



The Chesapeake Bay Retriever

Breeding for Better

Breeder Seminar

In conjunction with

The 2010 National Specialty

Gilroy, CA

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Seminar Outline

- 1. History - Dr. James Stewart
Temperament, Movement, Backline**
- 2. Breeding - Art & Science combined**
- 3. Genes – A Building Plan**
- 4. Additive Traits – Heritability**
- 5. Health Testing - DM, OFA, CERF, PRA**
- 6. Breeding Systems**
- 7. Pedigree**
- 8. Selection**
- 9. Temperament**
- 10. Starting a Breeding Program Do's & Don'ts**
- 11. Foundation - Brood Bitch – Stud Dog**
- 12. Breed Standard – Your Guide**
- 13. Conformation & Hunt Ability Combined - Discussion**
- 14. Breeder Responsibility - Discussion**

Breeding - An Art & Science Combined

Breeding dogs is an art and science. **The Art of breeding** has to do with the dogs that breeders select to mate; it requires an **eye for a dog**, which is an almost innate ability to evaluate a dog as one piece and recognize balance, quality and correctness in any breed. **The science of breeding** deals with the **breeding systems** used to mate each dog; it requires an understanding of **genetic concepts and principles**. Because the foundation for breeding success is guided by mating the best to the best with a goal of producing **genetically superior dogs in each new generation**, becoming a successful breeder means mastering both the art and science of breeding.

Genes a Building Plan on How to Make a Puppy

A sire and dam pass genes down to their offspring. The genes a puppy inherits determine how each body feature and trait will look. 50% of a puppy's genes come from its sire and 50% from its dam; therefore every puppy's conformation and behavior are the result of a double set of genetic instructions. Although the sire and dam each give 50% of their genes to a puppy, and they usually pass on a mix of their good and bad genes, it's possible for a puppy to receive mostly good or mostly bad genes from either mom or dad. The combination is always different and there is no way to predict which genes a puppy will receive from its parents. **No matter how good a dog is, he or she will always produce some inferior puppies.**

Grandparents

Pay Particular attention to the grandparents in a pedigree since puppies might resemble them or carry a concentration of their genes. In terms of a genetic relationship, it's possible, although not likely for a puppy to be **more closely related to one of its grandparents** than to one of its parents. Although a sire and dam each pass on 50% of their genes to a puppy, they each receive a random portion of genes from their own parents, who are the puppy's grandparents. It's possible that a sire may pass on to a puppy a high number of chromosomes from its own sire or dam (the puppy's grandparents).

Breeding to the Littermate of a Favored Dog

Each littermate inherits different genes. Each sperm and egg cell resembles a new one-of-a-kind blend of chromosomes and genes, and although they have the same parents, each littermate inherits a different set of genes (except in the case of twins). This is why puppies in a litter are genetically different and why breeding to the littermate of a favored dog is not the same as breeding to the favored dog itself.

Blending Genes Won't Work

Genes do not blend. For Example: Don't breed an overshot dog to an undershot dog and expect to get a scissors bite.

A Puppy's Sex and Size of the Litter

It's the **male who determines the sex of the puppies**. Unless a male is older, has defective sperm or is highly inbred, the **female** will normally **determine the size of the litter** because this depends on the number of eggs produced. There are slightly more males than females born.

Additive Genes

As breeders, we need to take advantage of additive genes. **With Additive traits, what we see on a dog is a good predictor of what it will produce.** A lot of guess work is taken out of breeding for additive

traits because many of these traits are visible. If a dog has a straight stifle, it is likely to pass genes on for a straight stifle because these are genes it inherited.

A sire with straight shoulders and stifles bred to a bitch with correct angles will produce puppies with angles not as good as the dam because the traits are an average of the parent's traits. **To breed correct front and rear angles, one should start with a bitch that possesses correct angles. She should be bred to a male who also has correct angles** and who has proven his ability to reproduce these traits. A sire and dam who are themselves incorrectly angled, carry genes for these traits and are likely to pass their "incorrect" genes on to offspring.

Pay particular attention to a dog's **front and rear angles, gait and temperament**. These are **visible, additive traits**. A dog with **incorrect angles** is carrying genes for these angles and is likely to **pass them on to offspring**.

Some Additive Traits

- 1. Movement (reach and drive)**
- 2. Shoulder angle**
- 3. Hindquarter angle**
- 4. Hunting ability**
- 5. Temperament (nervousness, aggression, shyness, etc)**

It's a common **misconception** for breeders to think that a dog with **straight shoulders** can produce well-angled shoulders if its ancestors possess the trait. The reality is, a straight-shouldered dog has **inherited genes** for straight shoulders and is therefore **likely to pass these genes** on to offspring. For additive traits with higher heritability, the individual dog itself, as opposed to its ancestors, is a better predictor of how it will produce. When a trait has a high heritability, a puppy will tend to resemble its parents in this trait.

