

breed from a slightly defective animal from a very perfect family, than from a very perfect animal from a slightly defective family.

The defects by one parent should be met by peculiar excellence of the other parent in the same point. If the dam is "high on legs," she should be bred to a ram with short legs; if thin-fleeced, to an uncommonly thick-fleeced ram, and so on. This, however, is to be understood within certain limitations. These counteractions are to be sought within the circle of proper excellence and proper uniformity in other particulars. The distinguishing features aimed at in the flock are neither to be sacrificed nor constantly changed nor disturbed for the purpose of producing a sudden amendment in a single point.

There is a practical point of the utmost importance in the selection of breeding rams. All do not transmit their qualities in an equal degree to their offspring. The power of "mark offspring," as it is termed, according to my observation, depends most on two properties. The first and by far the most influential of these is blood. By blood I mean nothing mysterious or unexplainable. I simply mean that blood which has flowed so long in one distinct channel, and through animals so closely alike in all their properties, that it has acquired a power resembling that of species—a power continuously to reproduce animals of the same family and almost the same individual characteristics. Under this definition the unsightly ass may have as high and pure blood as the winged courser of Asia and Africa, or as the far descended Merino of Spain.

The ram should not only then have a faultless pedigree, but, if practicable, be drawn from an old, distinct, well-marked family of Merinos that have been the same as a whole, and uniform among themselves for a long course of generations. I used to notice, when I dabbled in crosses between Merinos and coarse breeds, that a ram which was the produce of in-and-in breeding stamped his properties on the mongrel offspring with peculiar force; and I am not certain this rule does not obtain to some degree among full bloods. I am inclined to question whether the great cavana of Spain, some of them once numbering 40,000 sheep, would ever have acquired their remarkable identity of characteristics without that in-and-in breeding to which they were subjected. Some intelli-

gent observer of them in Spain, fifty or sixty years ago, whose name I do not remember, said that in every hundred there were ten rather better and ten rather worse ones, but that the other eighty could hardly be distinguished one from another.

The second property I have noticed in the ram, which gives him the power strongly to impress his qualities on his offspring, is constitutional vigor. He should be thoroughly masculine. He should be compact and massive in every part—his large scrotum almost sweeping the ground. He should not have a particle of a "ewe look" about him. Even his fleece should not be as fine as a ewe's fleece. He should have strength to knock down an ox. He should have undaunted courage and delight in battle—fighting with desperate determination until slain or acknowledged master of the flock! I have often seen a ram that if shut in a barn would go through the side of it at a single blow like a catapult. Other things being equal, such are more usually, according to my experience, the rams which transmit their characteristics to their descendants.

#### WHY HOGS EAT ASHES, &c.

Mr. Mechi, of Tip-Tree Hall, England, has discovered that pigs, when shut up to fatten, are very fond of cinders, and improve in condition by eating a certain portion of them every day. Some persons are unable to account for this singular propensity in swine. Poultry are very fond of egg shells, lime, sand, &c., and it is well known these substances are necessary in order to form the shells of eggs, and to furnish material for the bones of fowl.

Now, it is reasonable to suppose that swine eat ashes and cinders for the purpose of supplying the material for their bones, and this singular instinct in animals so low in the scale of intelligence, is truly wonderful, for ashes contain the ingredients which are necessary to form bones, viz., carbonate and sulphate of lime, and magnesia, clay, silica gelatinized and made soluble by the fire.

When hogs are at large, they take in clay and silica with their food, and eat bones and roots which contain the necessary ingredients; but when they are pent up they endeavour to supply the material necessary for keeping up their frames by devouring ashes and cinders. Let them have plenty of them.