



THE WORKING CLUMBER SPANIEL SOCIETY

[www.workingclumber.co.uk](http://www.workingclumber.co.uk)

# Factsheet

## GENETIC DIVERSITY

GET THE FACTS



Clumber Spaniels are a rare and vulnerable breed with only around 200 puppies born each year.

Breeding strategies need to be thoughtful and well informed. There is a responsibility to act on facts rather than personal opinion.

The Working Clumber Spaniel Society is grateful for the ongoing guidance and support from both the Kennel Club and The Animal Health Trust who study and understand the breeding strategies appropriate to the breed and its small gene pool.

### MORE THAN JUST NUMBERS

With only around 200 Clumber puppies registered in the UK each year, the Kennel Club regards Clumber spaniels as a vulnerable breed. This is not simply about numbers but about maintaining the limited diversity of the genes in the breed by breeding from as many different dogs as we can to ensure their genetic material is passed onto their progeny and preserved in the breed.

This makes the business of breeding Clumber spaniels a little more complicated than more numerous breeds. Breeders need to be thoughtful in their plans and long term in their thinking. Thankfully the breed is well advised by Kennel Club and Animal Health Trust canine geneticists who understand that nuanced and intelligent breeding strategies are essential.

It would be wonderful to have the luxury of choosing only the very best dogs to breed from and discarding those with faults, but with such low numbers we need to include less than perfect dogs. (the perfect Clumber probably does not exist!) Obviously, this needs to be done with knowledge and intelligence. Here is the skill of the truly responsible breeder.

*Maintaining genetic diversity in rare breeds calls for intelligent and skillful compromises.*

*Pursuing low COI numbers alone is a grave mistake. We must look at the whole picture.*

## INTELLIGENT COMPROMISES

Breeders need to ensure that breeding partners are carefully matched to ensure that any faults that are identified in either partner are not 'doubled up' in both the sire and dam and therefore very likely to be passed on to their puppies. This ideal balancing act is very difficult to attain for all the attributes we would like to consider and therefore breeders will very often have to compromise, but with integrity and insight. Members of The Working Clumber Spaniel Society and The Clumber Spaniel Club are well informed by their Health committees and so are well placed to do this.

## CO-EFFICIENT OF INBREEDING

Genetic diversity can be checked by looking at the dog's Coefficient of Inbreeding (COI). The COI of an individual dog is not a measure of the dog's health but a measure of the risk of 'identical by descent' genes being inherited and therefore the risk of an individual dog having inherited identical copies of a gene from both its sire and dam.

A relatively high COI shows a higher risk of a mutated gene being inherited which may cause disease. However, this needs to be balanced against breeding for type as identical genes are what makes a breed a breed.

When breeding the COI of the individual dam and sire are of no relevance but breeders should consider the COI of the resulting litter and balance this along with all the other attributes that are to be considered when breeding. The COI of the litter should be considered alongside pedigree analysis and not in isolation of understanding which dogs are influencing the mating and to what degree.

Vulnerable breeds such as the Clumber spaniel will inevitably have a higher average COI than those breeds with many more litters being registered each year, as the breeding population is so much more restricted numerically.

## GUARD AGAINST POPULAR SIRES

Some stud dogs can become very popular especially if they display many of the attributes breeders want their pups to inherit. Stud dog owners should limit the use of their dogs and check carefully that the bitches they line are a good match, any faults are not doubled up, and the COI of the resulting litter is not too high. A good guideline is no more than two litters in any rolling year, and only around 50-60 pups sired in his lifetime. Looking for a litter mate can be a good alternative to using the same dog too many times.

## AVOID REPEAT MATINGS

It can be very tempting after having a litter of excellent pups to do the same mating again. While this may be acceptable if the first litter was very small with only one or two pups, it is much better to use a different sire every time so that genes are shared around within the breed. If you have a stud dog, consider refusing his services to the same bitch twice.

