

attained to such excellence. But, even when this has been done, there will in all probability come misfits, and these must be cleared out, the males steered and the females fattened for slaughter. There can be no doubt but that if nine tenths of the male calves now reared for service in the northern counties (possibly the same will apply to other counties) were sold as fat calves, or steered and sold fat as bullocks, the breeders (tenant farmers) would benefit pecuniarily, and a manifest improvement would result in the general cattle of the country. At present such breeding and rearing for use is a lottery. The yearling may bring 6gs or 20gs. in the sale, so each take their chance of the higher figures. Such sires are simply a national loss, a deterrent to the improvement of the national breeds of cattle, and a pecuniary loss to each farmer who breeds them or from them. In the United Kingdom at the present time trade is good, wages are good, and the masses would prefer to eat British home meat; but when much of that meat offered to them is no better than the foreign meat sold at 2d. to 3d. per lb. cheaper, need we wonder that the foreign meat comes to us in ever-increasing quantities? And the future offers to intensify the competition, for the foreigners are taking the steps so many British farmers ignore, and are yearly improving their live-stock from British foundations. The lesson is before our eyes, yet British farmers—at all events, too many of them—remain apathetic, passive, looking on with folded hands, whilst their principal trade is slowly but too surely departing from them, and asking Jove to lift the wheel out of the rut—the landowners to reduce their rents. It is certainly a strange picture of “rest and be thankful,” and the pity of the situation is that it is true. We remember the case of a farmer, a man of capital, who took what he admitted to be the worst of a dozen rams, because it was 5s. cheaper. Yet he selected that ram for use in his own flock, to the probable deterioration of hundreds of its produce. Where practice such as this prevails, need we wonder that British agriculture remains under a cloud? How can we hope to see the silver lining? —*London Live Stock Journal.*

### LIABILITY TO AND IMMUNITY FROM CONTAGIOUS DISEASES IN ANIMALS.

It is well known to stockowners that certain diseases are confined to particular classes of animals while other affections may attack all the animals of the farm without distinction.

When pleuro-pneumonia appears in a herd of cattle, the farmer does not feel the least concerned about his horses, sheep or pigs as he knows that these animals are refractory (as pathologists say) to the infection of this disease. Glanders among horses is a terrible disorder, and every stockowner, would be seriously alarmed at its appearance in his stables, and with good reason. But no apprehension would arise as to the risk incurred by the rest of the stock on the farm. Swine fever is a special malady of the pig, and does not threaten horses, cattle or sheep; while an outbreak of anthrax excites alarm in respect of all the live stock as neither horses, cattle, sheep, nor swine are exempt from liability to suffer from the affection, and even dogs are killed quickly by eating the flesh or lapping the blood of an animal dead of the disease. On the other hand, rats enjoy a remarkable immunity from the malady.

Natural immunity from disease appears to be related in some way to the acquired immunity which follows an attack of a contagious malady. It has been long known as a fact that persons or animals which had recovered from smallpox, for example, were generally protected from another attack during their lives; and so well established was this fact, that people who were marked with smallpox were looked upon as so secure that no hesitation was felt in employing them to attend patients suffering from the disease, and the persons themselves did not object to be so employed. Exceptions to the rule occurred from time to time, but not to a sufficient extent to disturb public confidence in the protective efficacy of a prior attack of the affection. Dr. Hamilton, of Aberdeen University, gave a lecture, a few years since, mainly devoted to immunity, and the attempts which had been made to secure it at remote periods. Doubtless, the idea of rendering a person refractory to the contagion of any specific disease arose out of the common observation that persons who had recovered from an attack were so protected. It will only be necessary then to produce

