

practicable, to the action of frost, snow, and air, is a most beneficial practice, and is largely followed, in several parts of the country. Heavy lands are more particularly benefitted by being thus exposed in winter, and are found far more easily managed in spring; thus securing a finer tilth and an earlier seed bed. The underdraining of such lands as require that most efficient means of amelioration and permanent improvement, can, from want of funds, and other causes, be only gradually carried out. But much may be done towards the attainment of this important object by furrow draining, either with the plough or spade, so as to relieve the surface from any considerable quantities of stagnant water.

On the Non-contagious Nature of Epizootic Diseases.

BY PROFESSOR DICK, EDINBURGH.

(Continued from page 488.)

As already stated, when the report of the new plague or cattle pest reached this country, more than a year ago, my attention was directed to the subject, and, from the various detailed accounts of it in the newspapers, I came to the conclusion that it was an epizootic arising from some general cause or causes acting on the digestive organs of the cattle in the countries where it prevailed, and that, unless these causes existed in this country, the disease would not make its appearance here. As this cattle-pest had committed great ravages in the east of Europe, and was supposed to be approaching this country, and to be highly infectious, it excited great alarm amongst owners of stock. The alarm rapidly extended, and a proposal was made—by, I believe, the Royal Agricultural Improvement Society of Ireland, which was afterwards followed up by the Royal Agricultural Society of England—to send a veterinary surgeon to the Continent to investigate the nature of the disease. The Directors of the Highland and Agricultural Society having been solicited to join in the project, I was requested to attend a meeting of the Board to give my opinion on the propriety of joining in the expense of sending Professor Simonds, who had been proposed by the English Society. I stated that I considered such a mission to be unnecessary, as we could get every information regarding the disease from the veterinary surgeons on the Continent—a highly-educated body of men who had given the subject profound attention, and a translated *precis* of whose works would, it appeared to me, be more serviceable than any such mission as was projected. I moreover stated that I apprehended Professor Simonds'

journey would prove to be a kind of wild-goose chase, and that he would probably have to travel far and wide before meeting with a case. The correctness of that opinion is shown by the report now published, Professor Simonds having had to travel nearly 1500 miles before seeing a single case. I had been led to form such an opinion from the accounts I had received of the disease, and particularly from the information obtained in a letter from the Vice-Consul at Memel, near to which the disease had approached. In that letter it is stated—

“I could not be in a place more fitted to obtain for you the information which you desire, seeing that this celebrated cattle disease is at present within forty miles of us; and, moreover, the day after my arrival here, I was called upon by the Earl of Clarendon to answer the same queries, and obtain the same information as the now desired by you, and which I am now, of course, perfectly prepared to answer, having obtained the facts from the best and most authentic source. The symptoms of the disease are: The animal, when attacked, becomes extremely lively for a short period; the appetite is lost; the body trembles; the gums become inflamed; the eye becomes very dull, and discharges matter; the hair becomes very rough and the glossy pile disappears. Towards the latter stages the animal suffers from severe diarrhoea, death ensues in from eight to twelve days. On dissection the food will be found in the third stomach, a powdery dry mass. The stomach of the healthy animal is rose-coloured but when attacked by the disease, it assumes a dark-red colour, and the veins become black. No cure is ever attempted for the disease in this district: but I am informed that, in various parts of Russia, the animal has been subjected to a process of *steam bathing* (that is, placed under the influence of steam), which has in several cases proved successful. The only method adopted in this vicinity to stop the progress of the disease is by immediately instituting a *military guard* round the farm or estate where it appears, and neither man nor beast is allowed to pass this guard until the last vestige of the disease has disappeared. The disease is undoubtedly contagious, and may be conveyed from one place to another by goats, or sheep, or even human beings. I have asked permission from Lord Clarendon to visit the district where the disease is at present raging, which, if granted, will enable me to give you more definite, although not more authentic, information. I shall be at all times happy to furnish you with any further particulars on the subject, if desired.”

The symptoms detailed in the foregoing letter are very condensed, but they embody all that is described by Professor Simonds. It specifies one prominent symptom, which has been in a great measure overlooked. In the letter it is stated that the animal, when attacked, “becomes extremely lively for a short period.” This is given as a general symptom: but, with the