

Greyhound breeding in Germany, 2012 - 2017

The well-received presentation "Greyhound Neuropathy - what lessons to learn?" at the Greyhound World Congress in Oslo¹ and the article „Breed-Specific Health Strategies“ subsequent to the 3rd IFPD Health Workshop in Paris² both postulate measures to restrict further inbreeding, if we want to preserve the small population for the future.

Thus it is sensible to take a look at the breeding activities in Germany from a population genetic point of view and to see how the German course of action performs in comparison to already established measures to limit inbreeding in purebred dogs.

The situation:

Greyhound breeding in Germany lies completely in the hands of amateurs, there is no profit-orientated racing business. The only breed club to keep the breeding record is the German Sighthound Association (DWZRV), which is associated via the German Kennel Club (VDH) with the FCI.

Every year, about 50 Greyhound puppies are registered in the German studbook (ranging from 13 to 71 puppies in 2012 - 2016), and represent about 0,07 % of the puppies born in the VDH member clubs.

That already small number of puppies splits up into roughly equal shares of dogs from racing- and show-lines, which should be taken as genetically totally separated populations according to the Mars-Tests³.

A "mixed breeding" (between show- and racing-line) did not take place during the last six years⁴.

Breeding activities besides the German Kennel Club are not worth mentioning. There seems to be no market for "non-pedigree" Greyhound puppies, as this is already served by the widespread adoption of ex-racers from the UK or Ireland.

These dogs do usually not contribute to the German breeding activities, usually because they are already spayed / neutered.

In the breeding population there certainly is a busy international exchange, a lot of breeding stock is being imported, stud dogs from abroad are being used as well. The use of frozen semen both of stud dogs living far away or being already deceased is common practice, too. In addition, a considerable share of German-bred Greyhounds is being sold abroad.

Origin of the breeding stock used in 2012 - 2016		
Country	Number	Remark
Germany	22	
Ireland	18	Only racing-lines
Great Britain	7	
Sweden	6	Only show-lines
Russia	4	Only show-lines
Italy	3	Only show-lines
USA	3	
France	1	Show-line
Norway	1	Show-line
Romania	1	Racing-line
Total	66	

Requirements⁵ for Greyhounds, whose puppies shall be registered with the German studbook:

- valid FCI pedigree
- passed „Körung“ (temperament and conformation test)
- show result from Intermediate, Open or Working Class not less than „Very Good“
- for the „Beauty & Performance“ Körung additional racing / coursing results must be presented
- each dog must have a DNA fingerprint
- health tests are not required, but
 - breeders of Show-Greyhounds usually check their stock for Neuropathy with the commercial genetic test on their own accord
 - many Greyhound breeders have their dogs examined for cardiac diseases on a regular basis

Hence, every Greyhound with the respective pedigree and the postulated number of limbs, teeth (and in males) also testicles can easily get its breeding permission.

In regards to inbreeding, the DWZRV's breeding rules only prohibit incest between full siblings, father and daughter or mother and son so far. Matings between half-siblings need special permission.

In the superordinate FCI International Breeding Strategies⁶ we find this additional advice:

„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 five-year period.“

Breed strategies of other Greyhound breed clubs:

The Norwegian⁷ and the Swedish Kennel Club⁸ place their member clubs under the obligation to establish and to observe breed specific breeding strategies (RAS). In order to control the level of inbreeding, both parent clubs demand:

- Prohibition of incest – no mating should have a higher COI than 6,25% over five generations (which would equal a mating between cousins)
- The annual growth of the level of inbreeding should not exceed 2,5 % in average (over 5 generations), in order to limit the increase to 0,5 % per generation.
- Limitation of the number of offspring produced by any single individual to a maximum of 5 % of the total number of puppies registered in 5 years.

In want of better criteria we will investigate below, how the German Greyhound breeding performs according to these standards.