Don't Breed Dogs With These Defects

Inherited Eye Disease (PRA), Incorrect Temperament, Epilepsy, Severe Hip Dysplasia, Degenerative Myelopathy (DM), Bleeding Disorders

Learning which dogs in a pedigree are proven carriers and which are affected with genetic defects should be a critical part of a breeder's selection process. Dogs in the breeding program should have their health testing and clearances prior to breeding.

Breeding Systems

- 1. Inbreeding** - Matings involving parents & siblings, brother/sister, father/daughter, mother/son, half-brother/half sister.
- 2. Linebreeding** (also called close breeding) - Cousins (one or more grandparent in common), Nephew/Aunt, G. Granddaughter / G. Grandson, Grandfather / Granddaughter, etc.
- 3. Outcrossing** - Unrelated dogs no common ancestor in the first 6 generations.
- 4. Like-to-like mating** - (also called type to type or positive assortative mating) Dogs resemble each other but are not related. (less likely to pass on traits than line bred)
- 5. Unlike-to-unlike mating** - (also called compensatory, negative assortative or corrective mating) example: large to small to produce intermediate.

Pedigree

A pedigree is a list of ancestors behind a particular dog. When planning a mating, many breeders place **too much emphasis** on a pedigree in terms of predicting a dog's ability to produce. **When heritability is high, the individual dog itself is always more important than the pedigree**. It is the up close relatives that have the most genetic influence. A beautiful dog and a "pet quality" dog coming from the same litter

will have the same pedigree. **A common error is to give more importance to the pedigrees rather than the dogs themselves.**

A lot of what we see on a dog regarding additive traits is a predictor of how that dog is likely to produce. Breeders should not be led to believe that a straight stifled dog which comes from a pedigree of beautiful stifles will produce good-stifled offspring. **Traits like front and rear angulation, movement and temperament are termed additive traits.** Additive traits tend to be **highly heritable** and the higher the heritability of a trait, the more the offspring will resemble the parents in that trait. A dog with straight stifles has inherited genes for straight stifles and he is therefore likely to pass these genes on to offspring.

The pedigree is useful in determining a dogs potential breeding value, but the pedigree is never more important than the offspring a dog produces. **The proof is in the pups**, a dog may have a superior pedigree and still produce a lesser quality progeny. Littermates, in general do not produce pups equal in quality, this points to heritability, and each dogs individuality when it comes to the genes they carry.

In assessing the risk of producing genetic defects, the pedigree can provide key information on carriers and affected animals. The more information on the ancestors in the pedigree, the more useful the pedigree is. Information on the dog itself is always more important than information on close relatives. Inheritance from grandparents tends to be unequal.

Selection

The goal of all dog breeders should be to determine which dogs in the breeding program have the best breeding values or best gene combinations and then breed the best to the best. Breed improvement is determined by which dogs are bred. The goal of selection is to breed dogs with superior combinations of genes so that each new generation will possess better genes than the previous one.

Temperament & Breeding

Temperament is a highly heritable trait. Puppies will closely resemble their parents in this trait.

All puppies should be well socialized but breeders need to remember how much effort they had to put into this task. Socialization does not change the temperament genes a dog inherited. Environment plays a large role, a puppy may have inherited genes for good temperament but due to a bad or abusive environment display temperament problems. **Incorrect temperaments can be one of the hardest traits to eliminate from a breeding program. Don't breed dogs with Incorrect Temperaments!**

Starting a Breeding Program Do's & Don'ts

1. **Do study your breed**, your breed's **standard**, and have an ideal in mind of the dog you are trying to breed.
2. **Don't** breed your first **pet bitch**.
3. **Do** find a **mentor** before purchasing breeding stock.
4. **Do** join a breed club and attend educational seminars.
5. **Do** purchase the **best bitch you can afford**.
6. **Don't** purchase a brood bitch younger than 12 to 18 months.
7. **Don't** acquire a bitch without temperament and **health scores** on her and her close relatives.
8. **Do** evaluate as many relatives as possible.
9. **Don't** start a breeding program based **only** on pedigrees!

Foundation Bitch

To start a breeding program, obtain an **above average, linebred** bitch with common ancestor behind the sire and dam, preferably in the first 3 generations. The more inbred or linebred a bitch is, the better the chance her genes will be duplicated in her offspring. Remember, her bad genes as well as good ones will be duplicated.

