

# Understanding COI's

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By Kathy Petersen of Virginia KuneKunes

When I ask fellow KuneKunes breeders about the COI's in their herds, most do not understand what I am asking unless, they have a back ground in cattle, dogs or goats. As my background in breeding are with the Australian shepherd lines, this is a fairly common practice and tool that is used in making decisions in our breeding program. It is my hope to share this information with all my fellow AKKPS members so, you too, can use this invaluable tool for the betterment of not only your breeding program and herd but, for KuneKunes in general. With KuneKunes gaining popularity and growing in numbers, it is important that we maintain as much genetic diversity as possible in our herds.

COI stands for *Coefficiency of Inbreeding*. COI measures the amount of inbreeding in one particular animal. The goal is to reduce the amount of inbreeding to lessen the increase of genetic defects and imperfections. While many breeders believe in line breeding and inbreeding, it is true that you are doubling up on the good genes and increasing the chances of it showing in the offspring. However, they may not be considering that you are also doubling up on the "bad" genes that are not so valued. This includes but is not limited to, heart conditions, prolapsed anus', low birth weights and survival of offspring, scrotal hernias, umbilical hernias, Cryptorchidism (where one or both testicles are retained inside), teat abnormalities and many others.

With the various lines in this country, it is possible to dramatically reduce COI's. Understanding where these bloodlines originated and what they can be traced back to is also very important. With the various lines being renamed in the USA, it makes it harder for the new comer to make these decisions. Using COI's will help. (Coming soon we will have a listing of each bloodline, where they originated and how they can be traced back to New Zealand.)

When pairing two breeding mates, it is possible to reduce the COI's in the offspring considerable lower than the parents. By continuing this practice, COI's will be reduced automatically in the KuneKune breed. Our online herd book will allow

you to see what a potential mating COI's would be prior to the actual breeding. The goal is to REDUCE the COI of the parents with their offspring therefore, reducing the increase of genetic disorders, gaining diversity in your herd and bettering the KuneKune breed.

I hope that this article helped you understand that this is an invaluable tool to use in your program.

I may be reached for questions via email at [virginiakunekunes@aol.com](mailto:virginiakunekunes@aol.com) . If you have not requested access to our online herd book, you may do so by going to our website, click on Forms and you will see "Online Herd book access" and complete the form.

Virginia KuneKunes