**INTEGRITY IN OUR BREEDING PROGRAMS**

**Northwest Notes / LABRADOR QUARTERLY - Spring 2012**

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Thought – Is a 'breeder' *anyone* who owns a female dog that they choose to breed ? We as enthusiasts of the number one breed in North America ,  must recognize our responsibility to the Labrador Retriever. Owners of breeding bitches as well as stud dogs, must personally desire to improve the quality of offspring by being selective in choosing dogs for breeding.

Breeding’s must reflect our desire to keep the Labrador sound, healthy, and free of hereditary diseases. The diseases with hereditary influence that affect our dogs, changes over the years as research increases knowledge of not only new conditions as well as how diseases are inherited.

  Canine hip dysplasia was first described in the 1930's and was thought to be a rare occurrence at the time. The formation of the OFA is attributed to John Olin, not only an inventor and philanthropist, but also an avid hunter and field trial enthusiast. Hip dysplasia began to impact the performance of his dogs and he organized with representatives of the veterinary community, the Golden Retriever Club of American, and the German Shepherd Club of America, hoping to find a way of limiting the disease. The formation and incorporation of the OFA was in 1966, and now has a mission “To improve the health and well being of companion animals through a reduction in the incidence of genetic disease”.  Radiographs (x-rays), submitted to the OFA must follow the American Veterinary Medial Association directions for positioning. If the film is not suitable as diagnostic quality due to poor positioning, too light, too dark or being blurred from motion, it is returned to the veterinarian who sent it with a request to repeat it. With digital imaging now,  radiographs are received faster and are of superior quality.  The positioning of the dog on it's back with legs extended and parallel to each other is accepted world-wide for detection and assessment of hip joint problems and arthritic hip joint changes. OFA does not require the use of anesthesia but asks that it be used IF proper positioning cannot be achieved without. Three randomly selected and board-certified radiologists evaluates the hip status considering breed, sex and age.  With OFA evaluation, there are approximately nine different areas of anatomy evaluated for the hip joint. The hips within normal limits are given OFA numbers (permanent over two years of age), are now graded excellent, good or fair.

X-rays should not be done on females within four to six weeks of coming into or going out of a heat cycle in doing either preliminary reviews or certification after age two.  OFA states not within a one month minimum of an estrus cycle secondary to possible increased joint laxity or looseness of the joints from hormones.

Stud dogs and brood bitches should be certified as being radiographically clear of hip and elbow dysplasia by the OFA (Orthopedic Foundation for Animals) or universities with a school of veterinary medicine.  Yes, a dog who is rated as “good” can produce puppies with dysplasia but when dogs are only used for breeding who are certified to be good or better over generations, this  DOES reduce the incidence of dysplasia.

Penn Hip was started in 1983 by Dr. Gail Smith from the University of Pennsylvania School of Veterinary Medicine as a new method for the early diagnosis of Canine Hip Dysplasia.   His method is said to be capable of estimating the susceptibility for CHD as young as 16 weeks.

This technique quantitatively measures hip joint laxity or looseness, assessing 3 different views of hip x-ray and under mandatory anesthesia. Penn Hip exams must be done by a veterinarian within the Penn Hip network of vets trained to the specific methodology. This method of measuring looseness of the hip joint “determines whether a dog is prone to developing hip dysplasia.

The OFA opened it's database for Elbow Dysplasia in 1990.  Elbow dysplasia can lead to lameness or abnormal gait and can be extremely debilitating. From first seeing this as an osteoarthritis problem in dogs in 1961, it was realized over the years to come that three factors actually produce elbow dysplasia, in any combination or singularly.  With certain breeds being greater affected with one particular factor more than the other components, supports  the heritability of the disorder.  It appears that the disorder is inherited polygenetically (from multiple genes involved), with development being influenced by environmental factors as well. The OFA reports elbows as being normal or dysplastic and the grades of dysplasia given as 1-3,  influences the level of heritability.  There remains no good medical protocol or surgical procedure that significantly alters the progression of ED or cures it. It is therefore increasingly important to reduce the incidence of the disease through selective breeding.

When I began in the sport of Labradors in the late 1970's,  many breed clubs (more so in the West), had written Breeder's Code of Ethics that 'suggested' dogs and bitches used for breeding be certified clear of HD by the OFA and certified free of PRA eyes disease yearly.

