

By: Taru Holinsworth

Global Pumi Comparison: where does US stand in numbers and breeding recommendations?

Overview:

The pumi breed is a "small breed" in numbers everywhere, even in Hungary. There are 2350 registered pumik in Hungary as of 2016, and probably at least the same number unregistered pumik. Every year MPK (Magyar Pumi Klub/ Pumi Club of Hungary) arranges a "breeder's review" or "breeding stock review" for pumik, and it is run by a cynologist. The members of the committee are seasoned breeders, some of them have university degrees with animal breeding and management. In every annual event they typically inspect 400-500 females and about the same number of males. There were 41 registered litters (~ 240 puppies) born in Hungary during year 2016.

The next biggest population of pumi resides in Finland, with 3044 registered pumik as of year 2016. It can be assumed that every pumi in Finland is registered, since that duty belongs to the breeder. There were 54 puppies registered year 2016. The Hungarian Shepherd Club of Finland (UPK) provides breeding reviews as well, run by experienced reputable pumi breeders, where any pumi can be evaluated and receive recommendations in regards of breeding. This is an addition, or even an option, to showing in the conformation show, and it is a wonderful resource for first-time breeders.

Not far behind Finland, Sweden has 2372 registered pumik as of year 2016, and 138 puppies were registered that year. Norway has 220 registered pumik, with 16 puppies registered in 2016. Our club, Hungarian Pumi Club of America, is climbing up in numbers with about 420 registered pumik, 12 litters and 53 puppies in 2017 (unofficial number).

The pumi clubs in Europe have a long history: the Scandinavian clubs were established in early seventies and eighties. I personally have been involved with pumik since 1993, and served in the breed club board in both Finland and US. Although the pumi has a long history in Hungary, the present club was not formed until in 2000. There are pumi clubs in Germany and United Kingdom, although they seem to be less active than the clubs mentioned above. The Hungarian Breeds Club of Austria dissolved in 2014 due to very small number of members.

Learning from other pumi clubs:

Even though pumi breed has been recognized in AKC, we are still in early stages here in US. All the countries above have gone through these early stages with some level of inbreeding. It was common everywhere during that period. Mistakes were made and breeders learned from them. My first pumi Chapu, purchased from Finland year 1993, had a first degree relationship breeding (mother to son) in the third generation. There was 4 males in that litter **and** only one of them developed normal testicles. Chapu was a beautiful specimen of pumi standard, but he had a very tight spine and developed arthritis early on. I would like us to be able to learn from pumi clubs in other countries, so we wouldn't have to repeat the same mistakes.

If you look at the code of ethics or breeding goals established in these countries, except US, all of them have some kind of recommendation about maximum inbreeding percentage (same as COI = Coefficient of Inbreeding). They all feel it is very important to have maximum recommended COI. In addition, the clubs commonly have a goal of increasing the number of pumik being used for breeding. This helps to

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increase genetic variety. Even the littermates have different mix of genes each! The most recommended number for the "breeding pool" is 50% of the pumi population. These clubs also have recommendations about how many times an individual dog should be used for breeding. As a general rule, no individual dog should contribute to more than 5% of the puppies born in 5 years. These are the goals they are working toward, and I don't have statistics about how close to their goals they are right now.

Since I am from Finland myself, I know for a fact, that dogs are not routinely spayed or neutered there like they are in US. They are only altered if there is a health or behavioral problem. In spite of this practice the abandoned or stray dogs are pretty much an unknown subject. I served many years in the board of Hungarian Shepherd Club of Finland, the breed club established in 1974 representing the Hungarian Shepherd breeds (pumi, puli, mudi, kuvasz and komondor), and only once we had to rescue a pumi from unsuitable home. Many female owners opt to breed their female once to avoid pyometra.

Increasing genetic variety and limiting inbreeding

Increasing genetic variety is good for the health of the breed. The problem of inbreeding and line breeding is that the good genes are not the only ones being duplicated. Almost all of us, people and animals, have genetic defects hidden in our cellular furnaces, and inbreeding will multiply these defective genes too.