Data 2012 – 2016⁴

From 2012 – 2016, 33 litters with 248 Greyhound puppies altogether were born in Germany (113 male / 125 female). 52 parents were used, producing the following offspring:

Puppies per bitch 2012-2016:		Puppies per dog 2012-2016:	
Epic Invincible	26	Artefakt Demigod at Resch Wind	26
Ransley Simply a Treasure	25	Boughton Baggio	24
Questa vom Monarchenhügel	17	Droopys Bach	13
Dame Harringay	16	Donegal Duke Affair	13
Miss Harringay	13	Ulan vom Monarchenhügel	13
Lucy	13	Barrack Jimmy	12
Straight Ahead Aponi to Druantia	12	Gulds Only O'Brian	12
Fionn Clann Derry Duchess	12	Epic Kinetic	12
Magyar Álom Allright	10	Sobers Olliver	12
Epic Known	10	Cashen Shatana	10
Telegram Singular Sensation	9	Ballymac Ruso	10
Razldazl Sally	9	Asgard's Earl Affair	11
Tahuara's Autumn Sun	8	Dixit ad Honores des Legendes du Moyen Age	9
Rumford Silvetta	8	Mariki's Pequot of March Hare	8
Happy Hunter's Magic Moment	8	Orson vom Monarchenhügel	8
Sobers Svea	7	Shazam's The Journey Begins	8
Femme Fatale	7	Sobers Cadiac	8
Youni vom Märchenland	6	Endless Sky	7
Special Hot Socks All In One	5	Razldazl Jayfkay	7
Leanders Beat	5	Sobers Watson	7
Ballyregan Abbie	5	Skip The Field	6
Tosca v. Monarchenhügel	4	Ballymac Eske	5
Special Hot Socks Bubblegum	4	Superior Product	4
Pollys Rocket	3	Oran Leader	3
Nelly vom Monarchenhügel	3		
Utopia vom Monarchenhügel	2		
Fritzens Alberta	1		

If we would use the mentioned five-percent-rule on that data, we would reach a limit of 12,4 puppies per parent. This limit was exceeded by six bitches and five dogs – sometimes already with one single litter! Two dogs and two bitches are for themselves responsible for more than ten percent of the “five year production”, and more than 45 % of the puppies are descendants of only 10 % of the parents used.

Let us take a look at the **level of inbreeding**, these are the results for the COI over five generations:

2012:

Kennel	Sire	Dam	DOB	COI 5 Gen
Special Hot Socks	Cashen Shatana	Special Hot Socks All In One	6/25/12	0,20 %
Happy Hunter's	Shazam's The Journey Begins	Happy Hunter's Magic Moment	7/27/12	3,34 %
vom Monarchenhügel	Orson vom Monarchenhügel	Questa vom Monarchenhügel	10/13/12	1,95 %
Ina's Fashion	Epic Kinetic	Epic Invincible	11/6/12	4,69 %
Tahuara's	Sobers Cadiac	Tahuara's Autumn Sun	12/6/12	2,73 %
Straight Ahead	Sobers Olliver	Straight Ahead Aponi to Druantia	12/8/12	0,39 %
			Mean:	2,22 %

2013:

Kennel	Sire	Dam	DOB	COI 5 Gen
Harringay's	Barrack Jimmy	Miss Harringay	4/5/13	4,10 %
vom Monarchenhügel	Oran Leader	Nelly vom Monarchenhügel	7/15/13	0,59 %
Magyar Álom	Razldazl Jayfkay	Femme Fatale	11/27/13	0,0 %
			Mean:	1,56 %

2014:

