

WHY EYE-TEST?

Veterinary science has advanced at a great speed over the last fifteen or so years particularly in the field of genetics. Although the experts tell us they are only just scratching the surface, the information and tests now available to dog owners have taken much of the guesswork out of breeding programmes. DNA tests, where a cheek swab or blood sample can be examined and the genetic status of the dog (carrier, clear or affected) be determined have revolutionised many breeds, in that several dreadful genetic conditions are on the way to being eliminated altogether. Indeed, it seems that a new DNA test comes onto the market every week. Most of the genetic diseases in the dog are found in the eye and it is here that research has been focused. With these new advances, one sometimes hears the question – do we need to bother with routine eye-testing anymore?

The KC/BVA/ISDS eye-tests are carried out under controlled conditions by trained vets using specific equipment. They can only tell whether the dog is physically affected by a particular condition not whether it is a carrier, and as we know, two carriers mated together may well produce affected puppies. So is there any point in eye-testing with the DNA tests now available? From my own experience in Lancashire Heelers I would say most definitely, yes. You never know what may show up and it could be the saving of a breed.

The Lancashire Heeler is a small farm dog used for working cattle in confined spaces and as a general farm dog. Although well-established as a type for over 150 years it was only recognised as a breed by the Kennel Club in 1981. The breed did not ‘catch on’ as some do (thank goodness) but attracted enthusiasts who took their responsibilities seriously. Thus when a few dogs developed early-developing cataracts in the 1980s, several dogs known to have produced the condition were taken out of the gene pool. This form of cataract did not develop until the dog approached maturity (around the age of four) and owners were encouraged to eye-test at this age. All seemed to be going well. The years rolled on, breeders became more health conscious, science continued to advance. The odd case of cataract cropped up, as did persistent papillary membrane. A case or two of primary lens luxation occurred but was believed in the early nineties to be ‘one of those things’. No pattern of inheritance emerged.

In an effort to clarify the situation, the Lancashire Heeler Club organised a ‘mass eye-testing session’ at a club show in 1996 with Professor Peter Bedford. One hundred and seventeen dogs were presented for testing. Professor Bedford wrote: The most significant finding was that lesions ophthalmoscopically identical to those described for CEA were found in 16 dogs (13.7 per cent).... Nine of the CH affected dogs demonstrated papillary colobomas of varying size’ There is more technical detail in the article if anyone wishes to read it. There had not been a case of CEA reported in the Lancashire Heeler before and those of us present were shell-shocked. All the affected dogs traced back to one stud dog.

The effect on the breed was immediate. Puppy testing was recommended and responsible breeders took this up straight away. Annual eye-testing became the norm and several cases were picked up in this way. The situation was publicised in the breed notes and newsletters and became the subject of much discussion around the rings – no internet at the time! The few puppies that tested positive were removed from breeding programmes, parents who produced affecteds were also removed. This swift action prevented CEA from taking hold in the breed. As the Lancashire Heeler is a numerically small breed, increasing eye-testing as mentioned above undoubtedly helped to give the Heeler a healthier future.

One case of Primary Lens Luxation was discovered and this was to prove a tougher nut to crack than CEA. You can read more information about that struggle elsewhere on the site.

As we know, Optigen developed a DNA test for CEA/Choroidal Hypoplasia and they make it very clear that the test does NOT identify the gene(s) for coloboma. Another example of the value of eye-testing happened in Heelers shortly after the Optigen test became available. A responsible breeder eye-tested a litter and they were found to be unaffected by CEA. The breeder died and a nice dog was rehomed. The new owner was very health-conscious and was aware that her dog's pedigree showed a high susceptibility to CEA so she used the Optigen test and it showed her dog to be a carrier for CEA/CH. A little later she had him eye-tested. He was now a fully mature male and the eye-test showed a small coloboma, which had opened up as the eye grew to its full size. The result was referred to the BVA panel and the dog reclassified as affected. The owner was open about the situation – fortunately he had not been used at stud and so another problem was averted.

Eye-testing isn't cheap and neither are DNA tests. I hope I've shown that both are vital and should be used in conjunction with each other if we are to produce dogs with the best possible chance of a healthy life.

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