To promote the genetic variety, the pumi clubs (and many National Kennel Clubs) are recommending keeping the inbreeding coefficient (percentage) under limits. The recommended maximum inbreeding coefficient for pumi is most ambitious in Scandinavian countries with <2.5 % in Sweden and Norway* and <3 % in Finland. Germany, UK* and Hungary recommend avoiding close family and 1st and 2nd degree inbreeding. Scandinavian countries have statistics available over 10-27 years and they report having achieved their goals with recent statistical inbreeding coefficients 1.2% for Sweden, 1.23% for Finland and 1.6% for Norway. The coefficient is calculated over 5 (Sweden) or 6 generations (Finland and Norway). In Hungary they often settle with 4 generations or whatever is "reasonable available".

(* Recommendation comes from national kennel club rather than the pumi club).

This by no means makes Hungarian Pumi Club (MPK) lenient toward breeding guidelines. The Pumi is a "Hungaricum", meaning that it is unique to and an official "National Treasure" of Hungary. Therefore, its management program is a highly bureaucratic and it is coordinated with the Ministry of Agriculture. They have three breeding classification levels at the breeding stock review. It includes conformation, character, hip result, temperament, herding ability etc. The pumi pairings approved in MPK breeding stock review receive an official pedigree, while others can be registered as pumi as well.

Most European pumi clubs have age-related recommendations, with bitch being over 24 (or at least 18) months old and less than 8 years old at the time of breeding. Sweden and Norway have a limitation that no individual dog/bitch should contribute to more than equivalent to 5% of the number of puppies registered in the breed population during a four/five year period. Using that recommendation in US, where 53 puppies per year (unofficial number for 2017) is the latest record, we should only use the same individual dog/bitch twice. In Finland the limitation for males is 5 litters, and in Germany 3 litters. Just thinking about the one and only litter I bred, Pusztai Altatodal Bolondos (Tipli) and Scirpasta Chili (Hupi), I realize what a huge impact can one breeding make. I bet that about half of the readers of this article in US have a pumi that has these two names in their pedigree. And thinking that only one of their offspring was ever used for breeding...!

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Health and temperament recommendations

All the pumi clubs, including HPCA (US), recommend health tests of some sorts, the most common being hips, elbows and eyes. Screening patellas is recommended in Finland and USA, and screening the back is becoming a routine as well in Finland. USA, UK, Germany, Sweden and Hungary have specified DNA testing in their recommendations, most commonly PLL. Finland and Norway have not officially recommended either, although PLL seems to be tested for there too. The argument concerning DM test is that it doesn't necessarily work for pumi, since a sample has never been collected from a pumi with DM. The different breeds may have the same disease (DM), but it may be hiding in a different genes in each breed.

Temperament evaluation is part of the consideration in regards of breeding in many of these countries. In reality, most of pumi puppies end up in regular homes with regular people. They need to be able to adapt to a normal life and the sounds and distractions it includes. Being gun-shy is often seen as a failure to pass the temperament test. Most pumik don't have a problem with this though. The pumi often puts the traditional guard dog breeds (GSD, Rottweiler, Doberman Pincher) in shame by outshining them in protective character and being able to "bounce back" from a threatening situation. The pumi often loses points in being a bit hyper though. The temperament testing is a subject for a different article, which I will hopefully get to write in a future Pumi Perspectives.

Setting our goals in US

We are well on track in monitoring hip-dysplasia and genetic diseases such as DM and PLL. What we lack at this point is the genetic variety. The breeding pool in US is very small and the same dogs and bitches are being bred again and again. The breeders should educate the puppy buyers about possibility of breeding their pumik, instead of spaying or neutering them right off the bat. We need to increase the genetic pool by including more pumik into it. Instead of breeding the same bitch/dog repeatedly how about breeding the littermate instead? Even that creates genetic variety. We should also import more pumik from Europe.

It would be most helpful if all the old and new breeders in US could calculate the inbreeding coefficient for each litter they have ever bred, and we could build our own statistical database. When we simply would set our goals to make the numbers better, smaller in this case, year by year.

