

## BREEDING BLUES AND FORMENTINOS

Written By Bonnie Spiece

In the Cane Corso, blue, blue brindle and formentino are considered dilute colors, while black, black brindle and fawn are considered dominant. To further our knowledge, a recessive mutation in the melanophilin (*MLPH*) gene was identified as the cause of color dilution in dogs. The dominant full color (**D**) and the recessive dilute (**d**). So from that we can categorize the Cane Corso into Clear (D/D), Carrier (D/d) or Affected (d/d). If you breed a Clear dog to an affected you will only get carriers of the gene, if you breed a carrier to an affected you will some dilute and some black pigment, if you breed two affected together you will only get dilute.

Dilute dogs carry a higher likelihood of skin problems including, hot spots, mange, and Color Dilution Alopecia (CDA). CDA most commonly affects dogs with blue or formentino coats. Melanosomes may clump within Melanocytes of the skin and hair follicles, causing the hair shafts to easily break. Signs of CDA include hair loss on diluted areas only. The hair will be dry, itchy, and brittle with dry skin and appear unhealthy. Onset is usually 6 months-2 years of age and puppies with CDA appear normal until this time. While there is treatment for CDA it is an incurable disease that is often difficult to treat. The goal of treatment is to control infections. Mange is a skin disease caused by one of several different species of parasitic mites. While most dogs carry the mites, dogs with weak immune systems cannot keep the amount of mites in control. If left untreated secondary bacterial infections often accompany the mite infestation.

According to an article on the genetics of color found in The Encyclopedia of the American Pit Bull Terrier, “If you wonder why neuronal derived melanocytes might relate to immune problems then consider that the behavioral, the nervous, and the immune systems are linked very closely and communicate extensively. Not to mention these neuronally derived cells ultimately interact extensively with epithelial cells which are primary organs involved in many allergic reactions in the dog (hives, rashes, hotspots etc.)? “ In other words, when there is a problem in one system of the dog, it can affect other systems leading to such issues as brittle fur and hair loss among others.

To capitalize on selling puppies some breeders want to “specialize in selling blue or formentino”. In the long run, breeding dilute to dilute will not be beneficial for our breed. If this practice continues for multiple generations your risk for CDA and other coat/pigment problems significantly increases. Some have already noted these issues in the Cane Corso, you will notice some corsi have purplish-pink noses or thin dry brittle hair, mange and other coat conditions. With every generation of breeding dilute to dilute (blue/blue brindle x blue/blue brindle, blue/blue brindle x formentino

and formentino x formentino) you lose more pigment, it is always best to breeding dilutes back to a black pigmented dog to keep good pigment and coats in any breed.

So what does this mean, should we avoid blue totally? The answer is to know the coat colors in your dog's pedigree if you plan on breeding him/her. We know that not every dilute color puppy is going to have coat problems, but for the advancement of our breed, we should try and steer clear of generations of dilute breeding.

Resources:

*APBT Genetics of Color*. (n.d.). Retrieved from <http://www.apbt.info/tiki-index.php?page=Genetics+of+Color>

*Hair Loss and Color Dilution Alopecia in Blue Lacys*. (Feb.2009). Retrieved from <http://workinglacys.wordpress.com/2009/02/04/hair-loss-in-blue-lacys/>

Miranda, Kay. *Blue Coat Dog Health Problems*. Retrieved from [http://www.ehow.com/about\\_6117218\\_blue-coat-dog-health-problems.html](http://www.ehow.com/about_6117218_blue-coat-dog-health-problems.html)