

## **THE ART OF BREEDING NORWEGIAN FJORD HORSES? TURNS OUT IT'S A SCIENCE!**

By Dan Watanabe

The Fjord Breed is a relatively small, closed population, currently estimated to be around 80,000 in number worldwide, 7,000-9,000 of which are estimated to reside in North America<sup>1</sup>. Due to these factors, breeding Norwegian Fjord Horses presents some interesting opportunities, but also some interesting challenges. It has been said that line breeding should be practiced by only the most expert of breeders. Due to the size of the population, that it is a closed population, and that the degree of relatedness of the current population is likely somewhere between 6 and 8 percent<sup>2</sup>, all breeding of Fjord Horses is effectively line breeding.

Of course, not everyone can be an expert... not enough Fjords would be bred to perpetuate the breed. Yet, in order to successfully steward the breed forward so that future generations can enjoy Fjord Horses as we have, it is imperative that we breed as thoughtfully as possible. The following describes a methodology and resources that can help you to make successful matches.

### **Educate Yourself About Breed Character and the Breed Standard**

Breeding implies selection, and more specifically, selection toward a particular ideal. In the breeding of purebred animals, this further narrows the image to that of a shared ideal, or "breed standard". To that end, our breeding decisions must be made from a foundation of knowledge about the

breed including its history, the conditions under which it developed, the uses for which it was developed, the preferences of the people who developed it, and the vision they hold for its future. This is what is responsible for the character of the breed or "breed type", those combined traits and qualities that set a breed apart from every other.

Because the Fjord Horse has always been regarded as a versatile animal, a range of "type" exists within the breed and some would even suggest there are multiple acceptable types of Fjord horses. In my opinion, however, this leads to ambiguity both in breeding and with respect to the character of the breed as more extreme individuals of similar type are often paired, further intensifying their similarities, or at the very least, making it that much harder to breed back toward center in successive generations.

Without a strong breed character, one might argue that you really don't have a breed, yet that breed must also remain functional for its intended purposes, otherwise the breed does not really have a use. With this in mind, a vision for an ideal Fjord Horse and thus a breeding goal can emerge, one that exhibits a functional type of conformation that allows for the highest degree of versatility and works to preserve the character of the breed.

Of course, some of those extremes are needed in order to accomplish this, so having a range of individuals within the breed is quite necessary. Some might even choose to breed more extreme Fjords for suitability in particular markets, but I feel that this should be done by choice and never out of ignorance.

Since Norway is the Mother Country of the Fjord Horse and, *as per the Commission of the European Union, the Convention on Biodiversity, and Fjord Horse International*, "has the ultimate

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1 As published in *Fjordhesten I Noreg* (2005) by Hans Kolbein Dahle, Former Chairperson, Fjord Horse International. North American numbers are adjusted for recent registrations.

2 Based on research presented before FHI General Assembly 2010 based on 7 generation study of the Norwegian Studbook

responsibility for the breed and its character”, it is a great place to begin “looking” at the breed character and type that is both exhibited and desired.

Thanks to the internet, “looking” does not mean that you have to physically go there, although I highly recommend it as it will only help solidify your understanding of the Fjord Horse, its history, and ultimately what is desired for the character of the breed.

The Norges Fjordhestlag website can be accessed at [www.fjordhest.no](http://www.fjordhest.no). In the second column you can click on [Gå til bildearkivet her](#). This will take you to the photo archive. You can also use the “Hingstekatalogen” link on the left menu to take you to the current year's catalog of approved stallions. You will see a map of Norway and will need to select “Vis alle hingster i katalogen” to get the complete catalog. In the case of the hingstekatalog, look for stallions that have high scores for type (8-10). It is the first of the five scores listed followed by body and musculature, legs, movement, and “overall”. Note the similarities and differences.

If you are a little intimidated by Norwegian, don't hesitate to use [www.translate.google.com](http://www.translate.google.com) or a similar internet translator to help out. This is not always perfect, but is often close enough to give you an idea of what you are reading. One problem of note with this resource is that the Norwegian word for mare, “hoppe” gets translated to “jumps” in English.

At the CFHA website, [www.cfha.org](http://www.cfha.org), you can find a partial breed standard as published by Fjord Horse International ([www.fjhi.org](http://www.fjhi.org)) or in Section I of the CFHA/NFHR Evaluation Handbook, available for download at [www.nfhr.com](http://www.nfhr.com), you can find the full version. Choose from “evaluations” on the drop down menu to the left. It is from this document that the FHI version was adapted.

