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The cruelty of dogs' shrinking gene pools

Some breeders must adjust their mindset as inbreeding is still a very severe problem for many dogs and their owners Country Life - Thursday, 20 May 2010 - by David Hancock

Important inquiries carried out in the past year into pedigree dogbreeding all share the same concern: breeding to close relatives. Prof Sir Patrick Bateson's report recommended establishing an advisory council to address the issue; the cross-party Parliamentary Group's findings also recommended greater scrutiny of dog-breeding practices. But, for a century or so, close breeding has been accepted practice.

In *Advanced Labrador Breeding* (1988), Mary Roslin Williams, a breeder of both show and field-trial champions, wrote: 'To produce a strain of good ones, you must carry out a degree of line-breeding, possibly even using the dangerous practice of mild inbreeding in special cases. Top breeders hate the moment they have to use a complete outcross.' She defined line-breeding as 'a gathering of lines leading back in three or four generations to a known good dog or bitch or very often to one or two good dogs and bitches, with the rest of the pedigree filled with outcross names'.

Renowned golden retriever breeder W. M. Charlesworth warned against brother-sister matings, but liked bitch-grandfather unions and favoured bitch-nephew matings. In the 2008 television documentary *Pedigree Dogs Exposed*, after which the BBC and some sponsors withdrew from Crufts following the exposure of overweight labradors, pekingeses that can't breathe properly and bulldogs that can't breed naturally, the chairman of the Kennel Club (KC) was pressed on this matter. Understandably, he looked distressed when asked if he would consider having children with his granddaughter.

However, inheritable defects in pedigree dogs are increasing, with geneticist Prof Steve Jones stating that continued in-breeding will lead to 'a universe of suffering'. In America, a researcher found that there is a decline of 7% in the average lifespan of dog breeds for every 10% increase in inbreeding. Professional breeders of cows, pigs, goats, sheep and horses consider that a co-efficient of inbreeding of about 9% is risky. But show dogs' success isn't based on performance or production-for them, it's appearance, based on breeder whim.

The Germans call reckless dog-breeding *Qualzucht*, meaning cruelty breeding, or 'torture breeding'. And when a geneticist, himself a breeder of boxers, finds it necessary to ask whether there are boxers that are truly free of heart murmurs, we have much to think about.

However, geneticist Bruce Cattanach writes: 'Inbreeding has been ingrained in the dog-breeder psyche from the beginning and is hard to break, even when it is possible to show that it is not the most successful way to breed.' He states that, without intervention, some breeds may become extinct and advises out-crossing to other related breeds.

But who will listen to him? Dogma will prevail, and not just 'lurchermen' will wonder at such folly. A weakness of the otherwise excellent Bateson Report was that it didn't gather any valuable evidence on the genetic size of each registered breed; it uses the expression 'closely related breeding pair' when discussing the mating of dams with sires, but doesn't define what closely related actually means.

Experts argue that puppy farms are the source of much unskilled inbreeding, but all breeders need to be aware of the problem, or be regulated into compliance. Inbreeding will not cause inherited

problems if the problems are not present in the genes, in the first place. The genetic size of a breed is crucially important; some ancient breeds are inbred and some relatively new ones are not. But it's breeding practices that decide whether a breed founded a century ago is inbred or genetically diverse.

David Balding, professor of statistical genetics at Imperial College, advises: 'Inbreeding isn't the only cause of canine health problems, and perhaps not even the worst, but it is the easiest problem to fix.' He advises: 'Find out the coefficient of inbreeding for a puppy before buying it. At least make sure it has four different grandparents, not one of them directly related to another.' The Finnish KC publishes the coefficient of inbreeding for dogs registered with them on its website; ours must now do the same.

Inbreeding depression is an acknowledged cause of small litter sizes, shorter lives and a reduced immune system. Dr Ian Ramsey of the University of Glasgow states: 'If the "bad" genes that stop a dog's immune system recognising its own body are, accidentally, concentrated together with the "good" genes for a certain coat colour, physical size, and so on, then the dog will have an inherited tendency to suffer from auto-immune disease.' He says the only way of preventing this is to avoid inbreeding as much as possible, accepting that a greater variation in other aspects will be introduced.

Of course, breeds were originally created and then isolated by inbreeding-that is how their breed-type was established and sealed. But a closed gene pool when there are acknowledged problems in a breed, whether through a falling-away in virility or harmful morphological exaggerations, seals the problem in the breed's genotype. Dr Cattnach was right when he stated that inbreeding is encased in the dog-breeder's psyche.

Crossbred dogs are considered inferior or a threat to breed purity by the diehards, who scorn all empirical and scientific evidence to the contrary. 'We're not having scientists telling us how to breed a dog' is not the brightest declaration when livestock breeders have been gratefully accepting scientific advice for half a century.

Once, all breed-type was rooted in function, and informed breeders of sporting dogs have long bred for performance. Breeders may not want to utilise their dogs' innate field capabilities, but if they only respect a breed for its appearance, then the outlook for them-and, more importantly, their dogs-is bleak.

David Hancock's 'The World of the Lurcher', is published this year. He is an award-winning writer on canine matters and contributed to the 'Bateson Report'