The The American College of Veterinary Ophthalmologists began as a group of veterinarians interested in eye disease and the Organization of the College was completed in 1969, when approval was given by the American Veterinary  Medical Association. The final approval of ACVO was granted in 1974  by the AVMA , allowing the ACVO to set and maintain standards for veterinarians specializing in ophthalmology. Animal registry organizations such as the AKC, may request that the ACVO provide a scientific advisory panel to guide them as they  define guidelines regarding eye disorders of major concerns to each breed.

Currently, the eye diseases known to have a specific mode of inheritance for our beloved Labrador Retrievers (and must be screened for in our breeding dogs), still include PRA, known to be inherited as a recessive; When sire and dam each 'carry' the gene (the dogs are not *affected* *with* the disease but each possess the gene responsible), a very high percentage of the puppies in the litter WILL progress to blindness. Since early PRA abnormalities usually don't appear until well after four years of age on an ACVO exam, many years ago, we used to rely on what information we could obtain when dogs were proven to be affected; we then knew that the sire and dam of such dogs carried  the gene; very unreliable guesswork but gave us some information. Many of us waited impatiently for the DNA testing now available to us, giving solid information on our dogs, even as young as baby puppies, defining whether they are clear of the gene, PRA gene carriers or affected with the disease.

The eye disease Retinal Dysplasia (RD), abnormal development of the retina, is present at birth and can ruled out on very early ACVO exams. It is also inherited as an autosomal (not sex linked), recessive and results in early retina detachment and blindness.

Cataracts  may affect one or both eyes.  Where they are *complete* and affect both eyes, the progression of the disease usually leads to blindness.  It is assumed that cataracts are hereditary *except* in cases known to be associated with trauma, other causes of eye inflammation, specific metabolic disease, persistent pupillary membranes, persistent hyaloid (regression of or abnormal development of a specific artery), or nutritional deficiencies.  Hereditary cataracts in the Labrador are known now to develop and be in a specific area of the eye and present between one and three years at ACVO exams.  Studies are ongoing for mode (type), of inheritance but thought to be inherited as 'dominant with incomplete penetrance' (from *one* parent and skipping generations).

The American College of Veterinary Ophthalmologists Genetics Committee strongly recommends annual evaluations of dogs as the critical first step in the control of hereditary eye disorders. When my sister passed away in 1987, I was studying the book produced by ACVO for eve disease in all breeds of dogs and known to be or suspected to be hereditary. To my surprise, I saw that THE chairman of the ACVO genetics committee practiced in the same town as my parents and sister; and 'interviewed him' for more than an hour the day before I flew home.

I  made a generalized statement to him as I finished our discussion of eye diseases with genetic basis to the effect that, “I'd say that only about 20% of Labrador breeder hobbyists really screen for soundness in their breeding programs versus justifying their litters produced and making up puppies to sell' ......  His immediate reply was, “You're wrong !; it's more like 5 percent”.

Breeder's Code of Ethics did and still do provide additional guidelines for stud dogs and brood bitches including maintaining the original working ability of the Labrador Retriever and Conforming to the parent club's published Standard for the Breed.  A  breed club I've belonged to included in their Code of Ethics that stud dogs and brood bitches should earn at least : Two AKC championship points, A CD (companion dog obedience title), a CGC (Canine Good Citizen) awarded by the AKC,  a Judges Award of Merit,  placement in a sanctioned or licensed field trial, a WC (Working Certificate) awarded by the national Labrador club or a regional breed club, a hunting Retriever title, or a foreign (ie: Canadian championship).

With ongoing and improved DNA testing at major teaching universities, we are provided with  information defining which dogs and bitches are *carriers* of known diseases affecting our breeding dogs including PRA,  EIC (Exercise Induced Collapse), and CNM (Centronuclear Myopathy, a muscle disease inherited recessively).  I personally believe it is a breeder's responsibility to educate prospective buyers.  Incredible benefits from following such 'codes of ethics' for dogs and bitches in our breeding programs include increasing the demand for our stud dogs and puppies, protecting the reputation of our breeding dogs and enhancing the reputation of the kennel and the breeder.  Breeders increase the value of their litters and produce predictable breeding results over generations. Breeders diligently following soundness guidelines for their breeding dogs protect the buyer's investments and assist them in obtaining healthy and high quality dogs.  I hope we carefully make good choices in selecting dogs and bitches for breeding to ensure continued improvement of type, quality and soundness in our beloved Labradors .