Selecting a Brood Bitch

Requirements –

1. Linebred
2. Show quality
3. Buy from a successful breeder.

Seek Out -

1. Correct Temperament
2. Correct Balance
3. Good Conformation
4. Hunt Ability
5. Intelligence & Trainability

Don't acquire a mediocre, faulted bitch just because she has a superior pedigree. Even the best sires and dams will produce some pet quality offspring. **The pedigree is never more important than how the bitch looks herself.**

Selecting a Stud Dog

The above for selecting a Brood Bitch applies to selecting a stud dog. Because males may be bred to numerous bitches, **their potential impact on a breed as a whole is far more expansive. They should be as close to their breed standard as possible.**

1. **Don't** automatically breed to the top winning dog of the year or the stud dog of a breeder friend, unless it is warranted.
2. **Do** look at what he has already produced.
3. **Don't** breed to a dog just because he has a lower stud fee or it's convenient to get to him.
4. **Don't breed** to a **relative** thinking you will get the same genes as a favored dog.
5. **Do** request health scores on a stud's ancestors for important defects in your breed.
6. **Do** seek out a linebred stud dog whose common ancestors possesses, and has passed on, the trait being sought.

(ABC's of Dog Breeding – Claudia Waller Orlandi, PHD)

Official Standard of the The Chesapeake Bay Retriever

GENERAL APPEARANCE- Equally proficient on land and in the water, the Chesapeake Bay Retriever was developed along the Chesapeake Bay to hunt waterfowl under the most adverse weather and water conditions, often having to break ice during the course of many strenuous multiple retrieves. Frequently the Chesapeake must face wind, tide and long cold swims in its work. The breed's characteristics are specifically suited to enable the Chesapeake to function with ease, efficiency and endurance. In head, the Chesapeake's skull is broad and round with a medium stop. The jaws should be of sufficient length and strength to carry large game birds with an easy, tender hold. The double coat consists of a short, harsh, wavy outer coat and a dense, fine, wooly undercoat containing an abundance of natural oil and is ideally suited for the icy rugged conditions of weather the Chesapeake often works in. In body, the Chesapeake is a strong, well balanced, powerfully built animal of moderate size and medium length in body and leg, deep and wide in chest, the shoulders built with full liberty of movement, and with no tendency to weakness in any feature, particularly the rear. The power though, should not be at the expense of agility and stamina. Size and substance should not be excessive as this is a working retriever of an active nature.

Distinctive features include eyes that are very clear, of yellowish or amber hue, hindquarters as high or a trifle higher than the shoulders, and a double coat which tends to wave on shoulders, neck, back and loins only.

The Chesapeake is valued for its bright and happy disposition, intelligence, quiet good sense, and affectionate protective nature. Extreme shyness or extreme aggressive tendencies are not desirable in the breed as a gun dog or companion.

Disqualifications: Specimens that are lacking in breed characteristics should be disqualified.



Dog



Bitch

SIZE, PROPORTION, SUBSTANCE- Height Males should measure 23 to 26 inches; females should measure 21 to 24 inches. Oversized or undersized animals are to be severely penalized. Proportion Height from the top of the shoulder blades to the ground should be slightly less than the body length from the breastbone to the point of buttocks. Depth of body should extend at least to the elbow. Shoulder to elbow and elbow to ground should be equal. Weight Males should weigh 65 to 80 pounds; females should weigh 55 to 70 pounds.

HEAD- Chesapeake Bay Retriever should have an intelligent expression. Eyes are to be medium large, very clear, of yellowish or amber color and wide apart. Ears are to be small, set well up on the head, hanging loosely, and of medium leather. Skull is broad and round with a medium stop. Nose is medium short. Muzzle is approximately the same length as the skull, tapered, pointed but not sharp. Lips are thin, not pendulous. Bite Scissors is preferred, but a level bite is acceptable.

Disqualifications: Either undershot or overshot bites are to be disqualified.



NECK, TOPLINE, BODY- Neck should be of medium length with a strong muscular appearance, tapering to the shoulders. Topline should show the hindquarters to be as high as or a trifle higher than the shoulders. Back should be short, well coupled and powerful. Chest should be strong, deep and wide. Rib cage, barrel round, and deep. Body is of medium length, neither cobby nor roached, but rather approaching hollowness from underneath as the flanks should be well tucked up. Tail of medium length; medium heavy at base. The tail should be straight or slightly curved and should not curl over back or side kink.

FOREQUARTERS- There should be no tendency to weakness in the forequarters. Shoulders should be sloping with full liberty of action, plenty of power and without any restrictions of movement. Legs should be medium in length and straight, showing good bone and muscle. Pasterns slightly bent and of medium length. The front legs should appear straight when viewed from front or rear. Dewclaws on the forelegs may be removed. Well webbed hare feet should be of good size with toes well-rounded and close.



