

Stock.

Advantages of Pure-Bred Stock.

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Which breed is the best, and what are the advantages of the pure breeds over the common grade stock of the country, are questions that are often asked by those who are not familiar with the different breeds.

A consideration of the origin and characteristics of pure-bred animals will furnish the best and only satisfactory answer to these questions. Animals that have been kept in a circumscribed locality for a long time, without any admixture of the blood of other families, have certain characters in common, which are the result of the conditions in which they are placed, and the hereditary transmission of these characters from parent to offspring. The process of development may be accelerated by the selection for breeding purposes of those that resemble each other in the greatest number of particulars, and the rejection of all that present undesirable variations. As it would be extremely difficult to find two animals that are precisely alike in all details of the organization, we cannot expect the prevailing conditions will have exactly the same influence in modifying the characters of different individuals; and more or less variation in the form and qualities would therefore occur.

From the intimate admixture of blood, arising from the interbreeding of the animals in a given locality, and the continual influence of the same conditions, these differences would gradually diminish until a uniform type was finally established. These animals would then, from the uniformity of their characteristics, and the constancy with which they are transmitted, be recognized as a distinct breed. In what are called the "improved breeds" this process is carried still further.

The flexibility of the animal organization that renders possible the development of the characteristics of a breed through the influence of surrounding conditions, as already noticed, furnishes an opportunity for improvement of a more special character. A liberal supply of nutritious food, in connection with protection from the inclemencies of the seasons, will produce a tendency to early maturity and better feeding quality; or the energies of the system may be devoted to the secretion of milk by developing a habit of the system in that direction, and then new characters may become fixed by a system of selection and breeding, and constitute the improved characteristics of the breed.

The improved characters are, therefore, the result of more highly artificial conditions than those that gave rise to the original characters of the breed.

The improvements, it will be seen, are produced by modifications of food and habits, and they are perpetuated by a judicious system of breeding. It is a too common error to suppose that improvements are made by breeding only, and to overlook the influence of food and management.

At the time of birth the animal has no characters that have not been derived, by inheritance, from the parents, but it may itself be changed in its characters by modifications of food or by the development of new habits, and these new characters, which are added to the sum of the parental characters, may be transmitted to the next generation, where they appear as inherited characters. The process of breeding, then, only serves to accumulate the improvements made in each generation by other means, and perpetuate them as inherited characters.

Great differences in breeds, and in the improved characters engrafted upon them, must therefore be

produced from the different conditions that have prevailed in their development. Each breed is therefore naturally adapted to particular conditions of life, and the peculiarities of the farm and the system of management must be taken into consideration in deciding which is "best" in any given case.

The tendency to uniformity in the transmission of characters is increased by breeding only from the animals that possess the same peculiarities for many generations. From this concentration of hereditary force pure-bred animals are "prepotent" in the transmission of their characters when crossed upon animals that have no established characters, as is the case with our native and grade stock. As improved characters are engrafted upon the general characteristics of a breed through the influence of special conditions, the intensity of the power of transmission may likewise be augmented in particular families by more rigorous selections within the limits of the family, to produce a concentration of the special characters that belong to it, which is called high breeding.

One of the greatest advantages of the pure breeds, and particularly of high bred families, consists in the uniformity of their characters and their prepotency in transmitting them to their offspring.

For practical use upon the farm—aside from breeding purposes—well-bred grades may be equal in value to animals of pure blood, and in some instances they may be superior. The best grades, however, can only be produced by a systematic use of "prepotent" sires that have a high development of the characters we wish to establish, and we must look to the pure breeds as the only available source from which such sires can be obtained.

The Angora Goat.

A great deal of attention, says a Sydney paper, is being given in Australia to the cultivation of the Angora goat. The hair is said to make a very good mohair fabric, but its quality depends very much upon the nature of the locality in which the animals are reared. Undulating prairies, with a very good supply of water, are best adapted to the habits of this goat. In sandy, hilly districts it thrives admirably, but the hair is inferior and falls off very quickly. The flesh is excellent, and is preferred in some parts of Australia to the best mutton. The milk is of good quality, and yields a good supply of butter and cheese. The hair is worth about \$1 a pound, and one ram will yield about four pounds at each shearing; the best plan is to shear them twice a year, as this prevents the hair from falling off and splitting; at each shearing it is about six inches long. Compared with the Merino sheep the Angora goat seems to have the advantage, in the fact that the former produces only three and a half pounds of wool, worth two shillings and sixpence per pound, and that six Merinos will eat as much as seven Angoras. These facts are important, in view of the acclimatization of the Angora goat in this country.—Kentucky Live Stock Record.

