



NKU/VK (Scientific Committee) meeting 2019 – Minutes

(Final Minutes, 30.09.2019)

Time	September 19 th (09.00 – 18.30) – 20 th (09.00 – 16.00)
Place	Hotel Vika Atrium, Oslo, Norway
Present	DKK: Britta Sørensen FKK: Katariina Mäki SKK: Helena Skarp Sofia Malm Åke Hedhammar NKK: Maria Kjeldaas Johannessen (secretary) Nina Hansen Kim Bellamy Henriette Sæbø Astrid Indrebø (chairman) Frode Lingaas (day 1)

1. Opening of the meeting (09.00)

- a. The chairman opened the meeting and welcomed the delegates. She informed that statements, proposals to AU as well as the Minutes must be finished in a few days. NKK will prepare the documents and send them for comments and approval to the delegates, who must respond ASP.
- b. Short presentation of the delegates

2. Short presentation of organizational news from the national kennel clubs

3. Minutes and Things-to-do from the last meeting in Finland

- a. Minutes (Appendix 3a)
The minutes from last meeting were approved
- b. Things-to-do (Appendix 3b)
 - “Registration of litters from out-cross projects in the Nordic Kennel Clubs”
See Issue 24
 - EBV: “NKU/VK decides to gather short reports from each country (update the information which has been gathered earlier)”
See Issue 13
 - Deafness in Dalmatians: “Each kennel club will study the policy in their country to report on the next meeting”
See Issue 19 – appendix 19



- Sable x merle
See Issue 25 – appendix 3b
- HD and ED screening: “Previous results from other NKU kennel clubs
Is the owner obliged to report this on the form – if the dog moves to another NKU
country and id x-rayed again for new evaluation?”
See Issue 14 g
- “From which countries do we accept HD and ED results to be recorded as official
results in our database?”
See Issue 14 c – Appendix 14c X 3

4. Decisions from the NKU/AU

- a. Issues from the NKU/AU meeting October 2018 (Appendix 4a)
- b. Issues from the NKU/AU meeting February 2019 (Appendix 4b)

It was informed about the following issues from the two NKU/AU meetings

- i. **Recognitions of new breeds**
See Issue 20 – appendix 20 (4)

- ii. **NKU/VK – breed standard of Samoyed**
Decision of the NKU/AU 24.10.2018: The NKU/AU approves the proposal of the NKU/VK and will send a letter to the FCI Standard Commission.

Proposal from NKU/VK: The breed standard of Samoyed has not been changed at the FCI web-site. VK would be happy if AU could send a reminder to FCI; it is not beneficial for a Nordic breed to have a paragraph in the international breed standard that does not comply with the law in our countries.

- iii. **NKU/VK – mentality group**
From the Minutes of NKU/VK 2018 (issue 4):
NKU/VK was wondering about the current state of the mentality group and was interested to know which issues it had been working with.

From the minutes from NKU/AU 24.10.18 (issue 22):

Decision of the NKU/AU 24.10.2018:

It has been decided in February 2018 that the commission will not be formed. CEOs decided that NKU forms a task force to make an agenda for the future work in spring 2019.

- iv. **Robinow-like syndrome in screw tail breeds**
See Issue 11b – appendix 11b

- v. **Breeding rules and strategies in the NKU countries**
From the NKU/AU Minutes: The summary of the breeding rules and strategies in



the NKU countries was made by Astrid Indrebø and was a task given by the NKU/VD (May 2018).

Decision of the NKU/AU 24.10.2018:

It was decided that the CEOs will work common recommendations to breeding rules and strategies in the NKU countries and use the report made by the Uppsala University of Agricultural Sciences for scientific reasoning to certain rules.

Decision of the NKU/VD 13.02.2019:

For the moment, it is not possible to harmonize the breeding rules because of new animal welfare laws coming in force in Sweden and Finland. The work will continue but will have to wait for the new legislation.

Decision of the NKU/AU 14.02.2019:

The decision of NKU/VD was approved.

