

Stock and Dairy.

Shorthorn Breeding.

CONDUCTED AS A SCIENCE, WITH A VIEW TO MAINTAINING THE HIGHEST EXCELLENCE IN USEFUL QUALITIES.

[Address delivered by Judge T. C. Jones before the American Shorthorn Breeders' Convention, at Toronto.]

(Continued.)

The theory upon which the early improvers proceeded was, that by bringing together males and females possessing the same valuable properties, they would insure the presence of these properties in their offspring; and by continuing to breed from the produce of such offspring, and always keeping in mind the properties that constituted their value, they would finally establish the excellence desired. At length, by this process, the term blood came to be distinctively applied; and according to an early authority, "when reference could be made to a number of ancestors of distinguished merit, the term blood was admitted." And thus, we may assume, the use and value of the pedigree were suggested. The pedigree was convenient and valuable, but the all important matter was, that which the pedigree was supposed to represent, to wit: an ancestry of animals possessing the properties they sought to produce and perpetuate. The perfect pedigree was not the one sought, but the perfect animal; and the pedigree was only valuable as it aided in furnishing evidence of the material that could be relied on in breeding.

In the early history of the Shorthorn race, as of all other breeds, in what may be supposed to have been the period they were moulded into the approved type, there was a good deal of in-and-in breeding, that is, the coupling together of animals that were closely related; a practice that seemed justifiable, however, because of the limited number of cattle of approved excellence to breed from, and because the tendency of the practice is within certain limits to improve the symmetry, refine the bony and muscular structures, and increase the early maturity—objects which these improvers were, we may suppose, quite anxious to accomplish.

We therefore find that the great multitude of the race now disseminated throughout the world, are all descended from a very few animals. The distinguished bulls of the Collings, from which all pure bred animals trace descent, were from Hubback, R. Barker's bull, Dalton Duke, and the cows Houghton, Lady Maynard, Duchess, the dam of Red Rose and Old Daisy. It would seem, therefore, that with this common origin, there could be little occasion for controversy as to the superiority of blood in the different strains; and that within the prescribed limits as to pure blood, the all-important object should be to breed from the best animals in useful and profitable qualities. To quote the language of Professor Low, "So many fine animals are now reared from the same race, that no one is laid under the necessity of breeding solely from a few individuals; and in the future cultivation of the breed hardness, soundness of constitution, and the milking qualities of the females, may all receive their due share of attention. In all thoroughbred herds there will be more or less relationship between the different individuals, and according to the general testimony of practical men, breeding from remote affinities is not objectionable. In breeding thoroughbred horses, the coupling of cousins and even second cousins is regarded as in-and-in breeding, and held not to be allowable more than once, or at most, twice without a fresh cross. In Shorthorn practice the mating of animals in this degree of relationship would hardly be regarded as in-and-in breeding; while by many the persistent and continued breeding together of individuals related in the first degree, as brothers and sisters, and parents and offspring, is practiced and defended. As to the general effect of this practice, I am not aware that there is any ground for a difference of opinion among intelligent and impartial men. Except in the beginning—the building up of a race, or, as it has been expressed—"when the breed is new," if the system is long continued, the injurious effect, as stated by Professor Low, will be the manifestation to the animals of "symptoms of degeneracy, as if violence had been done their instincts. They become, as it were, sooner old; the males lose their virile aspect, and become at

length incapable of propagating their race, etc. *

These effects may not for a time be very observable, but by carrying the system sufficiently far, they never fail to manifest themselves. * * Both sexes become more subject to disease, as apoplexy, and inflammation of the digestive and respiratory organs." The tendency is to produce animals neat, handsome, and fine in appearance, but not growthy. The skin is thin, and appears to be drawn tight over the carcass—the hair is frequently short and scanty, and the flesh deficient in depth and evenness.

Let me appeal to the experience of the intelligent breeders here assembled, and inquire whether they have not observed as the result of long continued in-breeding, this absence of good feeding quality, with light flesh and slim waists, not only in the in-bred animal, but what is a much more serious matter, in the immediate progeny of such animals, where they have been crossed on other stocks?

The fact that close inter-breeding tends to refine the extremities, and to impart elegance and style to the general appearance of the animal, will explain why it is that men of taste have adhered to the practice where those of a more practical eye would have detected a deterioration in useful qualities. And the common assumption of superior excellence in particular strains, and the enormous prices they have made, will also explain why the system has been followed, in some instances, by the use of animals that were confessedly inferior.

In the case of the in-bred families commanding these high prices in the market, it is hardly to be expected that men will change their breeding where it involves pecuniary loss, and it may therefore be assumed, that so long as these finely-bred animals are in demand at higher prices than others, so long will they be bred. And yet, whatever we may say in defence of breeding with an eye to the requirements of the markets, in this, as in other cases, it can hardly be necessary that we should be the advocates of a system whose tendency is, in some degree at least, to diminish the excellence of our stock in useful qualities. I think it scarcely possible that among the intelligent and practical men here assembled, there can be a difference of opinion on this point. For, sir, we all know that however desirable it is that we have beauty of form, with that peculiar refinement, and nice balance and blending of parts, that denote the high bred animal, it will be comparatively valueless, unless we have the profitable qualities for the production of human food. In other words, we must have an animal with the vigor and thrift that constitute a grower. Of all the points of excellence in a bullock, none can be more important than this, which we know long continued close breeding tends to impair. And the same is true as to the influence of the practice upon fertility, and the production of milk. In reference to this, I quote the following passages from Darwin's work on the origin of species:—

