

short-horn shall be purchased for the Imperial farms whose pedigree cannot be traced on both sides to the second volume of the English Herd Book.

All this precision proving the intense interest which is taken by our neighbours in the race, must, if correctly interpreted, be to the English breeder the source of the greatest satisfaction. Those who have returned from Poissy to tell their neighbours that the French are now so much masters of their business as to need no further tuition from us may be correct; but those who add to this assertion that the perfection of the pure breed of short-horns established across the Channel renders unnecessary any further importation of foreign blood, and henceforth closes our trade in that quarter, must have used their eyes to little purpose, or reasoned negligently upon the facts placed before them.

We know very well in England that no breed of sheep or cattle reaches the same development in the situations to which it is foreign as it does in those natural to it. We know that great mistakes are made in removing stock from one county to another where the circumstances of life differ, or from one side of the island to the other, where the conditions of climate are various. No short-horn breeder is unacquainted with the fact that certain parts of Yorkshire are better adapted to the short horn than others, and that he is seen in richer bloom in his home pasture than he is anywhere else. It is for this reason that most prudent men when they want new blood like to go north for it. Now, theoretically, if these observations have any force as regards England, they must have much more when applied to France; and, in fact, we find they have. The English exhibited nothing very wonderful at Poissy, but yet the contrast was unfavourable to the French pure Durham. The latter wanted that development which characterised our own. There was nothing, for instance, at three years of age which could compare with Mr. Crisp's ox, or, unsatisfactory as he might be as the only representative in the steer class, with Mr. Holland's steer. We entertain the belief that many years must pass before the short-horn becomes so naturalised in France, should this ever occur, as to render the breeders there independent of a recourse to our herds. Were these gentlemen less particular than they are, ordinary development might suit them; but being so particular, nothing short of absolute perfection will please them, and to obtain this point they must continually return to us for new blood to counteract some certain effects of climate and soil disadvantageous to the growth of the imported breed.

Although the French were unmistakably proud of having accomplished so vast a stride in so short a time, and having arrived at such proficiency in the use of the weapons we placed in their hands, we met no breeder skilful in his art who was not ready to acknowledge, if judi-

ciously questioned, that a pretty frequent accession of English blood was requisite to preserve the French Durham from degenerating.

While, however, this enthusiastic attention to his art tends to make the French breeder a constant and large purchaser at our pedigree sales, it must be remembered that he comes as a discerning purchaser, and that if his custom is to be retained special attention must be here given to preserve the high character of the attractions which draws him.—*Agricultural Gazette*.

### Surface Manuring.

The practice of top dressing, or of surface manuring, has long been the favorite method employed by all intelligent gardeners within the circle of my acquaintance. We have long ago learned that masses of rich, nitrogenous manures are not what plants require about their roots, but that manures are applied much more successfully (and less injuriously) by top dressing, either in solid or liquid form. Nature never manures her plants with crude masses of concentrated fertilizing substances, but imparts stimulating and mineral food in a state of the most minute division—almost infinitesimally from the surface of the earth. No wonder so many fruit trees have been killed, many grape vines destroyed or rendered barren by excess of wood, in consequence of the heavy manuring at the roots so universally recommended by writers on gardening and horticulture.

The great objection to surface-manuring founded upon the probable loss of ammonia caused by the exposure of decaying matter upon the surface of the earth. But this it has been shown, by sound reasoning and facts deduced from practical experience, to be much less than is commonly apprehended while the benefits arising from surface-manuring in other respects, more than counterbalance any possible loss of ammonia from this practice.

In the first place, when manures are exposed upon the surface of the earth, even in a wet weather, decomposition no longer goes on so rapidly as when the same manures are kept in a heap, and the ammonia that is produced gradually carried into the soil by rains. Other soluble substances, as potash, lime, phosphates, &c., are of course not lost, because they are not volatile.

Nor are these soluble and valuable substances lost to plants by being carried into the soil before they are needed by growing plants. It has been conclusively shown by eminent scientific authorities that any good soil, containing a proportion of clay and carbon, is capable of taking up and retaining effectually ammonia, lime, potash, soda, &c., in a soluble form, that little, if any, passes off in the underground water of such soils. These substances, true, may wash from the surface, but they