East Anglian Collie Association

DNA testing for Collie Eye Health

Generalised Progressive Retinal Atrophy

GPRA or Rod/Cone Dysplasia (rcd2)

PRA, whether it be the late-onset Centralised PRA found in Collies of British descent or the early-onset Generalised form which tends to affect Collies of north American descent, is an autosomal recessive inherited disease of bilateral nature similar to the human eye disease, Retinitis Pigmentosa or 'night blindness'.

Night blindness is the earliest clinical sign of GPRArcd2, detectable in six week old puppies, and by the time they are 6-8 months of age, rcd2-affected dogs may become blind. Abnormalities can be detected in the eye long before the owner is aware of visual impairment, with affected dogs suffering cataracts and eventual blindness. There is no cure.

Whilst GPRArcd2 has so far not been diagnosed in British Collies, cases have been found in Europe and, with the recent imports of Collies from the north American continent to Britain and Europe, our stock could be at risk in the future.

The last few years has seen several Rough Collies being imported into Britain from north America, and a growing number of breeders have been making use of these outcross bloodlines and the clear genes these dogs have fortunately brought with them. It would seem a sensible approach for British breeders to have the offspring of such dogs DNA tested for GPRArcd2 to ensure another eye problem does not enter the gene pool.

Testing procedure

OptiGen offers a DNA test for both GPRArcd2 and CEA/CH so breeders can determine the accurate eye status of their dogs.

The test involves the use of either cheek swabs or blood samples which are sent to Optigen. On-line ordering is available and the cost reduces if the 'combo' option is chosen (that is, both CEA and PRArcd2 together). If arranged through a 20/20 clinic in the UK, an additional 25% discount is also available (a list of 20/20 clinics can be found on the Optigen web site).

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