Proposal from NKU/VK to NKU/AU: VK will be happy to offer our assistance in this matter.

The next NKU/AU meeting will be held on October 16th 2019 in Copenhagen.

5. Update from each country regarding health issues

RAS

SKK: Project on updating the RAS model. Looking into making it more useful and readable. Some of the breed clubs have statements in RAS that differ from their own breeding rules. SKK is looking into this. Revising of the RAS every 5th year.

FKK: Revising RAS: The ten most important things in the breed should be listed, then five of these issues should be the priority to work with. RAS should be built around this. Now the clubs are more eager trying to fill issues into the model, instead of looking what is most important for the breed. Not changing the model, but changing the thinking. SKK and NKK would like to get a copy of the FKK model.

DKK don't have RAS, don't have the resources.

NKK: Revising RAS has been postponed while we have been waiting on IT resources. Every RAS document has to be accepted by NKK before it can be published. Some of the RAS documents are quite circumstantial; it might be beneficial to make simpler and shorter versions. Also there is a problem that some breeds list serious health problems in the beginning of the RAS, but have no health program to deal with the problems.

BSI (Breed specific instructions regarding exaggeration in pedigree dogs)

The BSI document has been revised, and the new version (second edition) was published in March 2018.



SKK has made a new video; this is a short version (apprx. 7 minutes), and was highly appreciated by the VK.

Mentality reports

SKK informed about the collie investigation: There is a group working with collies and mentality (appointed by the SKK board). Background: Fears in the breed. The group should finish the report at the end of 2019.

There is a lot of interest for BPH in SKK. SKK has a video about BPH; the link will be published on VK Google Drive. BPH is growing in SKK. They don't have central education any more, but has 3 test leaders that will do the education.

When more breeds have more results, estimations of heritability will be worked out. Help in interpreting how the dogs react.

There are projects on how to use EBVs on behaviour (pilot projects). One based on MH, and one on BPH.

Large international interest in BPH. France have contacted SKK, and want to start BPH testing as well. BPH was initially funded by SKK, but now it is owner funded.

DKK: no news

FKK: the theme next year, nothing else is new.

NKK: New mentality program, will report on this under another issue.

6. International activities and conferences

a. FCI

FCI news (reports from FCI Scientific Commission and Breeding Commission – see issue 9 and 10). FCI European commission has arranged a European Health Conference some months ago; as far as we know, none of the NKU kennel clubs were invited or got any information about the conference. Link to the lecture of Tamas Jakkel, president of FCI: <https://www.youtube.com/watch?v=i71YzCmeMIs&fbclid=IwAR2j4hepRrw1G-ZyOInlxNelpLKCYYw1lpw2KVumXpdQBz41nFtCo-SVsas>

VK agreed that the lecture is not helping us working with health issues, because of reactions in the scientific world on how Jakkel interprets data.

b. International Dog Health Workshop 2019 (appendix 6b)

Concept of breeds (from the “goals and strategies document” worked out by the group)

Goals

The primary focus of these recommendations is health and welfare of all dogs.

Long term goals:

- Open studbooks between related breeds and/or breeds with common breeding goals in a controlled way.
- Cross breeding projects should be used when a health or welfare problem can not be solved within breed.
- KCs databases should be open for all dogs



- *Short term goals:*
- Create a positive attitude to the concept of more open studbooks.
- To encourage the development of crossbreeding projects.
- Encourage KCs to record all dogs on a database.

Strategies

- Collaborating with breed clubs and breeders at an early stage.
- FCI Scientific and Standard Commission in cooperation with other kennel clubs should be asked to take on the task to develop guidelines to help kennel clubs and breed clubs with how to proceed with breeding between varieties and breeds.
- Consult and identify breed issues where the previously mentioned guidelines and methodologies should be used.
- Assigning people to actions to be completed after IDHW4:
Working group formed: Everybody in the group and (hopefully) Gregoire Leroy, anyone who want to join.

