



More Thoughts About Breeding



PROBABLY one of the best articles a person could read regarding this problem of breeding and improving the quality of our bird dogs is one that appeared in the horse magazine, *OWNER-BREEDER* (June/July 1994) titled "Of Humans & Horses—the Question of Inbreeding", by Joe Bagan, who has researched the topic thoroughly and is highly qualified on the subject.

It is too long to reprint here, but I will try to give the highlights and the bottom lines of his dissertation and some direct quotations, for I think it is so well done and so important to our thoughts regarding breeding. In the following quotations, Mr. Bagan establishes the thought that inbreeding does not necessarily lead to degeneration or deterioration of the species:

The belief in Western society against inbreeding is nearly universal. The connection between inbreeding and degeneracy, deformity and feeble-mindedness is held by nearly everyone. But is the connection valid? From a historical perspective, there is much to refute this shared belief. Nearly everyone has some notion as to what constitutes incest and at least a vague idea of the "incest taboo." In our culture, the very idea of incest connotes shame and horror. In fact, all cultures have some sort of incest taboo, but as we shall see, that taboo means different things to different people.

Where did this taboo originate and why is it so all pervasive? The answer might surprise you—no one knows! One of the dominant misconceptions is that its function is to prevent sexual relations between members of the same family.

*According to Emile Durkheim, author of *Incest* (New York: Lyle Stuart, Inc., 1963):*

"Exogamy is the name given to the rule by virtue of which sexual union between members of the same clan is forbidden . . . a clan is a group of individuals founded exclusively on the community of the totem and not on a definite bond of consanguinity. There is no historical record which would establish a factual basis for exogamy based on a belief that consanguinity is itself a source of degeneration. It is only since the 19th century that there appears the idea that those unions weaken the race."

*The widely held idea of genetic deformity being the inevitable consequence of incest is addressed by Leslie White (*The Science of Culture*, New York: Grove Press, 1963) in the following manner:*

"If the children of brother-sister or father-daughter unions in our society are frequently feeble-minded or otherwise inferior, it is because feeble-minded individuals are more likely to break the powerful incest taboo than are normal men and women and hence more likely to get degenerate offspring."

Research on the subject seems to establish four conclusions:

1. Incest taboos have little or nothing to do with genetic relationships.
2. The taboo means many different things to many different people.
3. The so-called "horror" of incest is not universal.
4. No one knows its origins.

The following quotes are convincing evidence that inbreeding has been constructive under certain circumstances:

In terms of longevity, the Egyptian civilization has no equal. From about 3400 B.C. until the Persian conquest in 525 B.C., Egyptian civilization maintained a continuing influence in the world. Not without its own internal turmoil throughout the millennia, it nevertheless maintained a continuity of incredible duration. And there is no doubt whatsoever that the Egyptian rulers and higher classes practiced widespread incest—usually between brothers and sisters. A few historians have tried to defuse this fact by insinuating "brother-sister" were nothing more than terms of endearment and did not mean blood relationship. But the evidence is to the contrary, including the evidence that lies within their religious beliefs. The Egyptians had an elaborate pantheon of gods and whether gods create men or men create gods, mankind tries to emulate his gods. In Egypt, the gods were incestuous in the extreme.

Sir Marc Armand Ruffer, writing for the Royal Society of Medicine, concludes his studies of the physical effects of consanguineous marriages in the royal families of Egypt in the XVIIIth dynasty in these words:

"There is no evidence to show that idiocy, deaf-mutism or other diseases generally attributed to consanguineous marriages ever occurred among the member of this dynasty, and as far as can be ascertained from mummified bodies, masks and statues, the features of both men and women were fine, distinguished and handsome. The result of this inquiry is that a royal family in which consanguineous marriage was the rule, produced nine distinguished rulers...There is no evidence that the physical characteristics or mental power of the family were unfavorably influenced by the repeated consanguineous marriages."

Historical records seem to support the following conclusions:

1. Close inbreeding was widely practiced in many ancient civilizations.
2. There is no evidence to suggest that the practice resulted in widespread degeneracy, feeble-mindedness or loss of vitality. That some of these weaknesses occurred is no doubt true, but then this will also occur in the general population as a whole.
3. In modern times, incest and first cousin marriages were widely practiced among the aristocracy of Europe.
4. Prior to the Industrial Revolution, incest and first cousin marriages were widely practiced among the entire European population.
5. In our society today, incest almost invariably has disastrous social and psychological consequences, although not necessarily resulting in biological degeneracy.
6. Human beings have and still do maintain incestuous relationships; the frequency and degree vary among different cultures.

Much research has been conducted on the study of animals in their natural state. The weight of evidence seems to support the

notion that while incest occurs, there also exist natural mechanisms which prevent it, such as the expulsion of male offspring. Breeders, on the other hand, can succeed in producing excellent stock through inbreeding because of the ability to cull undesirable offspring.

Apparently our domestic birds and animals are all the result of selective inbreeding. The article next deals with rather technical explanations of recessive genes and their genetic behavior to do with inbreeding, and then with the positive results of selective inbreeding. You must remember, this article was written for thoroughbred horse breeders:

After reviewing the research with all its contradictory conclusions one might be inclined to ask: "Does inbreeding achieve desired results?" Of course it does. This has been known since the domestication of plants and animals, has been widely practiced within the human community, and is not refuted by modern genetics! But you have asked the wrong question. The proper question is—at what price?

The advantages of inbreeding should be obvious. More of the desired parental genes will be transmitted to the offspring. The best genes are evident in the phenotypes of great Thoroughbreds. Duplicating those genes is advantageous to the offspring. Many of the risks are dependent on the quality of the stock used.

What is the result of all this outcrossing? It certainly hasn't resulted in any positive gains. About 35,000 Thoroughbreds are foaled in this country each year. Half of these will never race. Only a relative handful will ever win a stakes race much less race in one. Small fields dominate in allowance and stakes races. There is nothing to indicate that the breed is improving in any way. If anything, it is deteriorating. The cost of outcrossing can be summed up in one word—randomness. While there may be less risk of homozygosity, there is also less chance of duplicating the very traits which are prized and sought after.

Perhaps at the expense of oversimplifying Mr. Bagan's article, what I derived from it is that selective inbreeding is the only logical way to improve a species or strain; close inbreeding is not detrimental if it is done very selectively; having enough members in the family to make those critical selections seems to be the key; that the problem of negative recessive genes calls for close scrutiny of the gene pool and the individuals to be used; and lastly, that continual outcrossing tends to lessen the quality of the totem or strain, particularly if of an unselective nature.

If this hypothesis is true and I believe it to be so, my regret is that I did not inbreed more than we have, but grateful for the amount of inbreeding we have done.

Sincerely,

Robert H. White

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