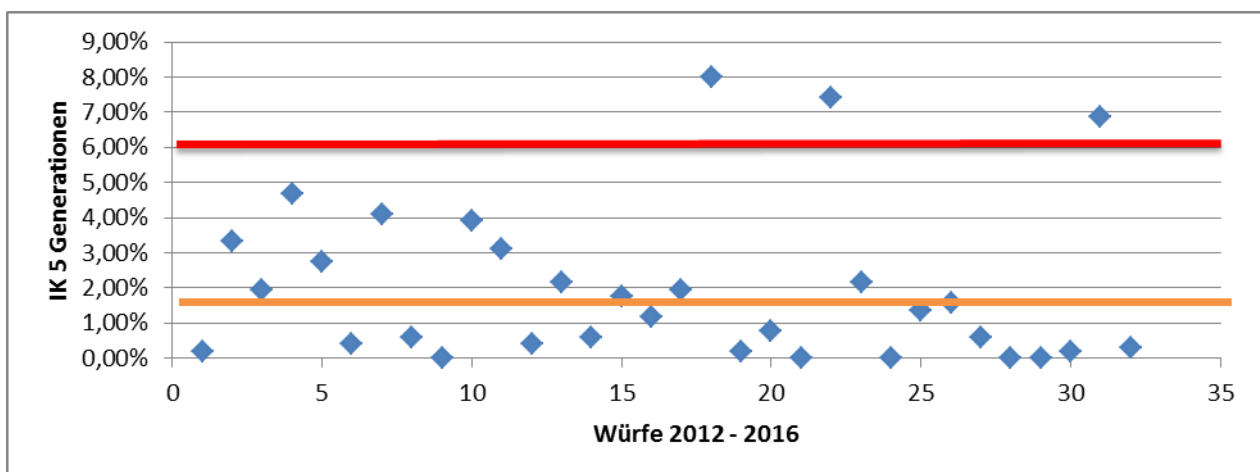
Kennel	Sire	Dam	DOB	COI 5 Gen
Harringay's	Endless Sky	Dame Harringay	1/1/14	3,91 %
Resch Wind	Artefakt Demigod at Resch Wind	Fritzens Alberta	1/18/14	2,64 %
Ina's Fashion	Boughton Baggio	Epic Known	1/31/14	3,12 %
vom Märchenland	Skip The Field	Youni vom Märchenland	3/26/14	0,39 %
vom Monarchenhügel	Droopys Bach	Tosca v. Monarchenhügel	4/1/14	2,15 %
Resch Wind	Artefakt Demigod at Resch Wind	Ransley Simply a Treasure	4/28/14	0,59 %
Rumford	Dixit ad Honores des Legendes du Moyen Age	Telegram Singular Sensation	5/4/14	1,76 %
vom Monarchenhügel	Droopys Bach	Questa vom Monarchenhügel	6/7/14	1,17 %
Harringay's	Ballymac Ruso	Miss Harringay	10/9/14	1,95 %
Ina's Fashion	Boughton Baggio	Epic Invincible	12/19/14	8,01 %
			Mean:	2,57 %

2015:

Kennel	Sire	Dam	DOB	COI 5 Gen
Fortheringay's	Gulds Only O'Brian	Fionn Clann Derry Duchess	2/19/15	0,20 %
Dalma al Fahra's	Asgards Earl Affair	Utopia vom Monarchenhügel	6/24/15	0,78 %
vom Märchenland	Ballymac Eske	Ballyregan Abbie	7/17/15	0,00 %
Vitruvians	Sobers Watson	Sobers Svea	8/7/15	7,42 %
vom Monarchenhügel	Droopys Bach	Tosca v. Monarchenhügel	8/23/15	2,15 %
Winsome Yankees	Asgard's Earl Affair	Razldazl Sally	9/6/15	0,00 %
von der Wilden Meute	Donegal Duke Affair	Lucy	11/11/15	1,37 %
Magyar Álom	Cashen Shatana	Leanders Beat	12/21/15	1,56 %
			Mean:	1,69 %

2016:

Kennel	Sire	Dam	DOB	COI 5 Gen
Resch Wind	Artefakt Demigod at Resch Wind	Ransley Simply a Treasure	4/14/16	0,59%
Rumford	Mariki's Pequot of March Hare	Rumford Silvetta	4/24/16	0,00%
Special Hot Socks	Superior Product	Special Hot Socks Bubblegum	5/13/16	0,00%
vom Monarchenhügel	Ulan vom Monarchenhügel	Pollys Rocket	8/19/16	0,20%
Harringay's	Barrack Jimmy	Dame Harringay	8/24/16	6,88%
Magyar Álom	Ulan vom Monarchenhügel	Magyar Álom Allright	11/16/16	0,29%
			Mean:	1,33%



At first glance there seems to be no cause for concern: Only in one year the mean COI raises above 2,5 %, and only three litter with a COI above 6,25 % were born.

But let us look further. In a breed as closely line-bred as ours with such a small gene pool, the COI over 7 respectively 12 generations is worth a second look as well as the ancestor loss.

