, dealers, and some July 3rd of Patrick McCabe, dealer. In both cases the fresh cows came from the country and went to the stables, with our permits, furnished after examination. August 19th four cows were found to have the lung plague and were slaughtered."

Many other similar cases could be cited.

In the face of this evidence how are we to prevent our cattle being shipped in infected cars, which will sooner or later happen if we allow American cattle to enter, except after due quarantine.

The same authority writes that the infectious nature of the manure is certain, and cites the case of Mrs. Power, Franklin avenue, Brooklyn:

"She kept eight cows, and had made no purchase since the autumn of 1878. On March 20th one of her cows was found to be affected with lung fever, and was killed in consequence. The only available source of the contagion was the manure, which had been drawn from infected city stables, and spread on a lot where these cows were turned out on fine days for exercise. In spite of the ploughing under of the manure as soon as the frost would allow, three more of her cattle sickened, and had to be killed May 12th. As further evidence of the contagious nature of the affection in this case, Mr. K., her neighbor, who had visited and handled her first sick cow, has since lost one out of his herd of eleven, with unequivocal symptoms and lesions."

"Contagion through Infected Pastures.—It is to an example of this medium of contagion that Australia owes her present bovine lung pestilence. In 1859 a Shorthorn cow was imported by Mr. Boodle from England into Melbourne, and was found to be affected with the lung plague. All of Mr. Boodle's cattle were killed and paid for by private subscription; his farm was then quarantined, and the colonists fondly hoped that the danger had been averted. It happened, however, that a teamster who worked his ox-teams on the streets during the day, turned them, these prescribed pastures at night under cover of the darkness, and when later these animals perished, they had already infected large numbers belonging to different herds and districts. What was thus begun by the cupidty of the teamster, was repeated again and again in quick succession, and on every side, for the herds of different owners roamed at large on the unfenced pastures, the healthy grazed where the sick and infected had preceded them, and soon the greater part of that immense island-continent lay in the grasp of the relentless pest."

"This method is a fruitful source of infection around our cities and villages. The cattle of different owners are turned out in summer on the commons and unbuild lots of the city and suburbs, and even if headed by an attendant or staked on a given spot, they go in successive days on places where infected stock have been before them, and inhale the deadly *contagium*, from which the owner thinks he has been carefully guarding them."

"Wherever the practice of pasturing the cattle of different owners on unfenced lots is allowed, the work of exterminating the disease is most seriously retarded, if not rendered altogether futile, the expense to the state is indefinitely enhanced and prolonged, and the hope of any future riddance of the pestilence is rendered extremely problematical."

"Contagion through Pasture or Fodder.—An instance which came under the author's observation in east Lothian, Scotland, in the years from 1856 to 1862 was nearly allied to the above. On the Bell estate the deer park was not fully stocked with game, and the right of pasturage for a certain number of cattle was let yearly. Prior to the date mentioned cattle affected with the plague had been placed in this field, and after this the affection developed year after in the herds there turned out. That the infection came from the field was unquestionable, as the stock turned out on the deer-park were often from farms near by, where they had been kept all winter, and where there had not been

a trace of the disease for years. As the park was vacated by all but the deer and sheep for four or five months of the year, it is hardly credible that the *contagium* survived in the soil for that length of time through all the changes of the British winter, and it seems more reasonable to conclude that it had been covered up under great accumulations of dried leaves, or in hay stored for the use of the animals.

"In conclusion it is well to add that this denial of *mediate contagion* is sustained by but very few living veterinarians, who claim the absence of all contagion whatever, direct or indirect. But the best authorities, including Delafond, Bouley, Reynal, Garlach, Roloff, Rychner, Roll, Lafosse, Fleming, etc., etc., advance the doctrine of *mediate contagion* as amply proved and indisputable. Rychner says, 'The affection breeds a disease-germ—a contagion of a volatile nature. That it attacks the cows that stand in an uncleaned, infected stable, the many proofs of its conveyance through men, and through horses that have stood in stables as mates with cattle, its constant extension in a stable or in a herd, and finally its sure arrest by the seclusion of stables and localities affords the most conclusive evidence of this.' (Bojatrik.) Roll says, 'Contamination occurs from the contact of sound animals with the sick on roads, pastures, in stables, through the medium of food of infected beasts, by the utensils that have been used for the latter, and by the persons who have attended them.' (Pathologie and Therapie.) Fleming says, 'Healthy cattle have been contaminated after being lodged in stables that were occupied by diseased ones three or four months previously. Hay soiled by sick cattle has induced the disease after a longer period; and pastures grazed upon three months before have infected healthy stock. The flesh of diseased animals has also conveyed the malady; and it is recorded that the contagion from cattle buried in the ground infected others fifty or sixty feet distant.' (Veterinary Sanitary Science.)

#### VITALITY OF THE VIRUS.

"There is much difference of opinion with regard to the power of the virus to resist ordinary destructive influences. In many cases the free exposure of an infected place for three or four months to the action of the air has purified it so that fresh stock have been introduced with impunity. On the other hand, instances can be adduced in which cattle have been infected by being placed in stables in which sick cattle had been kept at least four months previously. Other things being equal, it will be preserved longest where it has been dried up and covered from the free access of the air. Thus, in very dry and close buildings, in those having rotten wood-work, or deep dust-filled cracks in the masonry, and in those with a closed space beneath a wooden floor, it clings with the greatest tenacity. Again, when the buildings contain piles of lumber, litter, hay, fodder or clothing, the virus is covered up, secreted and preserved for a much longer time than if left quite empty. In these last it is preserved just as it is in woolen or other textile fabrics and carried from place to place by human beings."

"As carried through the air the distance at which the virus retains its infecting properties varies much with varying conditions. The author has seen a sick herd separated from a healthy one by not more than fifteen yards and a moderately close board fence of seven feet high, and in the absence of all intercommunication of attendants, the exposed herd kept perfectly sound for six months in succession. On the other hand, infection will sometimes take place at a much greater distance without any known means of conveyance on solid objects. Roll quotes 50 to 100 feet, while others claim to have seen infection at a distance of 200 and 300 feet. But it may well be questioned whether in such cases the virus had not been dried up on light objects, like feathers, papers, straw or hay, which could be borne on the wind, thus, from being in thick layers, would escape the destruction that would have befallen it had it been carried in the air only as invisible particles."

Should American cattle be allowed to pass through Canada how can the manure be prevented from becoming scattered at times along the railway tracks where, frequently, Canadian cattle are seen grazing, and how will it be disposed of at the different resting places?

In view of these facts, we again repeat, American cattle should not be allowed to enter Canada except after a severe quarantine, equal at least to that imposed on animals coming from Europe. The farmers of Canada should stand firmly together in the demand that they be excluded. This is a question for the Grange, the Patrons of Industry, and the Farmers' Alliance to take up and discuss. Farmers and live stock breeders should everywhere raise their voice against the proposed innovation, and also demand that American cattle be no more carried through Canadian territory in bond.