Minutes from the NKU/VK meeting 2014

November 3rd 9:00 – 19:00

Hotel Reykjavik Lights, Iceland

Participants: SKK: Tomas Bergström, Sofia Malm, Helena Skarp, NKK: Astrid Indrebø, Kristin Aukrust, Kristin W. Prestrud (assisting note taker), FKK: Hanna Bragge, Kirsi Saino, HRFI: Helga Finnsdóttir, Klara Símonardóttir,

DKK: Helle F. Proschowsky (chairman, note taker)

1. Welcome, short presentation and organizational news from the national kennel clubs

SKK registers approximately 50.000 new puppies per year and this number has been decreasing. The counting of memberships differs between the NKU countries making it difficult to compare. SKK have 300.000 members including breed club members.

NKK: The economy is not good, and the staff has been reduced with 5 employees. A new CEO started in December 2013. She has experience with both economy and media, which is a good combination. NKK has three veterinarians in the health department and arrange many seminars and initiate cooperation projects with the government and the veterinarian association. NKK registers 28.000 puppies a year and there are 65 - 70.000 members. The number of yearly issues of Hundsport will be decreased from ten to four in 2015 and the plan is to switch to electronic publications later.

FKK: No organizational news – FKK has been very busy with world dog show and anniversary. The number of yearly registrations is 47.000 and FKK has 150.000 members. Many are members just because of the magazine.

DKK: The decrease in registrations has declined. The number of puppies in the overall Danish dog registry has decreased resulting in a higher proportion of DKK dogs. The number of registrations is around 22.000 and there are 33.000 DKK members.

HRFI: Iceland has tried to publish the magazine electronically but this was not a success. The number of members decreased, and HRFI decided to make a printed version again. The number of yearly registrations is 1.150 and HRFI has 2.000 members. There are estimated 15.000 dogs in Iceland with Labrador, Cavalier and Miniature Schnauzers as the most popular breeds. Import of breeding dogs is not easy due to the four weeks quarantine. Only 1-2 dogs per year are inseminated with frozen semen and the use of fresh semen is prohibited.

2. Minutes and follow-up from the last meeting in Finland

The minutes from Finland mentions that the DNA strategy should be sent to the FCI Scientific commission, but it should be send to the FCI Breeding commission as well (directly to the chairmen). Both commissions meet once a year and next meeting will be in February, in relation to the Dog Health Workshop in Dortmund. The DNA strategy must therefore be finished in January 2015.

NKU/AU has turned the proposal from NKU/VK of a new panel for spinal diseases down. The minutes from the NKU/AU meeting denotes it as a "commission" but the VK suggested a new *panel* – not a new commission. The benefits of a forum for the scrutinizers of spinal diseases will be put forward to

NKU/AU again. Some countries have only one person evaluating the X-rays for i.e. disc herniation and this is a very vulnerable system. Perhaps it would be possible to merge the evaluations within a common Nordic panel of spinal scrutinizers.

The issue concerning international breed clubs trying to regulate/control the use of breeding dogs between different countries has been put forward to the Scientific commission.

At the last NKU/VK meeting it was decided that Astrid should collect lists of giant breeds (in relation to hip screening) in each of the Nordic countries. DKK, NKK and SKK have identical lists while the lists from Finland and Iceland differ. The breed clubs decide the minimal age at HD screening in Finland and this makes it difficult to agree on a common list. The board of HRFI takes the decisions, but the breed clubs can express their wishes.

NKU/VK suggests putting forward a request to the HD/ED panel asking if the panel will be responsible for maintaining the list of giant breeds and make decisions regarding new breeds. If the HD/ED panel accepts, a request should be send to FKK to pass on the decision-making authority to the HD/ED panel. It is stressed that the country seeking advice from the HD/ED panel regarding the optimal age at screening for a new breed is responsible for providing relevant background information about the breed.

NKU/VK also asks for the panel's opinion on whether the minimal age at HD and ED photo should be the same (i.e. 12 months for both hips and elbows in stead of 12 months for elbows and 18 months for hips). Astrid will make a first draft of the letter to the HD/ED panel.

3. General update from each country regarding health issues (BSI, RAS, Mentality etc.) and specific projects/issues for NKU/VK to consider.

BSI – Finland: Had a seminar recently for judges and a talk by Göran Bodegård for judges and participants at the Helsinki dog show. They have also held seminars for ring stewards teaching them to inform judges, especially foreign judges. FKK stresses that exaggeration of presentation – "showing" - is very important as well. FKK plans to implement the new BSI document from January $\mathbf{1}^{\text{st}}$ and expects to send the reports to Sweden for registration. SKK does not agree on this and states that every country should do it themselves.