Genetics (discussed yesterday – see Minutes from the DNA.group)

Extremes and Communication

- The group narrowed the issue to mainly discuss BOAS and communication concerning the issue.
- Focused on the perception of the dogs as healthy.
- The group should work on how should cross-breeding be done, if necessary.

For more information – see dogwellnet.com

The 4th International Dog Health Workshop was a very successful conference! It was informed at the work shop that the 5th IDHW would be arrange by ACK, but at the moment this seems to be unclear.

- c. **Int. Conference of Kennel Clubs (DNA testing), SKK June 2019** (appendix 6c)
It was informed about this conference at the DNA group meeting yesterday – see the Minutes from the DNA-meeting.

- d. **International Working Dog Breeding Conference, Stockholm 2-5 September**
A successful conference. The people present and the speakers were professionals working with different types of working dogs, like guiding dogs for blind and mine-dogs, as well as university employers. The speakers included Frode Lingaas and Åke Hedhammar. There were people from all over the world, and the conference included both practical training of dogs as well as genetics.

- e. **Canine and Feline Genomics conference, Bern, May 2019**
It was informed about this conference at the DNA group meeting yesterday – see the Minutes from the DNA-meeting.



7. Report from the DNA-group

The following statements from the DNA-group were approved by NKU/VK:

DNA-testing and Nordic Biobanking

The extent and complexity of DNA testing was extensively discussed in the DNA-group meeting, Sept. 18th 2019, as well as the NKU/VK the following days. The following statement is proposed by the DNA group, and supported by the NKU/VK:

Statement: During the last years, the Nordic kennel clubs have been approached by various commercial interests regarding sampling, storing and analysis of DNA and tissues, as well as collection of phenotypical data. The NKU DNA group, composed of scientists as well as kennel club staff, have recognized the complexity of the issue, and want to emphasize the importance for the kennel clubs to maintain the ownership of these resources. The kennel clubs should be cautious and aim to protect the long-term interest of the dogs, owners and breeders. They should ensure that the DNA, tissues and phenotypical data are handled in a way that benefits these stakeholders. They should also avoid unnecessary cost for them. Relying on gene tests/storage of DNA from commercial interests have the risk of introducing unnecessary cost for dog owners.

It is also crucial to enable the samples and data for research. In the Nordic countries there is a long tradition of collaboration between the kennel clubs and universities, including the sharing of samples on specific diseases/breeds/projects for the benefit of the dogs and their owners. Universities will also ensure impartial quality control of disease diagnostics/classification using a limited number of highly qualified specialist/clinician/pathologists which is necessary in most projects. Too much commercial interest could hamper efficient sharing of samples across borders and have a negative effect on research for the benefit of dog welfare.

DNA profiling (DNA “fingerprinting”, parental testing)

Breeders, dog owners as well as breed clubs and kennel clubs have during the last years been contacted by various commercial interests that offer DNA profiling. A DNA profile is a genetic “fingerprint” (genetic ID) that is unique for every dog. The Nordic kennel clubs somewhat have different routines regarding registration of DNA profiling (parental testing).

Statement: In general, there are currently more cost than benefit to perform mandatory DNA profiling (parental testing). The NKU/DNA group agrees that DNA profiling on a routine basis should not be mandatory. This statement is supported by the NKU/VK.

DNA test for diseases/conditions with unclear inheritance

In the DNA and VK meetings in November 2014, the policy regarding the use of genetic tests in dog breeding was discussed. It resulted in the document “Information and policy from the Scientific Committee of the Nordic Kennel Union (NKU/VK) regarding the use of genetic tests in dog breeding». Concerning diseases with unclear inheritance, the following statement was worked out: *The general approach of NKU/VK is to advice against the use of genetic tests for*



conditions where the inheritance is unclear. Tests for diseases that are influenced by many genes should be applied only in cases where evidence based on scientific publications has established that the mutation or mutations cause a significant and defined risk of disease, and provided that the condition is of clinical relevance in the breed concerned.

In the last years, the laboratories offer more and more tests where the inheritance is unclear. The result of a DNA-test for one gene for a disease that are influenced by many genes, might mislead the breeders to believe that a dog is affected or free of a certain disease; some dogs diagnosed as “free” of a certain gene might actually get the disease, while some dogs diagnosed as “affected” might never develop the disease.

