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Improvement of Horses by Selection of Pure Blood Sires.

The old expression, "the sire is half the herd," applies in a general way to average conditions of breeding. But it does not express the whole truth, for in many instances we find the prepotency of the pure blood sire for improvement exceeds that of the dam greatly, and should be credited with a far greater share of influence. Darley Arabian, Goldsmith Mahem, Eclipse, Perserger, Justin Morgan, Hambletonian, George Wilkes, Louis Napoleon, Highland Denmark, and hundreds of other well-known sires, will attest the great prepotency of individuals, strains, and families. Among breeds of dairy cattle it is a matter of common observation that the siring, and particularly before, form concurs with remarkable results, rarely equal the performance of the dam. It is more commonly observed
that the progeny of good cows of the right type from bulls of superior breeding surpass those of champion cows. While the latter are not skillfully mated. It is frequently noticed that heifers inherit the dairy characteristics of the sire’s dam, especially when the latter is strongly built. While it is frequently modern to state this as a rule, there are as many instances where the male progeny resemble the dam and the female progeny the sire, that it is perhaps justifiable to expect such results in a majority of cases.

Among the most successful breeders of live stock will be found the greatest attention paid to the selection of the sire. It has come to be a generally accepted rule that improvement is only to be expected from the side of superior males. Careful selection of females will maintain the present standard of a given breed, but it is difficult
to raise the standard of stockmen through such selection. We must look to the selection of pure-bred stock for any marked improvement. This is not in accordance with the view of some breeders of Arabia who produce one of the finest breeds of horses known to the world, but modern breeders who have achieved distinction in the improving of live stock have done so principally through the careful selection and use of sires.

The possibilities of selection in this direction are almost unlimited. Luther Burbank owes a large part of his reputation to his skill in selecting those specimens approaching most closely to the type he seeks to produce, and to his distinction of perhaps a hundred thousand specimens many of them good, in the search for the best. If his methods could be followed in stock breeding, if the best sire could always be
selected, and all inferior could be thrown out and only the best ones retained, we should have types of horses far above the types we now have.

It is due to the fact that inferior animals, more particularly inferior mares, have been maintained for breeding purposes that great advancements have not been made in breeding. It is also due to neglect by the rank and file of breeders that there is a deterioration from the best type towards an ordinary or mediocre grade. Because of this downward tendency on the part of average breeders there will always be a demand at remunerative prices for superior animals to be used in countering this tendency, and there will always be splendid opportunities for good breeders to use their skill in producing a few animals of superior quality and marked excellence, which
shall prevent the general standard of the breed from falling too low.
Neglect may be due to carelessness or ignorance. The careless
boulder essentially does the least
thing. He has not quite mastered
the situation. He finds that
his farm work and general
affairs are taking the time
that he needs to go abroad and
properly select his breeding stock.
Consequently instead of securing
the best he secures that which
is nearest and most convenient.
By this method he continues
to work in a circle of small
radius. His work is progressing
so that it cannot be done,
his products are below the stand-
and as to quality and quantity, the
returns are disappointing. His profits
do not permit him to travel and
study and broaden his horizon,
his move is perpetually on the
grind stone— he is not making
progress.
The breed who use a six month time or four hundred dollars and produce twenty four a year for five years, worth at maturity on the average one hundred dollars, requires almost as much food, almost as much time and labor spent as the breed of good bone. His investment is not so much less as to justify his costs. On the other hand, by the use of a six month from fifteen hundred to three fifty thousand dollars in the same time a hundred foals may be produced that are worth on the average two hundred each at market age - double the value of the progeny of the ordinary sire. At may choose cost a little more for feed, the interest on the investment may have been quite, but forty dollars per head should easily cover the additional cost of production. This leaves a margin of at least sixty dollars per head in favor of the superior
stock, not to mention the great satisfaction, interest, reputation and standing that the producer of the latter grade may acquire as an incitement to his business. Sixty dollars per head on a hundred horses produced in five years time, although amounting to six thousand dollars in the aggregate, represents not more than ten per cent of the capacity of a good horse to produce superior stock.

Neglect through ignorance is hardly less culpable than neglect through carelessness. In this day and generation, in these United States, with the opportunities for instruction, with the agricultural literature and books embodying the experience of our most successful breeders, our most learned scientists, and our most able investigators, with the agricultural press and its long list of periodicals, and with agricultural colleges, with the farmers' institutes and
their crops of lettuce drawn from the best talent obtainable, there is hardly any excuse for ignorance, either of breed type, of good and bad qualities, of unsoundness, and other defects and imperfections, belonging to remain in this land, instead of matters pertaining to husbandry, and with opportunities for learning all about us, is little short of a shame.

In selecting a sire there are two considerations that should be emphasized: first, individual excellence, and second, uniformity of inheritance. It is not to be expected that an inferior animal will prove a successful sire. It is true that a few instances are on record where poor individuals have produced unusually fine stock, but these are only the exceptions to the general rule: "like begets like." Only the best can produce the best. It is therefore of prime consideration to see that the sire is in the
first place a good individual. In an article of this nature it is hardly in order to discuss the points which taken together make up a good individual. One can hardly get a good conception of the ideal type except by seeing and feeling many good ones, studying the best types that have been produced.