SKK will send the excel sheet for report, and a power point presentation about BSI to the other members of NKU/VK.

Norway: Started using the new BSI document in Stavanger in September and sent the booklet in English to all Norwegian judges and breed clubs. A link to the BSI document is e-mailed to the invited judges together with the regular information about the show. The BSI document will be used in all 11 yearly International dog shows. The booklet will also be available in all show rings. The breed clubs are requested to send the link to judges they invite for breed club shows. NKK does not have briefings of judges in connection with the dog shows, but are planning to do so. In the other countries, the briefings are carried out by specifically educated judges or otherwise qualified persons, not necessarily from the national kennel clubs. The judges have to fill out reports in Norway. The reports stay in Norway but they would like to send them to Sweden if this becomes possible.

SKK: Continues as they have done for several years.

DKK: The old BSI documents are still used, it is not decided when the new common Nordic booklet will be implemented. DKK does not have the resources to register reports.

HRFI: No work has been done with this so far, but HRFI had a seminar for judge trainees with Göran Bodegård two years ago. There are few dogs in few shows in Iceland and only 5-10 judges per show. HRFI would like to work with the BSI document but has not yet decided how.

RAS: FKK: Readymade templates are available on the webpage to make it as easy as possible for the breed clubs. A complete RAS is mandatory in breeds with > 250 registrations in five years. Smaller breeds (50-250 registrations per year) can make a smaller RAS. RAS is not mandatory in breeds with less than 50 registrations per five years, but many do it anyway. Maintenance of health programs are dependent on RAS – if a breed club does not produce/update RAS, the health programs of the breed will not be prolonged (all health programs run for periods of five years) and new programs will not be initiated.

NKK: Is impressed by the work of the breed clubs. A total of 100 breeds have delivered a RAS, and a lot have asked for an extended time limit, still working on it. NKK has the same RAS document regardless of breed size, but the expectations are widely different depending on size and resources of the breed club.

SKK: Keeping up the good work, but changed some routines. Not all breeds update every five years as intended. At present there are no routines for sending out reminders, but there are plans to implement this. SKK will shortly start to use a program called "Platina" to manage different versions of the same document. This program will also facilitate keeping track on when revisions/updates are expected.

HRFI: No RAS, not enough resources in the clubs. No plans for implementing it now but perhaps later.

DKK: No RAS either - a question of resources. Some breed clubs have made it voluntarily, but there are no plans to make it mandatory.

General health issues: SKK is planning to develop a service called "My pages" (similar to e.g. FKK) with possibilities to register dogs online, for owners to report death and cause of death/euthanasia etc. They also investigate the possibility to develop an "SKK Info bank" collecting info from web services like "Avelsdata", "Köpa hund" and "Hunddata" which are today separate. In a new Info bank SKK would also like to implement new tools like for example prediction of EBV's for behavior traits, i.e. a Mentality index, and calculation of a "Relationship index," returning a value showing how much an individual dog is related to the rest of the breed. There is a group looking at all rules in the SKK. The background is difficulties getting an overview of rules and recommendations for each breed. This review is likely to put more pressure on the breed clubs to evaluate their health programs. Evaluation of RAS and health programs will be the theme of SKK's course for breeding officials in the spring. Breeds with serious health problems (for instance English bulldogs) are included in breed specific projects. During 2015 SKK plans to focus on the Cavalier King Charles Spaniel.

DKK informed about a new project funded by the national knowledge center for animal welfare. The project has several topics but one of them is to study the incitements of buyers of extreme dog breeds. If we know more about the incitements it becomes easier to target the information.

FKK has launched breeding inspection guidelines – how to evaluate conformation and behavior - starting 1st of June 2015. The breed clubs can arrange evaluation of dogs (e.g. breeding dogs in

general, specific sires and offspring etc.). Results (dog accepted or not) can be registered on FKK's Dognet (Koiranet). In FKK, English bulldogs can take exercise tests to evaluate health. French bulldog will be next and Pugs as well.

a. Common vaccination rules

WSAVA (World Small Animal Veterinarian Association) recommends that the last vaccination is given at 14-16 weeks to ensure that maternal antibodies are gone.

Even though it would be convenient with harmonized vaccination rules within NKU, the group concluded that this is not possible due to different routines, recommendations and legislation in each country.

Iceland: Has quarantine for four weeks when dogs enter the country. There is a pressure to loosen or give up the quarantine from dog owners wishing to bring their dogs on holiday. NKU/VK recommends that Iceland maintains the quarantine to secure the exceptional health status of the country.

