

Fighting for the future of the dog

by Hellmuth Wachtel

WHY DO WE need to fight for the future of the pedigree dog?

It is because of the deleterious consequences of our present breeding system which urgently needs to be reformed after 150 years as it is severely jeopardising the health and even the survival of dog breeds.

Therefore it must be modified and adapted to the present state of progress in population and molecular genetics.

Formerly dogs were bred for some working task like hunting, herding, watching, tracking and so forth – and perfect health was a foremost requirement.

However, today most dog breeds or the majority of dogs in a breed have lost their original role. This has brought about degeneration, severe inherited diseases, loss of natural instincts, as well as adaptive efficiency and social and everyday intelligence owing to close breeding (inbreeding and line breeding), giving rise to inbreeding depression and its consequences.

Inbreeding is a developmental stress factor, impairing maintenance of adequate levels of biological functions (homeostasis). The results of this are a decrease in vitality as well as in immunological infection defence, fertility, reproductive and brood care behaviour, intelligence and mental capacities.

Striving to achieve close Standard conformation by close breeding leads to the continuous increase of inbreeding levels owing to heavy use of favourite sires, the seclusion of the breed population from any ingress of genetic diversity from outside and often an extremely small original founding population producing a genetic bottleneck.

The guiding breeding rule up to today was using only dogs with the highest quality level this has meant limiting breeding stock to a very small number of dogs, particularly sires.

Today, as a result, studies of breed populations from the British and American Kennel Clubs show a steady loss of genetic diversity (heterozygosity), so that the highest diversity is now found in breeds which were the last to be recognised, and vice versa.

The earliest recognised breeds showed highest diversity loss and thus greatest genetic endangerment.

Quality rule

So, the 'best-to best' quality rule, while giving good results in the short term, has turned out to be disastrous and must be changed.

It inevitably leads to accumulating inbreeding levels accompanied by risk of inherited diseases and finally inbreeding depression which will ultimately endanger the breed.

That corresponds to the warning for dog breeds: "Kennel Club recognition can impair your health." Indeed, several working dog breeds have strived to escape kennel club recognition in Britain and the US, often in vain (for example, Parson Jack Russell Terriers, Border Collies).

In consequence, expenses for tests on genetic diseases and general medical care are making ownership of purebred dogs less and less affordable and/or acceptable on the part of dog fanciers.

So, today, many dog lovers either prefer a mongrel from a shelter or one of the new 'designer dogs,' that is mixed breeds from planned crosses like Labradoodles.

While mongrels are cheap to get, the 'designer dogs' are highly priced, often exceeding the price level of purebreds. These dogs, while certainly not free of inherited or other diseases, are in my opinion on average distinctly less prone to most hereditary diseases and mostly exempt from inbreeding depression, or, in other words, will show heterosis (hybrid vitality).

In addition, in contrast to 'common' mongrels, 'designer dogs' like Labradoodles (Labrador Retriever x Poodle), Cockapoos and the like are predictable as pups owing to the genetic 'uniformity rule' of mix-breed animal conformation in the first generation.

However, this and heterosis gets gradually lost if those mix-breeds are crossed among themselves in the next generation, so in my view only first generation 'designer dogs' should be bred and bought, in order to have the full advantage of acceptable uniformity and high heterosis. However, the foremost contemporary objective of dog breeding should be raising the health of the purebred dog since their health risks keep on increasing.

An illusion

Unfortunately, it seems to be a common belief that veterinary medicine is already on the way to defeating all inherited diseases so pedigree dogs are going to be healthy again and breeding methods could proceed just as before.

This is an illusion, it would mean forgetting that inbreeding depression is just such a terrible foe of the purebred dog but by contrast can often easily be defeated by strictly cutting inbreeding levels.

Sometimes crossing out to a similar breed and back breeding might be necessary and should not be shunned as it was always a common emergency measure to save breeds in dire straits of diversity loss – as so many are today.

Uniformity of Standard conformation has reached a level that selection is sufficient to maintain it. Thus, in my opinion, the following method of breeding is imperative to raise the health standard of purebred dogs to near the level of both kinds of mixbred (mongrel) dogs.

Certainly show ring competition is a legitimate way of evaluating dog's aesthetic qualities for an ugly dog has little chance in this world, no matter how healthy it may be, and we like attractive dogs since, after all, we want to see that, among other traits, dogs have appealing looks.

But it is ruinous to carry on in the usual way any more. The principal rule of mating the 'best to the best' has led to a dangerous situation which must be acted upon so that it can be rectified.

But the only way out of this quandary depends upon the puppy buyer.

The dog breeders are caught in a system of hard competition which inevitably compels them to follow an old outmoded system of showdog breeding.

But no doubt dog lovers wish for another dog: a beautiful dog certainly, but with good health, vital and strong and with high adaptability to our changing environments. Furthermore they need to be trainable, sociable, long-lived and gifted with good pet qualities.

In conclusion, in addition to the usual requirements dogs destined to compete in the show ring should have low fixed inbreeding coefficients and should have passed some functional performance indicators like endurance or sprint test or other physical tests according to the aptitudes of the breed.

Special sports medicine tests may be also suitable for them.

This means that potential puppy buyers should ask for these tests as basic requirements in order to acquaint the breeding community with the changes needed to the current antiquated and ruinous ways to a method which is ultimately destined to secure a sustained preservation of canine health while maintaining show competition quality without further causing harm.

Due to the laws of economy, the stock of purebred dogs on the market will inevitably be according to the market's requirements. Producing healthy puppies requires well informed buyers and breeders.

Today, the level of breeders' education and engagement is often high but market constraints and heavy competition (specifically requiring show traits without insisting on health traits), plus low average knowledge of buyers prevent a change, due to insufficient information levels.

Basically this should be the task of the veterinary medicine profession but sadly engagement in this field is weak, to put it mildly.

Positive trigger

In disease studies inbreeding coefficients are rarely given, and there is just one study on longevity of purebred dogs and inbreeding coefficients.

This study, however, showed that a Standard Poodle with less than 6.25 per cent inbreeding depression showed no longevity difference compared to mongrels.

As far as I know there has never been an information campaign aimed at decreasing inbreeding as an imperative factor for better health although it would be a first step likely to achieve a considerably better health in pedigree dogs.

Hopefully the 'designer dog' boom can trigger such a development with decisive and positive benefits for purebreds.

The alternative is unthinkable.