At the present meeting, NKU/VK made the following statement:

Statement: The general approach of NKU/DNA-group and NKU/VK is to advise against the use of genetic tests for conditions where the inheritance is unclear. Tests for diseases that are influenced by many genes should be applied only in cases where evidence based on scientific publications has established that the mutation or mutations cause a considerable and defined risk of disease, and provided that the condition is of clinical relevance in the breed concerned. If risk tests are recorded in the databases, the results should not be recorded as “affected” or “free”, but rather a grade/letter associated with a relative risk estimate.

Laboratories approved for DNA-testing in the Nordic Kennel Clubs

The Nordic kennel clubs register in their databases results of DNA-tests for important diseases/conditions in the individual breed, but only from laboratories approved by the kennel clubs based on quality verification. An updated list from all NKU-countries, of tests, breeds and laboratories, is presented each year at the NKU/DNA-meeting. IPFD (International Partnership for Dogs), has a harmonization project which aims to develop more specific quality indicators for the laboratories.

Statement: The Nordic kennel clubs approve of the IPFD harmonization project and value this as important for developing more specific quality indicators for laboratories. However, the Nordic kennel clubs may have additional requirements. The quality verification of laboratories is time consuming, and the Nordic kennel clubs may therefore reject new laboratories according to lack of recourses. If a laboratory is approved for one test in one of the Nordic countries, as a general principle, the lab should also be approved for this test in the other Nordic countries, if applicable.

8. Report from the HD/ED panel

Marte Ottesen, HD scrutinizer since 2008 and member of the x-ray panel, informed of the procedures in the NKU x-ray panel concerning the quality control (harmonizing) of HD and ED diagnosis. The x-rays that are discussed, is mainly difficult cases (“borderliners”). In their meetings, the panelists also discuss news from the NKC as well as new literature; they have their own scientific “library”.



Chondrodystrophic breeds (elbows): The list of breeds which have (or might have) chondrodystrophy is getting longer because of the new genetic tests. VK would like to have an updated list of breeds that should be excluded from scrutinizing.

Minutes from NKU x-ray panel

In the VK meeting in March 2018 (issue 13 in the last VK-minutes), VK asked the x-ray panel to send us the Minutes from their meeting, but so far we have not got any Minutes. We have been informed that the panel would like to keep their minutes as their own "arbeidsdokument" which should not be distributed.

Decision: VK asks the X-ray panel to send us their "Faktaruta", which is now updated and translated to English. Marte will send the document to Maria (secretary of NKU/VK), who will forward it to NKU/VK and the NKU Kennel Clubs.

International FCI meeting for HD scrutinizers

For many years, there has been much discussion among dog owners, breeders and breed clubs, also outside the Nordic countries, concerning the diagnosis of official results of hip dysplasia. Several years ago, Kirsi Sainio committed on behalf of the FKK to organize a meeting for the FCI hip dysplasia scrutinizers, in order to harmonize the scrutinizing and diagnosis within FCI. This was supposed to be a follow up of the successful meeting in Copenhagen March 18, 2006. So far, there is still not set a date for this meeting.

Each country should also talk with their CEOs concerning this matter. It is important to state that this is a meeting for the panelist, not a training session.

Proposal to NKU/AU: It is of major importance to harmonize the routine and criteria for diagnosis of hip dysplasia within the FCI. The long planned international FCI meeting for HD scrutinizers should be arranged as soon as possible. It is important that the meeting is hosted by one of the NKU countries. The VK propose that FKK will take action and arrange the meeting as promised, and that the Nordic X-ray panel is appointed to be in charge of the program.

9. Report from the FCI Scientific Commission

NKU/VK deeply regrets that there is no report from the Scientific Commission. VK is kindly asking Kirsi to send this report to the secretary of NKU/VK (Maria Kjeldaas Johannessen), who will distribute it.