Norway has proved that some dogs from Eastern Europe with passport, microchip and vaccination certificates have zero titer against rabies meaning that they were never vaccinated.

b. Dystocia in Scottish terriers

Helle informed about a Danish master project showing that it is clearly hereditary whether a Scottish terrier bitch is able to deliver or not. If the mother delivers, the daughter also does. Height of the dog was also positively associated with normal delivery (smaller dogs had a higher risk of dystocia and caesarean sections). The Danish breed club, the master student and the supervisor wish to include more dogs in order to evaluate if radiographic screening of hip conformation would be beneficial. Scottish terrier is a numerically small breed in Denmark and it will probably be relevant to include dogs from the other Nordic countries. DKK would therefore appreciate if this information could be passed on to each of the Nordic country's breed clubs of Scottish terriers. Interested breed clubs can contact Helle.

c. HD Ph.D. project

Sofia sent out an invitation to participate in this project earlier this year, but it has been decided that only the three countries directly involved in the project (Sweden, France and the UK) will be included. If there is a possibility later on to include more countries with respect to the time table of the Pd.D. project, Sofia will come back with a new request. The Ph.D. student, Shizhi Wang, just arrived to SLU to start up the project.

d. Breed cross program, Norwegian Lundehund

NKK has initiated a breed cross program to control Intestinal Lymphangiectasia (IL) in the Norwegian Lundehund. Three breeds will be used for crossbred litters: Icelandic sheepdog, Norwegian Buhund and Norrbottenspitz. Right now NKK is struggling to get the Nordic countries into the project. It has been decided to use bitches from the other breeds with Lundehund males. The reason for this is reduced fertility in the Lundehund breed, and risk of dystocia because Lundehund bitches are smaller than the other breeds. Some of the bitches

come from other countries (Iceland and Sweden) and the litters must be registered in the country where the puppies are born. They must be registered in an X-register and not in the regular register.

The Norwegian breed club wants to select which dogs can enter the regular registry; they do not want the crossbreds to enter automatically after a number of generations. It is important to avoid that they remain as two separate populations and there should be a long term plan to merge the crosses into the original population.

FKK: Does not have an X-register; they use a separate register with their breed name, and remain there for three generations. This is an FCI rule. FKK has breed cross projects with Schnauzer and Pinscher, Kromfohrländer and Poodle, Parson Russel terrier and Tibetan terrier and Barbet with a French spaniel and Spanish water dog. Finland have made guidelines for breed cross projects and will send these to the members of NKU/VK.

DKK: made a cross between Old Danish Pointing dog and Braque Francais in 2000. Too few animals were used and it was not sufficiently specified how to merge the crosses into the original population.

e. Registration of HD/ED results between Nordic countries (NKK)

Norway sees an increasing number of dogs being x-rayed in the "wrong" country. The rules are not the same in all NKU countries and each country must send their rules regarding registration of HD results to Kristin A. She will make a comparison for the next meeting.

f. Mentality testing

SKK: Results from MH have shown quite high heritabilities. Also the heritabilities of the five overall personality traits are moderate, and these combined traits are likely easier to use for genetic evaluation than single behavior/test elements. SLU has had a project calculating estimated breeding values for behavior/personality traits in Rough Collies (the EBV's are published on the breed club webpage) and SKK has approved funding for expanding it to more breeds. SLU will make some preliminary analyses of BPH data very soon, i.e. calculations of heritabilities for some of the traits measured. The ideal breed profiles can be represented by "spider diagrams" – this makes it easier to interpret the results. In Avelsdata it is possible to see for instance all offspring after a certain male, represented in a spider diagram. You can chose either to see all test elements or only the five personality traits. An evaluation of BPH will be carried out in 2016 and Sofia will send the results to NKU/VK.

FKK: Some breeds have mandatory mentality testing for registration and/or championship (Bouvier, Rottweiler and White Shepherd). FKK make "Breeding evaluations" which have a behavioral part. They evaluate the dogs in everyday situations, walking on varying surfaces, meeting unfamiliar people and dogs etc. Some breed clubs do statistics for their RAS and they must define the optimal results for each breed. Generally, though, there is a lack of capacity to handle the results systematically.

DKK: Some breeds have mandatory mentality testing for registration of offspring (Broholmer and Rottweiler). Generally MH is a description and not a test you can either pass or fail but in these breeds, certain values may exclude a dog from breeding. Helle had a meeting with James Serpell recently in relation to another project, and discussed the possibility of using a

questionnaire to get more data on behavior (C-BARQ or a shortened version of it). Sofia knows a Ph.D. student at SLU (Helena Eken) who works with this topic as well, and she will send information/questionnaire to NKU/VK. One benefit from questionnaires is the possibility to pick up information about interdog aggression – something that is not monitored by MH/BPH.