Improved Stock in England.

A correspondent of the *Mark Lane Express* writing of English cattle, notices as a good sign that instead of buying all sorts to mix in a wild muddle, as men did but a few years back, purchasers are selecting and sticking to one special line.

Of Hereford cattle he says:

Their quality is so good, and their contour often so admirable, that one wonders they are not more generally taken up. The fact is, *connoisseurs* must have that which pleases the eye amongst other requisites; and, however beautiful an individual or two may be, a herd of white faces is not agreeable. If some heretic would hunt up the roan cattle of the district, and infuse a little more purple into their tint, and do away with the ugly white slash upon their faces, I am certain that the demand for his sort would be rapid. Of course the old hands would crab and abuse, but a fresh and extended circle of buyers would reward his enterprise. This brings him to sheep and of these he remarks.

How capricious are the changes in taste of their breeders! Take, for instance, only the now fashionable Sharrowhawk Down. The old Shropshire sheep, as exhibited in print in Youatt's pages, had a comparatively bald head, but the demand came for wool there, and of course the development was obtained by a series of cunning devices, they have now crowns woolly as an owlet's; but I am told, by one of the most successful breeders and prize takers with the sort, that in humoring this market he had forfeited about seven pounds of mutton per quarter. This defect he is taking measures to correct; but there it is now. Of course there is danger in alteration. I am told of one Shropshire breeder who, by a lucky experiment, obtained a flock that carried everything before it. Everybody went to buy. In the next generation out comes the mischief, and one farmer so spoils his old sort by an infusion of this new one that it drove him fairly off his head, and he ended his days in an asylum. What care and thought these changes—most needful often, but still uncertain, if fascinating as the chemical combinations of the laboratory—require! Still I would try one were I a breeder of Hereford cattle.

Crossing Buffaloes on Cows.

I give a short account of a herd so crossed, and kept in this neighborhood some thirty years ago. I well remember the fat ones being brought to our market, and the remarkably fine quality of the meat—this, too, in a district surpassed by few in its feeding capabilities; and I and many others to whom I have spoken agree that we never tasted beef like that from the cross-bred buffaloes.

The following account may be relied on:

A cow buffalo in calf was purchased from the late Lord Combermere by the late Mr. Norcop, of Betton Hall, and placed in his park. She produced a bull calf which, with its mother, was allowed to roam at pleasure. Getting access to a Longhorn bull, the cow brought further produce which at last attained to a herd of about fifty. The practice was to castrate all the male calves as soon as dropped, the old man in charge of them being able to go among them at will, though with strangers they were very wild and untractable, the cows being served by the bulls of the neighboring farmers, most of which were the old-fashioned Longhorns. The animals thus bred grew to a large size, more especially those which had a less proportion of buffalo blood; these, too, gradually lost the delicious hump of fat that characterized the pure and half-bred ones, though even to the last the conformation of the back showed where it should have been, and the quality of the meat was markedly superior to the ordinary stock of the district, the fat being perfectly delicious.

The three-year-old bullocks would run as much as seventeen hands high, and sold to the late Mr. Duckers—who, I believe, bought all as they were ready—even in those days of cheap meat, for £30 each. I well remember how the buffalo beef was sought after by all who had tasted it when it became known that he had killed some. The herd roamed at pleasure about the park, but were very wild with strangers. No obstacle would stop them when alarmed; fences or gates were crushed down before them like stubble, and when food became scarce they would scent the young after-grass at a great distance, and make for it straight as a line. The way they dashed into the pool and swam across has been described to me as a most interesting sight. They bred freely under the conditions previously stated, were quiet with their feeder, but had to be shot when their turn came for the butcher. The pure-bred ones were small beasts, but, as I have said, the cross-bred ones were immense animals. I have been told also by one who knew them well that the late Lord Combermere had a herd at Combermere Abbey, some of which were still larger than those at Betton.—*Cor. London (Eng.) Live Stock Journal*.

American Shorthorn Association.

In Great Britain, a country of comparatively limited extent, where everything centres at London, and where there is a large class of landowners and farmers with more or less leisure and ample means, who are constantly called to the metropolis on various errands of business or pleasure, the establishment of a "national association" is a natural and easy process for any purpose which requires the concentrated attention and energy of interested parties. But in this country, with its vast area, and the general necessity on the part of most of us that our own affairs at home