10. Report from the FCI Breeding Commission (Appendix 10 x 2)

New president: Janne Orro, Estonia (secretary for the commission May 2016 - May 2019)

New vice-president: Nikola Smolic, Croatia

New secretary: Inga Cerbule, Latvia

Guidelines regarding criteria for limited registration

Based on a suggestion from Slovakia in 2014, it was decided that the commission should make a document with guidelines regarding criteria for limited registration, to be published on fci.be. The



guidelines were approved by the commission in 2015, but was turned down by the General Committee (GC); “the general feeling of GC is that the guidelines cannot be considered to be “global” as it would be impossible to implement them in all the FCI NCO” (Zagreb, November 2015).

BUT – in 2018 the GC asked the BC for guidelines for limited registration, but to make it shorter than the last proposal. BC removed the examples from the document, and it was approved by GC to be published on fci.be. In 2019 BC was informed that the guidelines were ready to be published very soon – but they are still not there....

BOAS

The issue was discussed, and an update was given from each country. “FCI needs to say: We breed dogs that are beautiful AND healthy”. The kennel clubs were asked to make a summary of what they are doing in different countries to be presented at Dog Health Work Shop in London 2019.

Nomenclature of coat colours

There is a need for standardized nomenclature of coat colours, as it is required to write coat colour in pedigrees. This issue of standardization based on genetics, was sent to GC and forwarded to Scientific Commission some years ago, but there is no response so far. There was a proposal that in the breed standard and the pedigrees the traditional nomenclature can continue to be used, while adding the scientific accurate term in “brackets”.

Some BC members volunteered to make a working group to develop a list of coat colours by their respective FCI groups, in order to start the work of standardization.

Proposal to the GC: Coat colours on FCI Export Pedigrees has to be recorded in one of the four FCI languages.

HD screening results seem to be worse in Scandinavia: are the requirements harder?

Scandinavian KCs have a long tradition of co-operation and information sharing in the areas dog health and preventative testing. It is unlikely that dog health is worse in Scandinavia, rather that testing and information sharing is more extensive.

Registering FCI litters in a country different from the country of birth

Proposal: Include the text from the new FCI Standing Orders (in Latin in the proposal) into FCI Breeding Rules Art 18:

A litter must be registered with the studbook of the country where the owner of the bitch has his/her legal residence the Member or Contract Partner of the country where its breeder has his legal residence and the litter was born. *Exceptions can be made by mutual agreement between the Members or Contract Partners involved.*

Recognition of a ridgeless variant of the Ridgeback breeds: Rhodesian ridgeback and Thai ridgeback

Background: BC made a proposal to GC in 2010/11 concerning “*Approval in breed standards of coat, colours and anatomical features that it genetically impossible to avoid in order to breed what is accepted in the breed standard*”. Rhodesian and Thai ridgeback was included, as there is an increased risk of dermoid sinus in dogs homozygote for the ridge gene. Dermoid sinus has not been seen in ridgeless dogs.

There was a lot, sometimes angry, discussion; some of the delegates were strongly against recognition of ridgeless dogs as a variety of the ridgebacks.



Decision: The issue has been sent forward from the GC to the Scientific Commission some years ago, and is no longer an issue for further discussion in the Breeding Commission.

Artificial insemination, ownership of frozen semen and authorized storage

International Breeding Rules of the FCI chapter Artificial Insemination has been discussed in BC earlier meetings. BC decided to propose to GC to add the following text:

Proposed extra text:

- The stud dog itself as well as his sperm are both legally seen as a property. When collecting semen for processing, the ownership of the semen needs to be specified by a written document. The document should also state the date of collection, the doses of sperm, identification of the doses, place of storage and identification of the stud dog.
- It is strongly advised to make a DNA profile from every dog of which semen is stored.
- When the stud dog is sold or dog's breeding rights are transferred, the dog owner must provide the information about the already collected frozen semen to the other part.
- The semen itself may be the subject of a selling contract, or it may be sold together with the stud dog. The precise arrangements should be contracted between the parties.
- The semen can only be used if the national rules for mating are fulfilled, especially securing that the semen may only be used for bitches registered in the FCI recognized studbooks.
- The owner of the semen is entitled to sign a stud service certificate.
- The owner of the semen must provide the information about the date of semen collection, identification of the doses, place of storage and identification of the stud dog.