HRFI: Does not carry out routine mentality testing, but the behavior of dogs can be evaluated if a dog bites.

NKK: Register individual MH results

g. Limits for inbreeding

NKK: If F \ge 25 % (calculated from a six generations pedigree), the offspring is registered but banned from breeding. Inbreeding > 12,5% in 6 generations is not recommended; NKK recommends F < 6.25 %

FKK: The offspring of matings with high inbreeding (father/daughter, mother/son) is registered but banned from breeding. The recommendation is a maximum of 6.25. A few breeds have breed specific limits: Finnish spits and Norbottenspitz have a maximum of 6.25% in 7 generations and Sarplaninac a maximum of 6.25 in 5 generations.

SKK: Current rules were before Avelsdata/inbreeding coefficient was available. Mating siblings, father/daughter or mother/son is not allowed. The recommendation is max 6.25 %, based on 5 generations.

DKK: The recommendation is max 6.25 %. The computer system reacts if a mating exceeds 10 %. If it only happens once nothing is done, but if the same breeders register litters with to high inbreeding again and again, they receive a letter from DKK. DKK changed the official number of generations used for inbreeding calculations from five to three recently. It is still possible to se the calculation for up to eight generations on Hundeweb. Some breed clubs argued that imported animals would only enter the database with the three generations visible on the pedigree and thus this change would give equal status to Danish and foreign stud dogs.

NKU/VK does not see any need to focus on inbreeding, the trend is good and there are no signs of an increased use – rather the contrary.

Iceland does not have rules regarding inbreeding, but the minimal age for first litter is two years for all breeds. Individual breeds can apply for reduced minimal age.

4. International activities and conferences

a. International Cavalier Symposium 25.10.2014 Sofia and Helle attended. Belgium collects health data, primarily regarding the heart disease endocardiosis/mitral valve disease from all over the world and aim at developing a "Mate Select" program based on estimated breeding values. DKK has shared health data with this project and received an USB key with EBV's for heart health for 1.100 Danish Cavaliers. DKK lacks some information regarding the model used for the calculations etc. and this need to be available before DKK can publish the EBV's. Sofia has been in contact with the Cavalier for Health project regarding the same issue and will share the information she has. In addition, Sofia has a paper questioning the quality of the DNA test for Episodic Falling Syndrome. She will pass this along to.

b. Dog Health Workshop in Germany.

There has not yet been much contact between Germany and SKK who hosted the first Dog Health Workshop. The workshop titles are not the same, and it is not quite clear what the new workshop "Dogs in motion" will cover. The web-platform "Dog Well Net" (Brenda Bonnett) will be launched on day two of the conference and NKU/VK emphasizes the importance that all NKU countries are represented, including Iceland.

- Advances in canine and feline genomics and inherited diseases.
 The next conference will be held in Cambridge this summer 22-26 June. Helle and Tomas know they will participate, but the conference is relevant for all NKU members.
- d. SKK/Agria is planning a conference on November 21, 2015 for breeders and interested dog and cat people. The conference will present ten years of research in the Nordic countries funded by the SKK/Agria Research Foundation.

5. Report from the DNA-group

Kirsi is head of the group but Hanna chaired the meeting in Kirsi's absence. SKK has made a very nice paper describing the different issues concerning DNA testing. The DNA group asked Sofia to make a more general version (leaving out SKK specific topics) and translate it to English. The strategy will be circulated to the DNA group in December and when finished, send directly to the chairman of FCI's Scientific commission or via Kirsi in time for the meeting in Dortmund in February 2015.

Helle informed the DNA group about an upcoming project in Denmark. The newly launched DNA test for HD (IDEXX) will be evaluated in a number of Labrador retrievers with high and low breeding values.

PRA has been diagnosed in a Norwegian Yorkshire terrier male coming from Sweden. The Optigen test for prcd-PRA can be used to identify carriers. Each of the Nordic kennel clubs will contact the national breed clubs and pass on the information.

The status regarding DNA profiling in each of the Nordic kennel clubs was discussed. The DNA group argued that the use of letters to indicate allele sizes would make it easier to compare results from different laboratories using the ISAG panel.

Helle oriented the group about a recent master project comparing clinical eye diagnoses at 7-9 weeks of age with the CEA DNA test in collies. The compliance was very poor and a new project is now running in the Shetland sheepdog.

SKK has decided to introduce a maximum limit of three generations for registration of hereditary free offspring. There are some practical issues concerning the administration of this new rule, and the group decided to wait and evaluate the Swedish experiences before implementing it elsewhere.