COI litters 2012 – 2016 over 7 generations⁹:**2012**

Kennel	Sire	Dam	COI 7 Gen
Special Hot Socks	Cashen Shatana	Special Hot Socks All In One	1,23%
Happy Hunter's	Shazam's The Journey Begins	Happy Hunter's Magic Moment	5,69%
vom Monarchenhügel	Orson vom Monarchenhügel	Questa vom Monarchenhügel	2,61%
Ina's Fashion	Epic Kinetic	Epic Invincible	7,15%
Tahuara's	Sobers Cadiac	Tahuara's Autumn Sun	3,88%
Straight Ahead	Sobers Olliver	Straight Ahead Aponi to Druantia	1,48%
Mean:			3,67%

2013

Kennel	Sire	Dam	COI 7 Gen
Harringay's	Barrack Jimmy	Miss Harringay	4,80%
vom Monarchenhügel	Oran Leader	Nelly vom Monarchenhügel	1,29%
Magyar Álom	Razldazl Jayfkay	Femme Fatale	0,48%
Mean:			2,19%

2014

Kennel	Sire	Dam	COI 7 Gen
Harringay's	Endless Sky	Dame Harringay	4,79%
Resch Wind	Artefakt Demigod at Resch Wind	Fritzens Alberta	4,56%
Ina's Fashion	Boughton Baggio	Epic Known	5,76%
vom Märchenland	Skip The Field	Youni vom Märchenland	1,22%
vom Monarchenhügel	Droopys Bach	Tosca v. Monarchenhügel	3,36%
Resch Wind	Artefakt Demigod at Resch Wind	Ransley Simply a Treasure	2,24%
Rumford	Dixit ad Honores des Legendes du Moyen Age	Telegram Singular Sensation	5,30%
Harringay's	Ballymac Ruso	Miss Harringay	2,89%
vom Monarchenhügel	Droopys Bach	Questa vom Monarchenhügel	2,25%
Ina's Fashion	Boughton Baggio	Epic Invincible	10,09%
Mean:			4,25%