Above pictured, a well laid back or sloping shoulder.

HINDQUARTERS- Good hindquarters are essential. They should show fully as much power as the forequarters. There should be no tendency to weakness in the hindquarters. Hindquarters should be especially powerful to supply the driving power for swimming. Legs should be medium length and straight, showing good bone and muscle. Stifles should be well angulated. The distance from hock to ground should be of medium length. The hind legs should look straight when viewed from the front or rear.



Above pictured, good hindquarters with stifles well angulated, hocks of medium length.

Dewclaws, if any, must be removed from the rear legs. Disqualifications: Dewclaws on the hind legs are a disqualification.

COAT- Coat should be thick and short, nowhere over 1 1/2" long, with a dense fine wooly undercoat. Hair on the face and legs should be very short and straight with a tendency to wave on the shoulders, neck, back and loins only. Moderate feathering on the rear of the hindquarters and tail is permissible.

The texture of the Chesapeake's coat is very important, as the Chesapeake is used for hunting under all sorts of adverse weather conditions, often working in ice and snow. The oil in the harsh outer coat and wooly undercoat is of extreme value in preventing the cold water from reaching the Chesapeake's skin and aids in quick drying. A Chesapeake's coat should resist the water in the same way that a duck's feathers do. When the Chesapeake leaves the water and shakes, the coat should not hold water at all, being merely moist.



The harsh outer coat & dense wooly undercoat insulates from the cold and sheds water.

Disqualifications: A coat that is curly or has a tendency to curl all over the body must be disqualified. Feathering on the tail or legs over 1 3/4" long must be disqualified.

COLOR- The color of the Chesapeake Bay Retriever must be nearly that of its working surroundings as possible. Any color of brown, sedge, or deadgrass is acceptable, self-colored Chesapeakes being preferred. One color is not to be preferred over another. A white spot on the breast, belly, toes or back of feet (immediately above the large pad) is permissible, but the smaller the spot the better, solid colored preferred. The color of the coat and its texture must be given every consideration when judging on the bench or in the ring. Honorable scars are not to be penalized.

Disqualifications: Black colored; white on any part of the body except breast, belly, toes or back of feet must be disqualified.



Brown Bitch 12 Months



Sedge Bitch 6 Months



Deadgrass Male 12 Months

GAIT- The gait should be smooth, free and effortless, giving the impression of great power and strength. When viewed from the side, there should be good reach with no restrictions of movement in front and plenty of drive in the rear, with flexion of stifle and hock joints. Coming at you, there should be no signs of elbows being out. When the Chesapeake is moving away from you, there should be no sign of cowhockness from the rear. As speed increases, the feet tend to converge toward a center line of gravity.



TEMPERAMENT- The Chesapeake Bay Retriever should show a bright and happy disposition with an intelligent expression. Courage, willingness to work, alertness, nose, intelligence, love of water, general quality and, most of all, disposition should be given primary consideration in the selection and breeding of the Chesapeake Bay Retriever.



Above Male Dog 10 years of age! A Happy Dog, he's in the water! (Note...he's smiling :)

DISQUALIFICATIONS

1. Specimens lacking in breed characteristics.
2. Teeth overshot or undershot.
3. Dewclaws on hind legs.
4. Coat curly or with a tendency to curl all over the body.
5. Feathering on the tail or legs over 1 3/4" long.
6. Black colored.
7. White on any part of the body except breast,belly, toes or back of feet.

The question of coat and general type of balance takes precedence over any scoring table which could be drawn up. The Chesapeake should be well proportioned, an animal with a good coat and well balanced in other points being preferable to one excelling in some but weak in others.

Positive Scale of Points	Approximate Measurements Inches
Head, including lips, ears and eyes = 16	Length head, nose to occiput 9 1/2 to = 10
Neck = 4	Girth at ears = 20 to 21
Shoulders and Body = 12	Muzzle below eyes = 10 to 10 1/2
Hindquarters and Stifles = 12	Length of ears = 4 1/2 to 5
Elbows, Legs and Feet = 12	Width between eyes = 2 1/2 to 2 3/4
Color = 4	Girth neck close to shoulder = 20 to 22
Stern and Tail = 10	Girth at flank = 24 to 25
Coat and Texture = 18	Length from occiput to tail base = 34 to 35
General Conformation = 12	Girth forearms at shoulders = 10 to 10 1/2

Total = 100

Girth upper thigh = 19 to 20
From root to root of ear over
skull = 5 to 6
Occiput to top shoulder 9 to 9
blades = 1/2
From elbow to elbow over
the shoulders = 25 to 26

**APPROVED: NOVEMBER 9, 1993
EFFECTIVE: DECEMBER 31, 1993**

Movement in the Field and Water

