

Irish Glen of Imaal terriers, facts and figures, dec. 2015

Registrations

As per December 2015 Glen-Footprints Database keeps record of nearly **6700** Glens from all over the world. The chart below shows the number of registrations per year of birth. Please note: registrations earlier than 1980 are summarized and we still have to add a few '2015' Glens.



Population

The actual population size is roughly estimated to be between **2500** and **3000** Glens. The chart shows a slightly **declining** trend. Approximately **70**% of all Glens live in the United Kingdom, Finland, USA and Ireland and **30%** in other countries.

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Coefficient of Inbreeding (COI)

Inbreeding is mating of related individuals and is inevitable in closed populations like Glen of Imaal with a finite number of ancestors. The COI measures the common ancestors of dam and sire, and indicates the probability of how genetically similar they are.

Glen-Footprints calculates the COI according the formula of Sewall Wright with no restriction on the number of generations. From many Glens we already have over 10 generations (> 2046 ancestors!) in the pedigrees.

The chart below shows 3 graphs:

- the mean COI (blue graph) of all database registrations per year of birth with trend graph
- the maximum COI (green graph) of all database registrations per year of birth
- the minimum COI (red graph) of all database registrations per year of birth

The mean COI as per 2015 is 21.5%.

After about 20 years of being relatively stable at about 20% we now observe an **inclining** trend.

The **minimum COI** is slowly increasing over the years and currently around **15%**. It's not possible to select a mating pair out of the current population with a COI less than **13%**! BTW..... should this still be considered as outcross????

Some people asked us why other (country KC) databases show a lower COI for the same Glen. Well here are some reasons:

- less ancestors or more gaps in their pedigrees
- limited number of generations used for calculation
- imported dogs are often considered being unrelated because the pedigree history of the imported dog is missing. As you probably know lots of Glens are imported and they all are related to each other.



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Generation interval

Generation interval is the average interval of time (in years) between the birth of parents and the birth of their offspring. The chart below shows the mean generation interval of all database registrations per year of birth. During the last 15 years the mean generation interval remained relatively stable at **4.2 years**.



Inbreeding rate

The inbreeding rate is an indication of the loss of genetic diversity in the breed. Inbreeding rate is calculated as the average of the difference in COI between the parents and their offspring per year of birth. Literature says that the loss of genetic diversity dramatically increases if the inbreeding rate is higher than 0.5% per generation and the future of the breed is to be considered at risk if the inbreeding rate is over 1%.

The chart below shows the progression of the average inbreeding rate over 5 year periods (1981-1985,....., 2011-2015). Like across all breeds the inbreeding rate appeared highest in the 80's and tended to decline in the 90's. Interesting fact is the more PRA became a severe threat for the breed the lower the inbreeding rate became. Unfortunately, since the gene test for PRA came available in 2010, the **inbreeding rate is increasing**. Thesis: *PRA wasn't only a threat but also a blessing for the breed*.

The average inbreeding rate over the period 1980-2015 is **1.2%** and from 2000-2015 **0.6%**.



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Litter analysis (from 1980 - 2015)

- Number of litters analysed: 1485
- Repeat matings: 243 (=16%); declining trend
- Average litter size: 4.3 puppies; (last 12 years: 4.8 puppies)
- Males/females/unknown: 49.5/50.3/0.2 %
- Number of distinct sires: **537**
- Number of distinct dams: 855
- Litters per sire: 2.8
- Litters per dam: 1.7
- Males used for breeding: **17.8** %
- Females used for breeding: 27.7 %
- Total Glens used for breeding: 23%
- Not used for breeding: 77%



Litters per sire / dam

The table below shows the number of litters per sire and dam. E.g.: - 228 sires produced 1 litter but there was 1 sire who even produced 19 litters! - 474 dams produced 1 litter where 1 dam produced 7 litters!



Offspring per sire/ dam

The table below shows the offspring per sire and dam. The number of offspring is divided into classes, 01-10, 11-20, etc. E.g.: - 331 sires have less than 10 offspring and there was one Glen with 84 offspring!