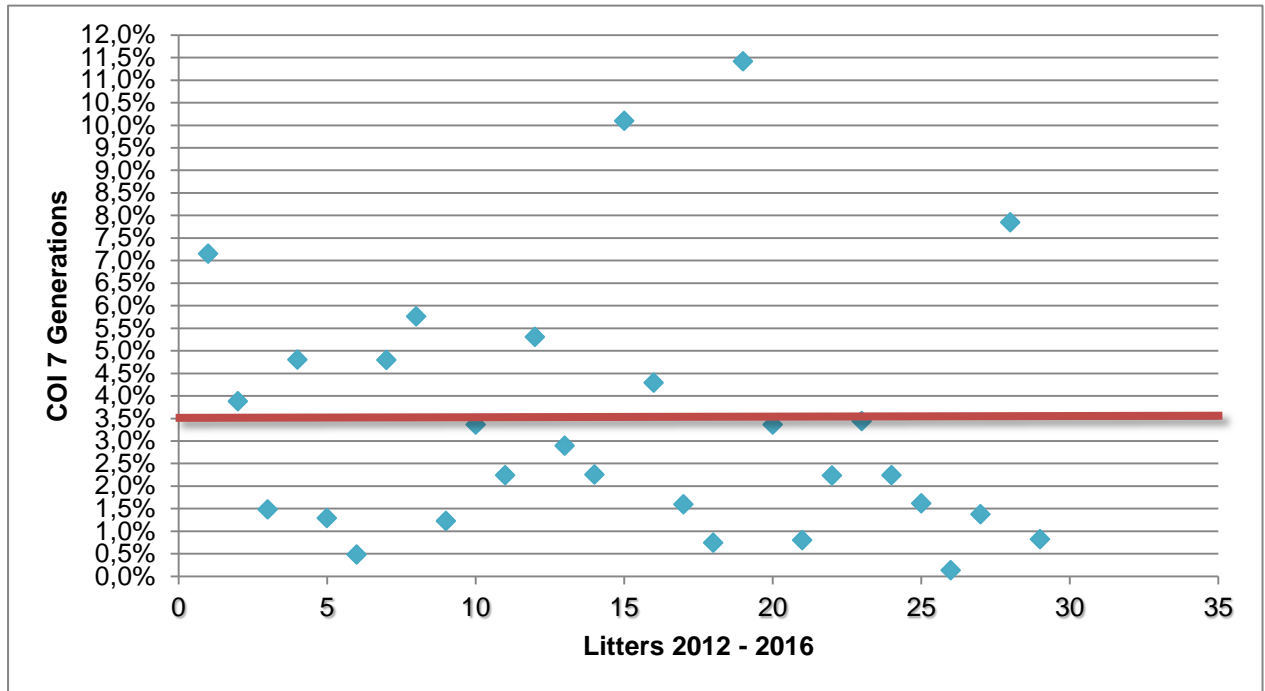
2015

Kennel	Sire	Dam	COI 7 Gen
Fortheringay's	Gulds Only O'Brian	Fionn Clann Derry Duchess	4,29%
Dalma al Fahra's	Asgards Earl Affair	Utopia vom Monarchenhügel	1,59%
vom Märchenland	Ballymac Eske	Ballyregan Abbie	0,74%
Vitruvians	Sobers Watson	Sobers Svea	11,4%
vom Monarchenhügel	Droopys Bach	Tosca v. Monarchenhügel	3,36%
Winsome Yankees	Asgard's Earl Affair	Razldazl Sally	0,80%
von der Wilden Meute	Donegal Duke Affair	Lucy	2,23%
Magyar Álom	Cashen Shatana	Leanders Beat	3,44%
Mean:			3,48%

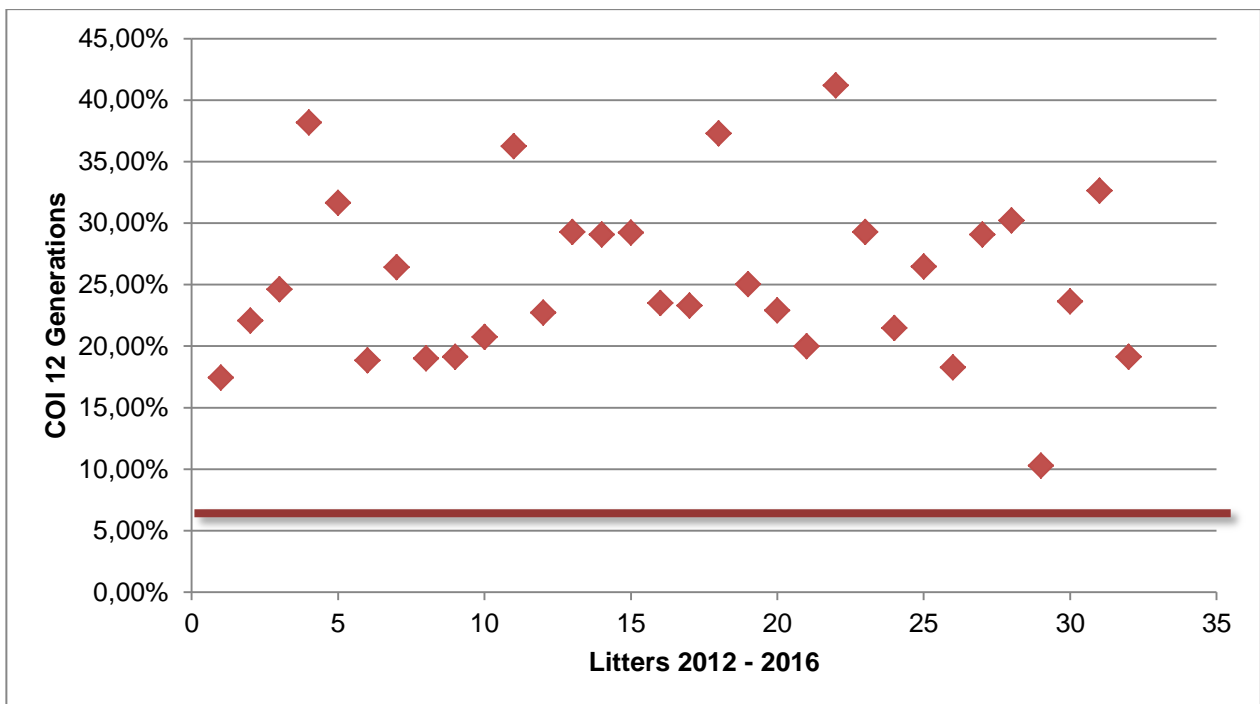
2016

Kennel	Sire	Dam	COI 7 Gen
Resch Wind	Artefakt Demigod at Resch Wind	Ransley Simply a Treasure	2,24%
Rumford	Mariki's Pequot of March Hare	Rumford Silvetta	1,61%
Special Hot Socks	Superior Product	Special Hot Socks Bubblegum	0,13%
vom Monarchenhügel	Ulan vom Monarchenhügel	Pollys Rocket	1,37%
Harringay's	Barrack Jimmy	Dame Harringay	7,84%
Magyar Álom	Ulan vom Monarchenhügel	Magyar Álom Allright	0,82%
Mean:			2,34%

If we follow the reasoning of limiting the increase of inbreeding to 0,5 % for each generation, we can assume 3,5 % as desirable maximum mean COI for seven generations. From this point of view the data shifts already, the COI of 3,5 % is exceeded in two years and almost reached in an additional year.



