

they are isolated, but for their illustration of a clearly established proposition.

We have no purpose by the suggestions we have presented to impede the introduction, or to discredit the utility of superior exotic animals, but on the contrary we concede that they may be beneficially used to supply by the influence of some specific quality of size, contour, beauty, or other distinctive property, prevailing defects in individuals or families of native stock.

We have attempted to impress on the mind of the American breeder a conviction of the important truth, that our country embraces a stock which may now be termed indigenous, equal to any foreign breeds for all the objects of the dairy. No land contains the basis for a race of animals better adapted to improvement and upon which the application of care in treatment and skill, and science in breeding, will be attended by more favorable or remunerative results.

Why should not the American farmer emulate the triumphs of European science, and by perseverance, attention, and skill, elevate the standard of our native stock, until it may challenge, in the estimation of the world, competition with the choicest thorough breeds of England?

VALUE OF PEDIGREES.

> Analyses of pedigrees are necessarily imperfect. We deal with numbers, not with power. The numerical proportion of crosses can be accurately ascertained; the potential proportion in each cross, and the variation of power in each, eludes observation. We can discover how much of this blood and how much of that a pedigree contains, but all attempts to detect the comparative influence of the several ingredients are successfully baffled. Conjecture supplies no determinate information; indeed, it supplies no information at all; and conjecture will ascribe superiority of potency to one sort of blood or another, according to the bias of individual taste. We can only, perhaps, be quite certain about a predominance of power when we are quite certain of a very decided predominance of any one element. A mere equality of numbers by no means denotes an equality of power, as in the case either of a short-horn bull put to a Highland cow, or a Highland Bull crossed with a short horn cow. In both these cases the numerical portion is half and half, though the potential proportion is in a different ratio. But calculations, because they fall short of deciding the relative momentum of every constituent part, are not therefore of no value. They are of very great importance notwithstanding: for they bring man acquainted with the general composition of an animal, and at least afford him an opportunity of seeing how *much* there is of the blood he likes, of the blood he hates, and of the blood about which he is indifferent. The grand vital truth of pedigrees lies, like all truth, *underneath*—as the ancients told us, at the bottom

of the well; and if we want it, we must *go down* for it. Impressions projected from the *surface* are usually delusive, for they are faithful only in part. The incompetency of the exterior of a pedigree to disclose the real character of a pedigree, in all the fulness of its wealth, seems to be admitted in the practice so much resorted to at present in private catalogues, of appending copious explanatory notes to the various crosses which compose the formula. In these notes something is told which the top lair does not reveal. How complicated a piece of complexity does a pedigree look to one who has descended beneath the superficial appearances, penetrated deeply the substrata and pursued his course of investigation on every side. To such a man a good deal more than eight or ten lines and a few bracketed references to a book of record is presented. He sees what others cannot see; for he knows what others do not know. Let us suppose a pedigree of 20 crosses. The four most recent crosses, we will assume, are Bates crosses; the other sixteen consist of miscellaneous blood. The animal to which this imaginary pedigree belongs possesses fifteen-sixteenths of Bates blood, through the four crosses alluded to, whilst the remaining sixteen crosses make only one-sixteenth. Are these sixteen crosses, then, influential, or, if influential, in what degree are they so? They are influential, because they have contributed to form the animal before us. Without any one of these crosses, or any portion of them, the animal would not have been what she is; could not, by any possibility, have been the same animal: but what precise degree or quantity of power is to be referred to each individual cross of these sixteen crosses is, of course, utterly beyond discovery. All the sixteen crosses have been necessary antecedents of the animal which stands before us, of which we say, and say with truth, that by virtue of the four most recent crosses she has fifteen-sixteenths of Bates blood in her. It would, however, seem as if the earlier or remote ingredients in a pedigree often did more than exercise a general effect, and were not without positive present and practical influence—something resembling that which the costly experiments of Sir Joshua Reynolds in his decomposition of some of the works of the old masters, discovered to belong to the initial and hidden coats or lairs of colouring applied by them. It would seem as if the power of certain crosses of ancient data came up and through the others, making themselves felt even after years of abeyance. But how long the earlier elements signified in a pedigree continue their influence, and to what extent they are influential; or whether they cease to be influential, so far as individual characteristics are concerned, and at what particular point they cease; are questions not only quite incapable of satisfactory solution, but of little consequence, so long as the animals resulting from them exhibit the unequivocal marks of high and careful breeding.