"I have collected a large body of facts, showing, in accordance with the almost universal belief of breeders, that with animals and plants a cross between different varieties, or between individuals of the same variety but another strain, gives vigor and fertility to the offspring; and on the other hand, that close inter-breeding diminishes vigor and fertility." The same author has somewhere observed, that it must be admitted that in nature there is a strong tendency to out-crossing; a remark which the observation of all intelligent men will confirm. For who is there that has not observed the universal disposition among male animals to seek the society of strange females away from home? There seems to be an intimate connection between the breeding and milk-producing qualities; and I think it seldom or never happens that a large milkier proves an irregular and uncertain breeder. For this reason, as well as because the Shorthorn race has from the earliest period of its history, been distinguished on account of its combination of excellencies, we must not neglect or under-estimate the milking qualities, or allow them to deteriorate. There is now no necessity for resorting to this refined system to give style and beauty to the form—for, as observed by Professor Low, "The external form has been already brought to all the perfection which art seems capable of communicating; and now, those other properties remain to be attended to, without which no further refinement of breeding will avail, for the purposes of profit to individuals, and benefit to the country."

Gentlemen engaged in the in-and-in practice, seem to be aware of its influence in impairing useful qualities, as is shown by the fact that they are constantly seeking bulls as remotely connected as

possible with their cows, so they are within the tribe, to make what they call a fresh cross. These breeders also hold, that if they are driven to go out of the family for a cross, they should resort to what they call a low or miscellaneous bred bull, assigning as a reason, that if they resort to another in-bred family, each being equal in hereditary power, there will be no blending of qualities, and therefore, the result will be unfavorable.

There is no doubt but such crosses are unsatisfactory, because the evil results of in-and-in breeding, whatever they are, are still present in both parents, and it is, therefore, self-evident that they will be transmitted to the offspring. It is claimed that the cross from a strain that is not in-bred is a success, because the hereditary power being comparatively weak, the cross will not materially interrupt or change the type of the in-bred family. This is based upon the assumption that in-and-in breeding increases the power of transmitting qualities to offspring—that, indeed, the more in-bred the animal, the greater his potency in this particular; and conversely, we suppose, the less an animal is in-bred, the less potent he will be as a getter. With this argument I take issue, and deny the assumptions on which it is based—I deny that the mere fact of in-breeding increases the hereditary power, and insist that among the most distinguished of our breeding animals for potency in transmitting qualities, have been those that were not in-bred.

I of course admit that many in-bred bulls have been remarkable for impressing their characteristics upon their offspring, but I deny that this is to be attributed to the fact that they were in-bred. The advocates of the assumptions which I am combatting, refer to Favourite to sustain them. Let us look at that case. Favourite was an in-bred bull, but he was not from an in-bred ancestry. His sire Bolingbroke and Phoenix his dam, were both by the same bull, Foljambe, and the dam of Bolingbroke, Young Strawberry was a half sister to Phoenix, both being daughters of the matchless Lady Maynard. The coupling of Bolingbroke with Phoenix, the dam and sire of Favourite, was, therefore, the first in-and-in breeding in this pedigree; here, then, was but a single incestuous cross, which, according to all authority, may frequently occur without injury, especially where animals are of high excellence and of vigorous constitution. How was it here? Phoenix was equal in excellence to any cow the Collings ever bred; and she was of large size, and a great grower. Bolingbroke was regarded by Mr. Coates as the best bull of his day—was a fine feeder, and inherited from his sire, Foljambe, substance and constitution, and from Hubback, through his dam, superior quality of flesh. Foljambe, the double grandsire of favorite, we are told, was a useful, thick beast, wide back, etc. Richard Barker's bull, the sire of Foljambe, was also a bull of good size and symmetry. On the other side, we find that the sire of the dam of Bolingbroke is Dalton Duke, described by Mr. Coates as of great substance with a wide back.

Such, Mr. President, were the elements from which was bred the most distinguished bull in Shorthorn history—Hubback—R. Barker's bull, Dalton Duke, the cow, Dam of Houghton, "by a bull Mr. Colling bought of Mr. Bamlet," and Lady Maynard. How could Shorthorns less related in blood have been selected? And the progeny of these were so coupled as to avoid in-and-in breeding until Bolingbroke and Phoenix, the sire and dam of Favourite, were produced. Surely, sir, we can find nothing in all this to support the idea of continuous incestuous or line breeding! On the contrary, was it not, until we came to Favourite himself, what would now be called "miscellaneous" or "low breeding?"

To be Continued in our Next.

HOG CHOLERA.—We learn that Hail Talbot, Esq., of Loure Island, Mo., has recently lost one hundred and fifty head of fattening hogs by the hog cholera. From every direction the news comes of the great fatality of this disease. What is the disease? What causes it? What will prevent it? What will cure it? Why will not the medical profession all over the West give this matter their serious attention? The internal organs of swine resemble those of man more than those of any other brute. It seems by careful examination that some of our best physicians can tell us what is the matter, and how to cure and prevent the disease. "An ounce of prevention is worth a pound of cure," and those having hogs that are now healthy, want to know what treatment to give to keep them so.—*Rural World*.

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kill wild mustard. Wild mustard first it makes its stand from amongst blossom, but if need an hundred fold, grain or root crops, for any number of out like wild oats till there, and the thing it I have seen and, where an eight ved with oats, the when in blossom en. The following ing—being plowed ated about three d" came up which d after being about e field was plowed ell harrowed, this k as before, and was the second plough- r root crops—this x inches deep, and a third crop, about of the other two, en haying and har- ight inches deep, any mustard to be then after harvest uck, from a newly wowing spring it was ds seeded down to with a crop of mustard in the bar- ken up after being he next, and again n of mustard could

ER, Pomona P.O.

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