

Since these byres were so altered we have not had a single case of pleura nor murrain, and very few cases of weeds or inflamed udders, and little fluctuation in the supply of milk from the changes in the weather. For the last eight years a fresh stock of cows has been every year bought in, not in the public market, but out of perhaps twenty different byres, over a wide district of country, and almost every one of them has been sold in prime health and condition.—Yours truly,

GEORGE DAVIDSON."

In the end of October, 1856, from 30 to 40 young cattle, belonging to different farmers, had been grazing during the summer on Irvine common; one of them was seized with pleuro-pneumonia, and died. The owners were afraid of infection, and knew not what to do, as the time had come for taking the cattle home. After consultation, Mr McCall, V. S., was requested to examine them; he found them free from disease, and after they had been home not one of them became affected.

In the same month, a person of the name of Campbell, at Irvine, kept three cows; one took the disease, and died; another was seized, but recovered; while the one standing between these two was never affected.

I shall conclude my remarks on the contagion or non-contagion of pleuro-pneumonia by the following communication from Mr. Hunter, who gives his experience on the subject.

"THE HAUGH, 18th November, 1857.

DEAR SIR,—I beg, in accordance with your request, to send you a few notes of my experience of pleuro-pneumonia. The first case I ever saw occurred about 12 years ago in a lot of young cattle of my own breeding. They were grazing in a field by themselves, and had never at any time come into contact with any other stock. Where *infection* could possibly come from, I never could conceive, as at that time the disease was unknown in this district; but one after another was seized at short intervals, till three of them died. The others were kept on, and continued perfectly healthy. The disease made its appearance amongst my feeding-stock in the ensuing winter, and during that and several succeeding seasons I suffered very severely. Curiously enough, my *immediate* neighbours had not a case for a considerable time after it got a footing here, whilst some others, at a few miles distance, were as bad as myself. From all I could observe regarding it, I became convinced that the disease was not infectious, and, acting upon this belief, when many of my neighbours were taking all manner of precautions—whitewashing, &c.—some of them even going so far that they would not enter my courts for fear of carrying infection to their own, I continued to pursue uniformly the same course as I had done before it made its appearance. By and by, in spite of all precautions, it found its way into the other stocks round about, and they suffered as much as my own had done.

I never could say whether court or byre was the more favourable for its development, as it used to skip about from one to the other up and down, both in a manner altogether applicable, sometimes confining its attacks to a lot of cattle, and again wandering, apparently at random, through them all. Whenever it was observed in the byre, the animal was put off, and another put in its stall, without fumigation, washing, or even removing the mips the diseased animal had been eating. I did very frequently, pretty much by experiment, and in no case could I ever see any bad effects to having done so. One strong case I may mention, which confirmed me in my practice. In 1846, cattle suffered so severely at grass that I was obliged to sell off the remainder, and buying a lot to replace them, the salesman told me that they belonged to a friend of mine, and that he was disposing of them because so many of them had gone with disease, and he could not get them into my hands without warning me. To the agent for his candour, I bought them, and put them into a court, with only a warning to keep them from another lot. I had not long been in possession of those two lots a single case of disease occurred. Visits for some seasons past have been extremely rare—occasionally a whole winter without a case. I generally graze from 40 to 50 cattle at my farm on the Pentlands, and of late I have had a few cases. This year I bought three lots, which were sent up at different times. One lot of 10 became affected, four of them were sent off, though grazing adjoining fields, and occasionally mixed with the others showed any symptoms. The herd's two cows took decidedly ill, but recovered. I have now upwards of 80 cattle of various kinds, all of which, with the exception of one more out of the 10 above noticed, has been sent away, have hitherto kept well. A small Shetland cow, which has been quite alone all summer, I may mention, fell ill some time ago, but, with some treatment, was brought through. I will be glad to find that the preceding proves of any use, and if I can furnish any further information, I am heartily at your service."

[To be concluded in next number.]

### Artificial Manures.

BY PROF. ANDERSON, GLASGOW UNIV.  
(Continued from page 465.)

Such differences, of course, can be detected by complete analysis; but if it is desired to ascertain whether or not a substance is genuine without determining its exact composition, it is possible to arrive at this information out of a complete analysis, and it is not customary to rely on such simple tests, but to omit altogether any means of ascertaining purity. Hitherto the general run of