

IRISH (RED) SETTER

Hip & Elbow Dysplasia Report June 2018

At the outset it must be stated that irrespective of under which worldwide hip and elbow X-ray scheme canines are graded for dysplasia they can only be considered CONTROL schemes. Hip and elbow dysplasia are polygenic in nature and no breed can guarantee complete freedom from the condition. Transmission from one generation to the next (mode of inheritance) is not clearly understood, so even when parentage with good gradings are partnered, siblings within a litter often show score variation. Currently NO DNA genetic test is available that could eradicate hip and elbow dysplasia, although research continues worldwide.

TABLE 1 - HIP GRADING SYSTEM TABLE = New KUSA/SAVA/FCI and Old KUSA/SAVA

FCI Grade	Description	F C I criteria	Old RSA Grade
A1	Excellent hips	No signs of hip dysplasia	0
A2	Good hips		0
B1	Fair hips	Near normal hip joints	0
B2	Marginal dysplasia		1
C1	Mild dysplasia	Mild hip dysplasia	1
C2	Mild to moderate dysplasia		1
D1	Moderate dysplasia	Moderate hip dysplasia	2
D2	Moderate to severe dysplasia		2
E1	Severe dysplasia	Severe hip dysplasia	3
E2	Very severe dysplasia		4

The Kennel Union of Southern Africa recently published Prof. Kirberger's phenotype analysis of Rottweiler and Labrador Retriever scores for hip and elbow dysplasia under the KUSA/SAVA/FCI (Federation Cynologique Internationale) Scheme which was introduced in 2007 as a revision to the "old" hip scoring KUSA/SAVA scheme. (See KUSA website – www.kusa.co.za home page click Responsible ownership then click Canine Health Schemes) and the International Elbow Working Group Scheme for grading.

The purpose of this research and analysis was to ascertain whether improvement in scores had taken place over a nine year period in both breeds and to compare these evaluations with the statistics of the Orthopaedic Foundation of Animals (USA)

In SA 1148 Rottweilers and 909 Labradors (dogs and bitches) had been graded. Under the KUSA/SAVA/FCI scheme it is generally accepted that dogs hip scored A and B merit breeding and are non-dysplastic. On analysis it was found that the prevalence of hip dysplasia in Rottweilers was 22% and Labrador Retrievers 31% The prevalence of elbow dysplasia in Rottweilers was 39% with the prevalence in Labrador Retrievers standing at 19%. Comparing these results to the OFA statistics from 1974 to 2015 Rottweilers showed a 20.2% prevalence of hip dysplasia and Labradors 11.5%. Elbow statistics showed dysplasia prevalence in Rottweilers of 36.7% and in Labradors 10.2%.

So where do Irish (Red) Setters, the most popular of the Setter breeds in South Africa stand statistically in this picture? Prof. Kirberger felt that the breed did not have sufficient numbers/data for research and analysis. The compilers of this report felt differently. Since 1991 to the present 75 SA Irish Setters of both sexes have been graded as potential breeding dogs under the “old” KUSA/SAVA and new KUSA/SAVA/FCI system which was introduced in 2007. A conversion of the “old” scores to align with the current KUSA/SAVA/FCI scheme was undertaken so that all were represented in the study .

All those scoring A and/or B for both hips and those with ONE hip scored C1 i.e. B1:C1 or C1:B2 were considered as dogs of breeding merit, but those beyond this parameter were included for the purposes of statistical research. It must also be noted that some Irish Setters with good scores for HD and ED were withdrawn from the breeding population for other reasons i.e. carriers of the blinding genetic condition Late Onset Progressive Retinal Atrophy rcd4 for which DNA testing commenced for South African Irish Setters in 2012.

Of the eight Irish Setters imported for future use as stud dogs only 4 rated A::A grading for both hips one (never used at stud) was graded C2:D1. One bitch was imported with a good grading.A2:B1

INTERPRETING TABLE 2 HIP GRADING RESULTS FOR IRISH SETTERS

- Col 1.** 5 year period during which the Irish Setter was born
(not year X-rayed and scored)
- Col 2.** Number of dogs X-rayed in each 5 year period
- Col.3.** Number of dogs with good scoring results As & Bs
- Col.4.** Percentage of dogs with good hips scoring results
- Col.5.** Dogs scored with ONE hip only C1 i.e. B1:C1/ C1:B1/ B2:C1/ C1:B2
- Col.6** Percentage of dogs with ONE only hip scored C1