SKK has decided to accept cheek swabs

The DNA group is still critical about the concept of multi testing.

FKK has validated the DNA test for Merle offered by Biofocus and it seems to work quite fine

6. Report from the index group

Kathariina Mäki is head of the group. The group discussed the possibility of including the two hips separately in the EBV calculation so that for instance A/B would be better than B/B. The scientific background for letting the worst hip define the overall grade was debated. It might as well be the best hip that represents the genetic liability while the worst may represent trauma. There is a lack of scientific literature concerning this issue. Helle oriented about a Danish bachelor report about the prevalence of different hip status on right and left hip. Between 1/4 and 1/3 of all X-rayed dogs of the seven numerically largest breeds in Denmark had different status on right and left hip. It would be nice with a future project testing if for instance dogs with A/C produce better offspring than dogs with C/C

The correction for age differs between the different countries. DKK calculates the correction for age using categories, while other countries use a modified linear regression. Sofia sends some details about their model to Helle. There are also discrepancies in the way heritabilities are used in the model, SKK and NKK uses breed specific heritabilities and DKK uses a fixed value.

SKK, NKK and FKK register HD/ED results before 12 months of age as preliminary results. In NKK the result is only registered if the result is D or E. DKK does not. NKU/VK brings this question forward to the HD/ED panel and requests a statement regarding the procedure.

Some breeds are "to good" to benefit form the index. If 60-70% of the breed has A hips it becomes very difficult for the breeders to use/understand that a dog with A hips can have an index below 100.

Dachshunds – a Danish master thesis has proved a strong correlation between number of calcified discs, low breeding values and the risk of developing disk herniation.

7. Report from the HD/ED panel

The HD/ED panel was not represented at this NKU/VK meeting, but some preliminary notes were received from the last meeting in the panel. The panel wants a new FCI protocol including information regarding scoring. There should also be an official FCI protocol for elbow dysplasia. At present, there is only a protocol written by IEWG (the International Elbow Working Group). The members of NKU/VK discussed the need for guidelines regarding hip and elbow evaluation in chondrodystrophic breeds.

8. Reports from FCI Breeding Commission (Astrid) and Scientific Commission (Kirsi)

The breeding commission has put forward a proposal that any member/contract partner of FCI may register an imported dog with limited rights for breeding, if the dog has characteristics that would result in limited rights for breeding had the dog been born in the country to which it is imported. The General committee turned the proposal down last year, but the BC has decided to send it once more.

They also suggested that FCI approved kennel names should only to be used for litters registered in the stud book. General committee turned this down as well.

Breeding commission has proposed that information regarding variant (coat color and size) should be included in all pedigrees. This has become more important after the general acceptance of mating variants.

Owner's name on the pedigree is needed if it is an export pedigree (NKK, DKK, SKK and FKK do not do it). Breeding commission suggests that the pedigree can be followed by a separate owner document.

Scientific commission has included new members. Kirsi will send the minutes from the last meeting as soon as they are available. Dog well net has been discussed in the Scientific commission and FCI has been urged to contribute practically and economically.

9. Recommendations/suggestions from NKU/VK to NKU/AU

NKU/VK has noticed that NKU/AU turned down the proposal from NKU/VK of a new panel for spinal diseases. The minutes from the NKU/AU meeting denotes it as a "commission" but the VK suggested a new panel – not a new commission. NKU/VK is still firmly convinced of the benefits of a forum for the scrutinizers of spinal diseases. Some countries have only one person evaluating the X-rays for i.e. disc herniation and this is a very vulnerable system. Perhaps it would be possible to merge the evaluations of disc calcifications within a common Nordic panel of spinal scrutinizers.

NKU/VK emphasizes the importance of all NKU countries being represented at the Dog Health Workshop in Dortmund, including Iceland.

NKU/VK suggests putting forward a request to the HD/ED panel asking if the panel will be responsible for maintaining the list of giant breeds and make decisions regarding new breeds. If the HD/ED panel accepts, a request should be send to FKK to pass on the decision-making authority.

NKU/VK also asks for the panel's opinion on whether the minimal age at HD and EAD photo should be the same (i.e. 12 months for both hips and elbows in stead of 12 months for elbows and 18 months for hips).

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The members of NKU/VK discussed the need for guidelines regarding hip and elbow evaluation in chondrodystrophic breeds.

10. Any other business and next meeting

Next meeting will be 4-5. November 2015 in Oslo. NKKs "Forskningsforum hund 2015" will be held Tuesday 3rd of November 2015, and VK's members are of course invited.