

Breeding for the Difference

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Most people think and act within the narrow limitations of what they have been taught during their early years as a breeder without ever questioning the basic assumptions that structure their world as a breeder. Because technology has become a tool that every breeder can use, it is important to stop periodically to see if we are experiencing a slippage in our values. This is an area that no breeder can afford to ignore and no one should drift from his or her breed's standard when it comes time to select sires and dams.

Every breeder knows that there are more than enough problems to worry about. The key to success is staying focused on the important issues. Many times the problems of least importance are given more attention than they deserve. In practice, no breeder can realistically focus on every problem. This means that choices have to be made. In this regard, one of the worst dilemmas will come when a breeder discovers that they do not know what problems exist in their breed. This is closely followed by not knowing what problems exist in their pedigrees. Regardless of what problem seems to be important, how much progress a breeder will make can be linked to the learning of skills. Three stand out. They are understating your breed's standard, knowing the modes of inheritance that effect the traits to be eliminated or improved and knowing what the strengths and weaknesses are that present in your pedigrees. In this regard there are several factors that separate success from failure. In this regard, some will know more about the ancestors in their pedigrees than others. Generally it will be those that occur in the first three generations because they contribute the most to each litter. Others will only study and use champions in their breeding program. This is because they are easy to notice and everyone appreciates a winner. Those with the least amount of experience will concentrate on only breeding to the dogs with health certifications (OFA, CERF, etc). This is because they do not know how to manage the carriers. Then there are those who believe that producing one good puppy or a champion will make them successful. In the end, most of these reasons will not be good measures of anything given what is known about breeding methods and genetics. For example, one good pup in a litter of faulty littermates is not progress. Even worse, is for the pups to be of such poor quality that most must be sold on spay/neuter contracts or on limited registrations.

In order to know whether a breeder can make a difference begins by taking a close look at the qualities found in the litters they have already produced. This begins with the core elements (health, conformation, and temperament). Quality and soundness are the proven measures of progress and they are the factors that will make the difference. In this regard, everyone is not equal. Some breeders begin with better quality dogs than others. Some know more about how to pick and choose the best offspring. Some know which breeding method is best suited for each sire and dam. Some will have more breed knowledge and better networking skills. While all of these factors are important, until a breeder understands what strengths and weaknesses are imbedded in their pedigrees not much can be done. In practice, every dog has some traits that need improvement. This is true even among the better individuals. Ask this question, is there one trait or characteristic you would like to fix or improve in the dogs you are breeding? It is not enough to know the breed standard and which traits are to be faulted and disqualified. To do a better job, one must know the modes of inheritance for each trait. The mode tells the breeder how a trait will be inherited. But of all the things that might go wrong, one of the worst problems is to not know if the problems are caused by the recessive genes or by the management of the dog itself.

Unfortunately, there are no reliable estimates for knowing the frequency of problems that occur in a breed. This forces each breeder to develop his or her own list of problems to worry about. One technique known to be of effective is to begin with a sheet of paper that has two vertical lines drawn from top to bottom. Space them wide enough so they form three columns. Over the first column write the words, "Problems in my breed". In this column list the traits and diseases considered of greatest importance to your breed. They might be size, short upper arm, small eyes, temperament or a specific disease(s). For example, in Dalmatians and German Shepherds it might be color, temperament, topline, upper arm or some disease. In other breeds, it might be body proportions, expression,

shyness, lack of angulation, etc. The list could be long, but in every breed there will be at least four important problems that are more important than others. They should appear at the top of the list.

At the top of the other remaining columns write the words, "Weaknesses -Pedigree of: _____". Enter over each column the name of the sire and the name of the dam to be bred. Under each of their names list the traits that need to be improved based on the breed standard. At the bottom of their lists add a section called "Strengths". Under this heading list the traits that are considered their strengths based on the breed standard. When both columns have been completed, the problems and the priorities for each dog will become apparent. These three columns now become the road map for things to study and worry about. These lists also make clear what information must be collected about each breeding partner. Illustrated below is the list for a typical stud dog and brood bitch.

Problems in my breed	Weaknesses-Pedigree of Sire: Ch. Win and Lose	Weaknesses-Pedigree of Dam: My Charm is Free
Poor top lines	Top Line	Top Line
Cock hocks	Eye pigment	Reach and drive
Lack of rear angulation	Length of croup	Missing premolars
Short upper arms	Short upper arms	
Health Prpblems	Strengths	Strengths of Dam
Hip dysplasia	Balance, reach and drive	Head proportions
Bloat	Good feet	Eye and coat pigment
PRA	Good feet	Correct croup and tail set
	Excelent head	Good body proportions
	Correct tail	
	Correct pigment	
	Full dentition	

Identifying problems on paper first helps to focus and give directions to a breeding program by keeping the important things in perceptive. It also serves as a reminder for what problems are present and which ones should be given the priority. The exercise of writing things down should be done before making the decision to use a sire or dam. This exercise helps to clarify and highlight what specific strengths and weaknesses are involved between the breeding partners. It also helps to identify the difference that exists between them. If the strengths and weaknesses of each breeding partner do not offset each other, it makes no sense for the breeding to take place. It makes less sense to worry about improving coat quality or color, if structure, temperament or health are the problems. In the example used above, notice that both the sire and dam have poor toplines. Unless they both have littermates and ancestors with correct top lines it would be difficult to justify this breeding because it is likely to concentrate the genes needed to produce a litter with the same poor top lines as their parents.

Another common mistake is to place emphasis on only one trait. Those who do not consider the total dog, meaning

the core traits (conformation, health, and temperament) will find that over time, the quality of their pups will soon begin to drift toward the breed average. In time, their pups will show all of the variations found in their breed.

In the final analysis, how much of a difference a breeder will make in his or her breeding program will be directly related to how well these principles are understood.

References

- Battaglia, C. L. – “ Punnett Squares”, Canine Chronicle, Vol. 27, No 8.
Pg. 188-120, 2003
- Battaglia, C. L. – Breeding Better Dogs, BEI Publications, Fifth Edition, Atlanta, GA 1986
- Bell, Jerold S. "Choosing Wisely", AKC Gazette, August 2000, Vol. 117, Number 8, p-51.
- Bell, Jerold, S. "Developing Healthy Breeding Programs", Canine Health Conformance, AKC Canine Health Foundation, Oct. 15-17,1999. St. Louis MO.
- Foley, C.W; Lasley, J.F. and Osweiler, G.D., “Abnormalities of Companion animals: Analysis of Heritability”, Iowa University Press, Ames, Iowa, 1979
- Hutt, Fred, Genetics for Dog Breeders, WH. Freeman Co., San Francisco, CA, 1979
- Willis, Malcolm, Genetics of the Dog, Howell Book House, New York, New York, 1989
- Willis, Malcomb, "Breeding Dogs" Canine Health Conference, AKC Canine health Conference, Oct. 15-17, 1999. St. Louis, MO.
- Willis, Malcomb, "The Road Ahead", AKC Gazette, August 2000, Vol. 117, number 8, p-47.