When we take a look on the situation over twelve generations (where a mean COI of $12 \times 0,5 \% = 6 \%$ should be the aim), we find that in all five years the mean growth of the COI exceeds that limit fourfold:



Here the associated data – COI of litters 2012 – 2016 over 12 generations¹⁰:

2012

Kennel	Sire	Dam	COI 12 Gen
Special Hot Socks	Cashen Shatana	Special Hot Socks All In One	17,42 %
Happy Hunter's	Shazam's The Journey Begins	Happy Hunter's Magic Moment	22,05%
vom Monarchenhügel	Orson vom Monarchenhügel	Questa vom Monarchenhügel	24,60%
Ina's Fashion	Epic Kinetic	Epic Invincible	38,17%
Tahuara's	Sobers Cadiac	Tahuara's Autumn Sun	31,63%
Straight Ahead	Sobers Olliver	Straight Ahead Aponi to Druantia	18,83%
Mean:			27,06%

2013

Kennel	Sire	Dam	COI 12 Gen
Harringay's	Barrack Jimmy	Miss Harringay	26,40%
vom Monarchenhügel	Oran Leader	Nelly vom Monarchenhügel	18,98%
Magyar Álom	Razldazl Jayfkay	Femme Fatale	19,12%
Mean:			21,50%

2014

Kennel	Sire	Dam	COI 12 Gen
Harringay's	Endless Sky	Dame Harringay	20,74%
Resch Wind	Artefakt Demigod at Resch Wind	Fritzens Alberta	29,75%
Ina's Fashion	Boughton Baggio	Epic Known	36,24%
vom Märchenland	Skip The Field	Youni vom Märchenland	22,71%
vom Monarchenhügel	Droopys Bach	Tosca v. Monarchenhügel	29,27%
Resch Wind	Artefakt Demigod at Resch Wind	Ransley Simply a Treasure	29,06%
Rumford	Dixit ad Honores des Legendes du Moyen Age	Telegram Singular Sensation	29,22%
Harringay's	Ballymac Ruso	Miss Harringay	23,48%
vom Monarchenhügel	Droopys Bach	Questa vom Monarchenhügel	23,27%
Ina's Fashion	Boughton Baggio	Epic Invincible	37,27%
Mean:			28,10%

2015

Kennel	Sire	Dam	COI 12 Gen
Fortheringay's	Gulds Only O'Brian	Fionn Clann Derry Duchess	25,02%
Dalma al Fahra's	Asgards Earl Affair	Utopia vom Monarchenhügel	22,89%
vom Märchenland	Ballymac Eske	Ballyregan Abbie	19,97%
Vitruvians	Sobers Watson	Sobers Svea	41,19%
vom Monarchenhügel	Droopys Bach	Tosca v. Monarchenhügel	29,27%
Winsome Yankees	Asgard's Earl Affair	Razldazl Sally	21,45%
von der Wilden Meute	Donegal Duke Affair	Lucy	26,46%
Magyar Álom	Cashen Shatana	Leanders Beat	18,25%
Mean:			25,56%

2016

Kennel	Sire	Dam	COI 12 Gen
Resch Wind	Artefakt Demigod at Resch Wind	Ransley Simply a Treasure	29,06%
Rumford	Mariki's Pequot of March Hare	Rumford Silvetta	30,19%
Special Hot Socks	Superior Product	Special Hot Socks Bubblegum	10,28%
vom Monarchenhügel	Ulan vom Monarchenhügel	Pollys Rocket	23,62%
Harringay's	Barrack Jimmy	Dame Harringay	32,63%
Magyar Álom	Ulan vom Monarchenhügel	Magyar Álom Allright	19,12%
Mean:			25,16%

Now, what about the ancestor loss⁹ over 7 generations?