Meir Ben-Dror recommended a free inbreeding coefficient (COI) calculator <http://www.sobczyk.eu/inb/> I used it to calculate the COI for the litter I bred (Hupi and Tipli). At 4 generations the COI was 0.00% and at 5 generations it was at 0.04% since there was a same dog on both side in fifth generation. I could have continued further out, calculating more generations, but it appears that the further out you go, the less it affects the final result. I got it done in 15 minutes, including the time I spent to look up the parents for the 4th and 5th generations from Finnish Kennel Club records.

Final notes:

It is to be noted, that the actual requirements for registering pumi puppies (with the national kennel club) in all the mentioned countries are often way more lenient than the recommendations stated above (please see the table 1 for details). These recommendations are often named "code of ethics", "breeding strategy" or "breeding goals". In Norway, it is the "code of ethics" underwritten by the

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Norway Kennel Klub (national kennel club comparable to AKC). Also the Kennel Club of United Kingdom has a recommendation of maximum inbreeding coefficient.

There are many good pumik in US. We should not encourage the puppy buyers to automatically spay or neuter their puppies. We people need our hormones, even when we get older. Why should we rip our canine companions from the hormones they need for developing muscles and mental health? The more intact pumik we have, the more choices we have in selecting mates for breeding.

We (HPCA in US) should establish a "breeding committee" to mentor and assist first time (or even multiple time) breeders. Another good option for increasing genetic variety is to import pumik from Europe. It is easy, and since the price for the puppy is lower, you may be able to afford a trip to pick up your puppy. Facebook has made it easier to get recommendations, and the breeders are more likely to sell a puppy to someone who comes recommended by a friend they personally know.

	UPK (Finland)	SvkFUR (Sweden)	KUR (Norway)	MPK (Hungary)	Hungarian Pumi Club UK	KFUH (Germany)	HPCA (US)
Breed Club established	1974	2001 (1973)	?	2000	2014	1922	2005
Recommended COI*	<3%	<2.5%	<2.5% (from KC)	<50%	<50% (from KC)	<25%	n.a.
Current average/year	1.23% (2011)	1.2% (2014-2016)	1.6% (2013)	n.a.	n.a.	n.a.	n.a.
Super Sire restriction**	5/ lifetime	5% rule***/ 5 years	5% rule***/ 5 years	6/year	n.a.	3 /****5 with health test	n.a.
Health tests recommended	hips, eyes, elbows, back, knees	hips, eyes	n.a.	hips, knees, elbows	hips, eyes	hips, eyes	hips, eyes, knees, patellas
DNA tests recommended	no	PLL	yes, but not specified	DM, PLL	DM, PLL	PLL	DM, PLL
Temperament test recommended	yes	yes	?	yes	n.a.	yes	no
Requirements to register puppies	eyes, hips	hips	?	hips	n.a.	n.a.	n.a.
required results	hips C or better	n.a.	?	has to pass	n.a.	n.a.	n.a.
# of puppies reg. yearly	54 (2016)	138 (2016)	14 (2012)	~240 (2016)	n.a.	15	53 (2017)
Number of kennels or breeders	12	22	10	~50	~5	4	11

*COI stands for Coefficient of Inbreeding

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**Super Sire restriction: Max. times of using the same sire for breeding
***5% rule: As a general recommendation no dog should have more offspring than equivalent to 5% of the number of puppies registered in the breed population during a four/five year period.
****Health (heart) test is required to use 4-5 times in Germany

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Sweden: <https://www.skk.se/globalassets/dokument/rasdokument/ras-pumi.pdf>

Norway: <http://web2.nkk.no/filestore/RAS/RAS-Pumi-ver-12.pdf>

Hungary: <http://pumiklub.eu/uploads/articles/18/TenyProgram2017.pdf>

Germany: <https://www.kfuh.de/>

United Kingdom: <http://www.hungarianpumiclubuk.co.uk/downloads/>

USA: <http://pumiclub.org/about-the-pumi/pumi-health/>