

# Basic Breeding Principles<sup>1</sup>

By  
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There is no elixir for good breeding. Success is contingent upon a careful and honest analysis of one's breeding stock and lines in regards to conformation, type, soundness and genetics. In the last health survey conducted by the STCA, Dr. Padgett noted that Scottish Terriers have on average 5 genetically linked faults. Some have more and some have less. Genetics and soundness are, however, not the only considerations when one breeds. Below are some "common sense" rules to help breeders avoid pitfalls.

1. **Honestly evaluate your dogs.** Self deception is a stepping stone to defeat. On the other hand, you do not need to announce your dog's conformation faults to your major competitors. You do need to abide by the STCA code of ethics and disclose genetic faults if they are known to you.
2. **It's better to begin from a position of strength than disadvantage.** Begin your breeding program with the soundest brood bitch you can find. And remember that not all good brood bitches are good show dogs. Each dog/bitch has its function in a breeding program.
3. **Don't search for the perfect dog as a mate for bitch.** The perfect dog (bitch) doesn't exist. Look for the dog (bitch) that has the attributes (conformation as well as health), you most need or are most important to the breed.
4. **Don't line breed for the sake of line breeding.** If done correctly line breeding with complementary types it can bring good results. However, even the greatest of lines needs the occasional outcross to strengthen and revitalize their line.
5. **The absence of a fault does not signify the presence of its corresponding virtue.** No more needs to be said. Unless a genetic test is available, The absence of a genetic fault does not mean the dog is the best genetic candidate for breeding. The dog may be carrier of the genetic fault. Research suggests that, on average, each dog has five genetic faults. Some are extremely serious and may be life threatening. Others may not be life threatening but may limit the life activities of the dog.
6. **Don't assess the worth of a stud dog by his inferior progeny.** All studs sire rubbish at times. What matters is how good their best efforts are and how consistent they are in producing their best efforts.
7. **Don't allow personal feelings (e.g., owner of the dog, color of a dog) to influence your choice of a stud dog.** The right dog for your bitch is the right dog regardless of who owns it or what color the dog is.
8. **Don't mate animals together who share the same fault, genetic or otherwise** (e.g. poor rear movement, light eyes, out at the elbows). You are likely to get more of the same. Your goal is to minimize or reduce faults and maximize strengths.
9. **Don't forget that overall soundness is an important goal.** If you forget one virtue (e.g. moderate neck, deep chest) while searching for another (e.g. CA free, long head, tiny ears), you will pay for it.

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<sup>1</sup> Updated in 2007 to consider recent trends in genetic testing. Much information originally from Raymond H. Oppenheimer, (1971). The complete bull terrier, Howell Book House.

10. **Don't allow admiration of a stud dog, a stud dog's show or sire record to blind you his faults.** Remember you are selecting the best dog to complement YOUR bitch.
11. **Don't mate together non complementary types**, namely ones which have the same faults and lack the same virtues. An ability to recognize type at a glance is a breeder's greatest gift. Ask successful breeders to explain this subject -- there's no other way of learning it.
12. **Don't mate known carriers of serious genetic faults.** In so doing, you increase, rather than decrease the odds of getting a genetic problem in the offspring. If both the sire and dam are carriers, each offspring has a one in four chance of having the genetic fault.
13. **The brother or sister of the great sire or dam is NOT necessarily as good** to breed from as the great dog or dame. For every one that is, many are not. It depends on the animal concerned.
14. **Don't be frightened to breed animals that have obvious faults** so long as they compensating virtues. A lack of virtue is by far the greatest fault of all.
15. **Whenever possible, get your hands on the potential stud dog.** What you see, is not always what you get. Scotties are a coated breed. Lack of substance, poor fronts, bad top lines, lack of reach and drive, poor rear assembly are not apparent until you have "hands on."
16. **Develop your own hierarchy of breed virtues/faults and genetic and anatomical faults.** Determine what you will or will not tolerate in regards to conformation and genetic-linked traits. For example, cerebellar abiotrophy (CA) is an extremely rare but very debilitating ailment. It can be definitively diagnosed definitively only by pathological examination of the brain and cerebellum after death. Given that, you must decide whether you accept and will rule out dogs from a breeding program if an offspring is diagnosed as having CA by a veterinary examination via a video tape and health history.
17. **With genetic faults, consider the seriousness and controllability of the genetic fault** the dog may carry. For example, thyroid is typically considered a less serious ailment than epilepsy. Epilepsy, however, may be difficult to eliminate because there are no tests for it. Legg Calves Perthes is diagnose via an X-ray but you can not tell if a dog is a carrier.
18. **Evaluate pedigrees backwards as well as vertically.** This will help determine better what genetic, temperament and conformation faults exist in a line and how dominant they might be. With hip dysplasia, a sire who has siblings with hip dysplasia is more questionable for use a breeding program than a sire with no dysplastic siblings
19. **Establish your own hierarchy of things to avoid** based upon what you know about your line and what you cannot tolerate in regards to conformation (e.g. short muzzle, low tail set, light eyes) as well as soundness (e.g. CA, liver shunt, legg calves perthes, VWD, epilepsy, Cushings).
20. **When breeding, ask the owner of the stud directly what genetic-based testing** has been done on the dogs, what health issues have occurred in prior matings, what faults exist in the line, what health issues have cropped among siblings of the potential stud dog. Some individuals will not volunteer the information but most will respond when asked directly. Check out the Orthopedic Foundation for Animals to see what testing has occurred. Unfortunately, breeders usually only register dogs that pass tests, rather than those that have failed tests.
21. **Don't take advice from people who have always been unsuccessful breeders** or who have a great show dog but lack breeding experience. If their opinions were worth much they would have proven it by their successful progeny.
22. **If problems arise, consider both sides of the family not just the stud dog.**

23. **Balance soundness, temperament and type considerations when breeding.** Don't get fixated on one category or one genetic fault or others aspects of breeding.
24. **Don't satisfice when breeding.** Educate yourself. Collect information from multiple sources and from our community of practice. Ask questions – even if you think they are silly or your already know the answer. Check out the veracity of statements or rumors. Don't rely on second hand information.
25. **It's the best we have, is not good enough when it comes to breeding dogs.** Relying on bad information or poorly conceived testing is harmful. Dogs can be eliminated from breeding programs which should not be eliminated.
26. **Things can and often do go wrong-- even with your best efforts and those of the stud dog owner.** We are breeding living creatures Scottish Terriers and who can not be preprogrammed to perform.