In a general way, known, there are some things which may be said that will be of assistance in placing correct values upon different characteristics and features of the animals desired. For example, in breeding draft horses size and strength are indispensable qualities; a good big horse is worth more than a good little horse. If one is to produce horses of sufficient size to command high prices, he must use ones of equal or greater strength than that he intends to get in his market stock. Size is, then, an
important consideration and should be fully up to if not superior to the average of the breed.

Size is, however, not all and if may be secured at a sacrifice of some greater value. If extreme size is combined with coarseness of form, sluggishness of temperament, and general lack of quality, style and manors, then it will be too great a sacrifice to obtain more size at the expense of these other desirable qualities. Generally speaking, our horses are too light in body for draft horses. To correct this fault a sire with large bones is generally desirable, although it is generally true that fineness of bone is generally correlated with excellent action, mettle, and stamina, and that big bones accompany a sluggish temperament and a lack of action and general lack of quality. The size should be completely balanced as well as fully average size. A greater
degree of compactness is desirable in the male than in the female. Style and manners are of equal importance with size. Without a good top line, a proud, bold appearance, indications of vigor and vivacity, the best type of a sire cannot be obtained.

Temperament, although of great importance, is something intangible and hard to describe. Courage is one of the most important characteristics; willingness to put every ounce of energy cheerfully, fearlessness in facing objects that are unusual, and general tractability and stability are of no less importance than and consequence than size and conformation.

Uniformity of inheritance is one of the most important characters. This means an inheritance of like character and details of conformation throughout a series of generations from each of the various units in the pedigree. All of our pure bred
live stock over to purity of blood
such uniform substrance.
Domestic animals, haveon purify
bed, and haveon long the need
of ancestry, all of necessity has
such fine bed than the native
wild species. Take for instance
characteristics of the fox or fox,
the erow or the robin. The
variations in appearance and
quality of such native pure
breed must be slight and one
can foretell with reasonable
certainty the characteristics and
appearance of the offspring of
day of these wild species from
at knowledge of three of the points.
For the mixed and miscellaneous
nursing breeding of animals in
domestication, a very different
condition exists. For example,
among cattle, breeders start with
common stock in which the
Shorthorn blood prevails. After
a year or two he takes a
fancy to Hereford cattle, and
introduces a Hereford sire into his herd. Then he learns something of the Aberdeen Angus herd, and decides that he would like that kind. Just comes a man inducing him that he should let Chief cattle alone and go into the dairy business with the purpose of buttermaking. To get the necessary milk he introduces the Holstein-Friesian blood into his herd, and then founding the quality of the milk too soon he crossbreds in with Jersey or Greenery blood. Now he may be a progressive breed lacking in flesh and fat. A purpose, and use pure blood every time he crosses, or he may be an ordinary breed and use only some of grade stock. At any rate his results will be the same and he will obtain a heterogeneous aggregation of misfits. The great objection to cross breeding...
lies in the fact that known meritorious. The first cross may be, the stock does not breed true, but almost invariably utrogadora in the second will subsequent generations. There is always a tendency to revert to the original wild stock which, in point of usefulness to man, was far inferior to our improved domestic breeds.

On the other hand the pure bred transmits his characteristics and his structural points with much regularity, this uniformity of temperament being due to a uniformity of instinct. In this connection it is only fair to state that many so-called pure bred animals, which pedigrees are recorded without control for twenty generations, may be, to all intents and purposes of mixed breeding. Among French hounds there have been
observed a great variety of types, from a tall upstanding horse of large scale and immense fibre, to a low-down, close-knit, compact, enduring type, and the slender, fine-footed, nervous, speed type. In fact as a rule from this French breed, each coming from the same farm no two would be considered of the same type. How is it possible to combine so many different types and yet maintain among the resultant product.

The first consideration in the pedigree of a breeding horse, regardless of the class of animal, to which he belongs, and to individual excellence, is that he be sprung from an ancestry of closely similar type. A grade that embodies similar characteristics for four or five generations may be strongly bred than all registered animal whose ancestry basit widely from the fixed standards. It is for
This reason that inbred animals are more uniform, and commonly more perfect, than animals produced from unrelated parents. It is a matter of history that great breeders have generally resorted to inbreeding, or rather have been forced to it, in order to fix a given type which has originated from existing. For this reason an inbred sire inherits less varied qualities more intensely, consequently he will transmit his desirable characters with greater uniformity and greater perfection.

Although perfection is common by a result of inbreeding, and masculinity and utility are indications of perfection, it can only be determined with certainty by the stock produced. It is a good plan to select sires whose sires were perfection animals, and whose dam was of the same type as his sire. A change
If blood is desirable mainly for the sake of improvement. A change should never be made if it necessitates the acquisition of a sire inferior to the one in use at present. A good sire may be used until the offspring have seven-eighths of his blood. The result of breeding good horses seems to lie in the selection of good sires, and after these are obtained, in preserving and using them until their period of usefulness is past.

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