BREEDING SHEEP—PERMANENCE OF CHARACTER.

The following detailed account of the successful experiments, made in France—and the principles on which they were founded, which led to the origin of a new breed, of excellent and permanent character,—the La Charmoise, will be read with interest.—The animals usually take prizes in France, whenever exhibited. The late Earl Spencer, so eminent as a breeder, remarked in accordance with the statements of Malingie Nouel, that the worse-bred the female is, the more likely is the offspring to resemble a well-bred sire; and that he should prefer, a cow of no breed, to an indifferent pure-bred cow, for a good thorough-bred bull.

"Now in all breeding, experimenters attach the greatest importance to purity of race on each side, because of the natural law by which the offspring resemble, not merely the father and mother, but sometimes the grand parents, great grand parents, and further back still. Many other observers as well as myself, have seen in young animals the clearest resemblance to some ancestor long since dead, who was marked by some distinctive feature. The purer the race of such ancestor, the more strongly do its characteristics overcome the subsequent mixture of breeds and imprint themselves on the new effspring. Would it not then have been more reasonable for French farmers to attach the utmost importance to purity and antiquity of blood in the ram, representing as he does, the improved type that is aimed at, but to avoid on the other hand, those qualities in the ewe whose defects were to be corrected? In giving motion to a projectile (for instance a cannon-ball,) the velocity obtained is not merely in proportion to the propelling force, but also to the resistance of the medium, (air or water for example) through which the body is driven. Now in our case t! ram represents the power of propulsion, the ewe that of resistance; since, if there were no obstacle on her side, the complete effect would be realized by the faithful reproduction of the improving type. Clearly, therefore, the influence of the ram upon the offspring will be the stronger, the purer and more ancient in the first place, his own race may be; and in the next place the less resistance is offered by the ewe through the possession of those qualities of purity and long decent which are so valuable in the sire.

"It appeared then that in order to unite the Gordian knot whose threads I have traced, inasmuch as one could not increase the purity and antiquity of the blood of the rams (I purposely repeat the first principles of the problem to be solved), one must diminish the resisting power, namely, the purity and antiquity of the ewes. With a view to this new experiment, one must procure English rams of the purest and most ancient race, and unite with them French ewes of the modern breeds, or rather of mixed blood forming no distinct breed at all. It is easier than one might have supposed to combine these conditions. On the one hand, I selected some of the finest rams of the New-Kent breed, regenerated by woord. On the other hand, we find in France many border countries lying between distinct breeds, in which districts it is easy to find flocks participating in the two neighbouring races. Thus, on the borders of Berry and La Sologne one meets with flocks originally sprung from a mixture of the two distinct races that are established in those two provinces. Among these then I chose such animals as seemed least defective, approaching, in fact, the nearest to, or rather departing the least from, the form which I wished ultimately to produce. These I united with animals of another mixed breed, picking out the best I could find on the borders of La Beauce and Touraine, which blended the Tourangelle and native Merino blood of those other two districts. From this mixture was obtained an offspring combining the four races of Berry, Sologne, Touraine, and Merino, without decided character, without fixity, with little intrinsic merit certainly, but possessing the advantage of being used to our climate and management and bringing to bear on the new breed to be formed, an influence almost annihilated by the multiplicity of its component elements.

"Now, what happens when one puts such mixed-blood ewes to a pure New-Kent ram? One obtains a lamb containing fifty hundreths of the purest and most ancient English blood, with twelve and a half hundredths of four different French races, which are individually lost in the preponderance of English blood, and disappear almost entirely, leaving the improving type in the ascendant. The influence, in fact, of this type was so decided and so predominant, that all the lambs produced strikingly resembled each other, and even Englishmen took them for animals of their own country. But, what was still

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