2012

Kennel	Sire	Dam	AL 7 Gen
Special Hot Socks	Cashen Shatana	Special Hot Socks All In One	24,00%
Happy Hunter's	Shazam's The Journey Begins	Happy Hunter's Magic Moment	39,80%
vom Monarchenhügel	Orson vom Monarchenhügel	Questa vom Monarchenhügel	21,30%
Ina's Fashion	Epic Kinetic	Epic Invincible	44,10%
Tahuara's	Sobers Cadiac	Tahuara's Autumn Sun	42,20%
Straight Ahead	Sobers Olliver	Straight Ahead Aponi to Druantia	41,70%
		Mean:	35,52%

2013

Kennel	Sire	Dam	AL 7 Gen
Harringay's	Barrack Jimmy	Miss Harringay	37,80%
vom Monarchenhügel	Oran Leader	Nelly vom Monarchenhügel	21,30%
Magyar Álom	Razldazl Jayfkay	Femme Fatale	16,50%
		Mean:	25,20%

2014

Kennel	Sire	Dam	AL 7 Gen
Harringay's	Endless Sky	Dame Harringay	33,50%
Resch Wind	Artefakt Demigod at Resch Wind	Fritzens Alberta	34,60%
Ina's Fashion	Boughton Baggio	Epic Known	47,20%
vom Märchenland	Skip The Field	Youni vom Märchenland	21,70%
vom Monarchenhügel	Droopys Bach	Tosca v. Monarchenhügel	33,10%
Resch Wind	Artefakt Demigod at Resch Wind	Ransley Simply a Treasure	33,10%
Rumford	Dixit ad Honores des Legendes du Moyen Age	Telegram Singular Sensation	35,00%
Harringay's	Ballymac Ruso	Miss Harringay	29,90%
vom Monarchenhügel	Droopys Bach	Questa vom Monarchenhügel	23,60%
Ina's Fashion	Boughton Baggio	Epic Invincible	48,00%
		Mean:	33,97%

2015

Kennel	Sire	Dam	AL 7 Gen
Fortheringay's	Gulds Only O'Brian	Fionn Clann Derry Duchess	43,70%
Dalma al Fahra's	Asgards Earl Affair	Utopia vom Monarchenhügel	21,30%
vom Märchenland	Ballymac Eske	Ballyregan Abbie	13,40%
Vitruvians	Sobers Watson	Sobers Svea	56,70%
vom Monarchenhügel	Droopys Bach	Tosca v. Monarchenhügel	33,10%
Winsome Yankees	Asgard's Earl Affair	Razldazl Sally	14,60%
von der Wilden Meute	Donegal Duke Affair	Lucy	28,30%
Magyar Álom	Cashen Shatana	Leanders Beat	28,00%
		Mean:	29,89%

2016

Kennel	Sire	Dam	AL 7 Gen
Resch Wind	Artefakt Demigod at Resch Wind	Ransley Simply a Treasure	33,10%
Rumford	Mariki's Pequot of March Hare	Rumford Silvetta	46,50%
Special Hot Socks	Superior Product	Special Hot Socks Bubblegum	15,00%
vom Monarchenhügel	Ulan vom Monarchenhügel	Pollys Rocket	24,80%
Harringay's	Barrack Jimmy	Dame Harringay	46,90%
Magyar Álom	Ulan vom Monarchenhügel	Magyar Álom Allright	18,10%
		Mean:	30,73%

Besides the COI, the ancestor loss gives some indication of how closely a dog was really bred. If we compare the figures over seven generations, we find the highest value at 56,7 %. This means, that the respective puppy has only 110 individual ancestors – in spite of 254 possible ones. One ancestor appears 14 times, another 9 times, two others 8 times, three more 7 times and so forth.

The lowest value in our table is at 13,4 %, these dogs still have 220 of 254 possible individual ancestors in seven generations.

Most of the time both values correspond with each other, but not always a low COI leads to a low level of ancestor loss. In our data we find e.g. one litter, which shows a five generation COI of only 0,39 %, over seven generations of 1,48 %. The ancestor loss for seven generations is in contrast at 41,7 % - so there are only 148 actual ancestors in spite of 254 possible ones. In comparison we have another litter, showing a five generation COI of 0,39 % as well, and 1,22 % over seven generations. Here the ancestor loss is as low as 21,70 %, these puppies have only “lost” 55 of their 254 possible ancestors.