Col.7 Number of dogs with hips scored C1:C1 and worse

Col.8. Percentage of scores C1:C1 and worse

**TABLE 2 - ALL HIP GRADING RESULTS FOR IRISH SETTERS
HIP SCORING RESULTS**

Year of Birth	No of dogs total	Clear A1 to B2	% of total	Mild B2 : C1	% of total	Worse C1:C2 +	% of total
pre 1990							
1991 to 1995	6	4	66.67	1	16.66	1	16.66
1996 to 2000	10	3	30	6	60	1	10
2001 to 2005	10	4	40	2	20	4	40
2006 to 2010	30	14	46.67	3	10	13	43.33
2011 to 2015	14	9	64.29	1	7.14	4	28.57
2016 to 2020	5	5	100				
Total Dogs to date	75	39	51.35	13	17.57	23	31.08

Table 2 indicates that of the total number of the 75 Irish Setter X-rayed from 1991 to June 2018 and graded 51.35% merited good results with a further 17.57% with one hip scoring C1 giving a total population of breeding merit of 68.92% with 31.08% of dogs graded C1:C1 or worse. It must be noted that there is a marked improvement in the grading percentage results of dogs born after the introduction of the current KUSA/SAVA/FCI scheme (2007) particularly in the period commencing 2016 to date of this report (June 2018) .

GRADING OF ELBOWS FOR IRISH SETTERS

Almost all elbow gradings were effected with the introduction of the KUSA/SAVA/FCI scheme (2007) with 35 Irish Setters of both sexes born from 2001 X-rayed and scored.

TABLE 3 ELBOW GRADING SCORES

- Grade 0 = No signs of arthrosis or osteophyte
- Grade 1 = Mild arthrosis osteophytes < 2mm in size
- Grade 2 = Moderate arthrosis osteophytes 2. 5mm in size
- Grade 3 = Severe arthrosis osteophytes > 5mm in size

INTERPRETING TABLE 3. IRISH SETTER ELBOW GRADING RESULTS

Col.1. Number of dogs graded for Elbow Dysplasia

Col.2. Good 0:0 results

Col 3. Percentage of total number of dogs with 0:0 good results

Col.4. Number of dogs graded with 0:1 or 1:0

Col.5. Percentage of total number of dogs graded with 0:1 or 1:0 results

TABLE 3. ALL ELBOW GRADING RESULTS FOR IRISH SETTERS

Year of Birth	No of dogs total	Good 0-0	% of total	Fair 0-1or1-0	% of total
2001 to 2005	1	1	100		
2006 to 2010	15	11	73.34	4	26.63
2011 to 2015	14	14	100		
2016 to 2020	5	5	100		
Total Dogs to date	35	31	88.57	4	11.43

Table 3. reflects Irish Setters with generally good results for elbow dysplasia. Of the 35 X-rayed and scored 88.57% graded 0:0 and only 4 gave a result of 1:0 or 0:1 giving 11.43%, therefore all merited entry to the breeding population for elbow health.

CONCLUSION

The mean average for the Irish (red) Setter hip grading score over the whole period is B2:C1 in line with the breed's KUSA Advanced Registration Certificate but over the last 9 years this has gradually improved and currently stands between B1 and:B2 Continued vigilance must be exercised by breeders with the grading of their potential breeding stock to maintain and advance the position upwards. This is no easy task with a scattered breeding population in a vast country, but of the last 12 dogs born during and after 2013 and graded (5 1/2 year period) only one had a hip score beyond C1:C1 with the balance reflecting superior scores. Elbow gradings of Irish Setters present a good healthy picture...

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IRISH (RED) SETTER DNA TESTING RESULT UPDATE June 2018

LATE ONSET PROGRESSIVE RETINAL ATROPHY rcd4 SCHEME (a blinding condition)

Good progress has been made since the commencement of the scheme, despite difficulties with the importation of testing kits from Animal Health Trust in the UK and the poor Rand to Pound Sterling exchange rate. To date **162 Irish Setters have been assessed and issued with KUSA Health Screening Certificates (Annexure to Certificate of Registration & Pedigree) as reflected in the following results:**

DNA tested Clear 20 – 12.5%	DNA tested carrier 18 – 11%	DNA tested affected 4 – 2.5%	Inherited clear 120 – 74%
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Total Irish (red) Setter population cleared of LOPRA rcd4 140 - 86.5%

Currently breeders are only using Tested DNA clear or Inherited clear dogs when breeding.

CANINE LEUKOCYTE ADHESION DEFICENCY (an auto-immune condition)

&

PROGRESSIVE RETINAL ATROPHY rcd1 (early onset blinding condition)

DNA tested clear 31 – 8.3%	Inherited clear 343 – 91.7%	Total cleared 374
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No cases have been reported and it appears these conditions have been eradicated. from the SA Irish (Red) Setter population. Thus KUSA Health Screening Certificates, of all progeny are issued with Inherited clear status.

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