## **Educate yourself about Functional Conformation as it relates to Breed Type/Breed Character**

Learn in what ways breed character dictates the conformation required for functionality. For example, Fjords should have powerfully built front ends. While this means heavier features in the front end than many other breeds, all horses should still be able to flex at the poll in order to work “on the bit” and still should exhibit overall balance. In the case of the Fjord, this means the neck must be attached higher at the withers and be longer over the top line and particularly the poll, in order to both maintain functionality and exhibit good breed character.

Additionally, in order for balance to be maintained, the ideal Fjord must therefore have a well developed hindquarter to match and a strong coupling that allows the two halves to work together, efficiently transmitting the energy from back to front and providing good suspension characteristics that protect the horse and rider when applicable.

To see differences in functional conformation, look at other national websites for Fjord Horses to see how the breed is different and how those changes might help to better suit it for particular uses. Identify the ways in which these changes are supportive of breed character, and ways in which they deviate from breed character.

Also, look at other breeds, their conformation, and their suitability for particular disciplines to see how their conformation relates. To see it all in motion, you can find a tremendous variety of videos on the internet, everything from backyard rides to Olympic Gold Medal Performances. **Determine the strengths and weaknesses of your mare/stallion**

Based on what you know, list the strengths and weaknesses of your Fjord.

Ask others their opinion and, if possible, take your Fjord to an Evaluation so that you can get even more opinions from those with particularly good knowledge of the breed.

Once you have objectively made observations as to your Fjord's strengths and weaknesses, prioritize your goals for the mating, based on changes you would like to see in the next generation compared with your Fjord's breed character and functional conformation. Don't forget to look at strengths and weaknesses in your Fjord's pedigree as these can most certainly affect the outcome of a breeding.

### **Select a suitable mate for your mare/stallion**

Look at the individuals. Look at offspring they have produced and the horses they have produced them with. Determine the traits they tend to produce to see if they will be a suitable match. You might even look at their pedigrees and try to determine where traits have come from and what traits have been passed strongly through the generations.

Also look to see if there are any mutual relatives. This can sometimes be responsible for "throwbacks", offspring that more strongly exhibit traits of an ancestor than even its own parents.

Check the pedigrees for inbreeding potential. Current recommendations and the current rules for registration in Canada state that the same horse should not appear more than once in the first three (3) generations of a pedigree. Of course, to really know what you might get, you will have to go back many more generations. You might even run inbreeding coefficients for both the mare and stallion to see which pedigree is stronger (more inbred) and thus, likely to be more influential in the breeding. There are on-line calculators that you can type pedigrees into that can help with this. By the way, at 12.5% an individual is, genetically speaking, its own first cousin!

You can look up pedigrees of Canadian registered Fjords at [www.clrc.ca](http://www.clrc.ca). NFHR registered Fjords can be looked up at [www.nfhr.com/ponyweb](http://www.nfhr.com/ponyweb). There is even a "hypothetical mating" feature that can help you to look at the pedigree of a hypothetical cross.

Finally, if you are feeling adventurous and want to go back even further into the Norwegian studbook you can go to [www.nhest.no](http://www.nhest.no).

Evaluation results are another tool that can be used to help determine the qualities of individuals. Use the numbers to direct you to information about specific qualities. Do not rely on numbers solely, as breeding is not simply a matter of accounting. If you breed strictly "by the numbers", don't be surprised if the results do not measure up to your expectations. As such, get commentary whenever possible. Translate it or have it translated if necessary.

Finally, consult with an expert to get recommendations. The Fjord Horse Community is full of great people so don't be afraid to call or email someone out of the blue that you think can help you pick a good match for your Fjord.

### **Test your theories!**

While the actual breeding will last a matter of seconds, you will now have 11 long months to wait to see whether your theories about a cross hold, or if you missed something in your research. If it worked as you hoped, now you have a few more years to wait until you can try for yet another generation. If it didn't work quite as planned, now you can look back at the pedigrees to explain where your theories went awry. Breeding is not an exact science, at least not any more than any other science, but it is not as some say, a crap shoot. If you do your homework and follow a thorough, systematic methodology, I think you will be happy. 🐾