For the sake of completeness the data of the litters born in 2017 so far ^{4,9,10}:

Kennel	Sire	Dam	DOB	M	F	COI 5 Gen	COI 7 Gen	AL 7 Gen	COI 12 Gen
vom Monarchenhügel	Borna Monty	Tosca vom Monarchenhügel	3/23/17	1	0	2,15%	2,74%	24,4%	24,41%
vom Märchenland	Zoccx vom Märchenland	Ballymac Alesha	3/27/17	4	1	0,00%	0,46%	20,9%	17,26%
Grian Gryjandi	Karkati's Cesare	Tahuara's Calantha	4/13/17	0	1	3,71%	5,23%	46,1%	34,61%
Royal Bunnycatcher's	Mistweave Mr. Cool	Impair et Passe ad Honores	5/18/17	4	4	2,49%	4,51%	39,8%	32,53%
Harringay's	Razldazl Oscar	Harringay's Maid for Sunshine	8/29/17	0	3	4,10%	5,79%	43,7%	27,93%
Ina's Fashion	Sobers Amadeus Karkati	Ina's Fashion Bright	9/12/17	6	9	1,95%	6,00%	54,3%	39,46%
Mean:				15	18	2,40%	4,12%	38,2%	29,37%

Summary

If we would apply the three population genetic recommendations of the Norwegian respective Swedish Kennel Club on the Greyhound breeding activities in Germany from 2012 – 2016, we would find the following results:

- Prohibition of incest – no mating should have a higher COI than 6,25% over five generations (which would equal a mating between cousins)
In three of 33 litters (about 9 %) lag der IK über 6,25 %
- The annual growth of the level of inbreeding should not exceed 2,5 % in average (over 5 generations), in order to limit the increase to 0,5 % per generation.
In one of five years the average growth of COI exceeded 2,5 %.
- Limitation of the number of offspring produced by any single individual to a maximum of 5 % of the total number of puppies registered in 5 years.
Out of 51 parents, 11 of them each produced more than 5 % of the regarded offspring.

Discussion

In order to maintain the gene pool, to control the level of inbreeding and to curb the spreading of genetic diseases a population genetic investigation of the breeding activities in Greyhounds seems a very sensible thing to do.

However, the known regulations of other breed clubs have their flaws, which become visible on a second glance.

Thus, when only regarding the COI for five generations, the results are not that bad.

But if you extend your observation to more generations, the picture is a different one.

A second challenge is the low overall breeding activity in Greyhounds. This leads to such a low annual birth rate, that some parents succeed to produce more than the desired 5 % of the offspring in one single litter.

If this rule was strictly applied, a “normal” use for breeding of suitable Greyhounds with more than one mating partner would not be possible. The situation is getting even more precarious, if you acknowledge racing- and show-lines to be in fact totally different populations. “Cleaned” from the racing lines, we would find that only two show-bred males and two show-bred females produced 20 % of all Show-Greyhound puppies during the last five years in Germany. 40 % of those puppies go back to only four of twenty used parents!

One positive aspect is that we do not have to deal with a nationally closed population. A busy exchange of gene material through importation or use of Greyhounds born outside the evaluated population is taking place.

Recommendations:

A breeding strategy for (Show-)Greyhounds could contain the following rules for the population genetic part:

- Prohibition of incest – no mating should have a higher COI than 6,25% over five generations
- The annual growth of the level of inbreeding in the population should not exceed 3,5 % in average (over 7 generations)
- Limitation of the number of offspring produced by any single individual to a maximum of 5 % of the total number of puppies registered in 5 years in the European FCI-countries.
- Besides these purely number-based assessments and measures we could also make use of other means in order to enhance genetic diversity of each single mating. Testing for DLA haplotypes (Feragen¹¹, MyDogDNA¹²) seems to be a very valuable tool in that respect.
- As we seem to have some very fertile lines in Show-Greyhounds, the use of double matings with two sires at a time may be a useful way to enhance the population’s genetic diversity by keeping the number of puppies – which to find a suitable home for - manageable.
- We should make more use of the possibility to collect and store frozen semen. Healthy, typical Greyhound males should be collected at a young age (especially when they still carry old and rare bloodlines). Even when these males seem not to be attractive for breeders to use at present, their genes may prove to be very valuable for the breed in the future.
- We should investigate if and under which circumstances our Show-Greyhounds would benefit from an outcross with racing lines.

As the observed challenges (small gene pool, low breeding activity, high levels of inbreeding) seem to affect actually all European countries (even the parent country Great Britain), a purely German approach would not make much sense. Therefore we can only achieve any improvement in the long run when the breed clubs of each country join forces to establish a common strategy!

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