International Breeding Rules

Proposal to the GC: Article 1. FCI International Breeding rules (new proposed text is in bold letters):
Point 3

Only functionally and clinically healthy dogs, with breed typical conformation, should be used for breeding; i.e. to only use dogs that do not suffer from any serious inherited disease or functional disabilities. Dogs with eliminating faults such as e.g., **but not limited to**, unsound temperament, congenital or inherited deafness or blindness, cleft palate, substantial dental defects or jaw anomalies, ~~PRA~~, epilepsy, cryptorchidism, ~~monorchidism~~, albinism, improper coat colors or diagnosed severe hip **or elbow dysplasia or diagnosed as severe of other screening tests on hereditary diseases**, may not be bred.

New point 4:

It is not beneficial for healthy dog population to rule out too many dogs from breeding; the goal is healthy offspring. Results from DNA tests for inherited diseases should be used to avoid breeding diseased dogs. Dogs shown to be carriers of a monogenic recessively inherited severe disease should only be bred to a dog that is proven not to carry the allele for the same disease.

Point 5 (old point 4)

With regard to surfacing hereditary defects, such as but not limited to hip or ~~PRA~~-**elbow dysplasia or inherited eye diseases**, the FCI member countries and contract partners are obliged to record affected animals, combat these defects in a methodical manner, continuously record their development and report to the FCI on this matter when requested.

If a DNA test is performed, the identification (chip or tattoo) of the dog must be checked and certified by the veterinarian who collects the sample as in the case of any other health protocol; the test result certificate from the laboratory must include the dog's identification.



Dogs with incorrect color, such as parti-color Poodles, white Boxers, etc.

Mating with American Pedigree dogs (ancestors with incorrect colors), how to handle these issues. While the countries of origin of a breed do not accept these colors, and they are often a disqualifying fault, in other countries these dogs are being shown and given good evaluations (Excellent). In Poodles – the imported dog is correct color (black), but the ancestors are black-and-white.

Proposal: BC advises to recognize the AKC pedigree if the dog itself is correct color, regardless the incorrect color of the ancestors. If any offspring of this imported dog are incorrect color, the offspring can receive Limited registration.

11. Brachycephalic health issues (SKK, NKK)

a. General work – update

Questions from Sweden for the other Nordic countries regarding health programs for BOAS (Appendix 11ad)

- **FKK:** The vets that do the grading are supposed to do it the same way and according to Liu et al.: <https://www.kennelliitto.fi/en/forms/assessment-nostril-stenosis>
- **NKK** has started BOAS grading courses. First course was in August 2019, with Jane Ladlow from the Cambridge group. Two Norwegian veterinarians that has studied under Ladlow in Cambridge will be doing the next courses. It might be possible that these vets can do courses also in the other NKU-countries. Concerning nostril, flexibility of the nostrils should be taken into account.
- **FKK** also have BOAS gradings, modified from Liu et al.: <https://www.kennelliitto.fi/en/forms/boas-clinical-assessment>
 - Price for examination in the health program for BOAS: 75-90 euros/dog (including the hall rental) in Finland. Price is set by organizer.
- **SKK:** price is set by organizer . SKK does this as group happenings.
- SKK and FKK are using the “belastnings-test” and examine pulse and temperature. 1 km in 12 min. FKK changes the time for Pugs and French bulldogs in the beginning of 2020. The new time is 11 min for these breeds.
- **DKK** will start a BOAS-grading (Cambridge) within a year.

b. **Further development regarding the Robinow like syndrome** (NKK, SKK)

- Report from NKU/VK, May 2019 (Appendix 11b)
- SKK is awaiting NKU/AUs decision. Both SKK and FKK har done genotyping the screw tail breeds. All of the French and English bulldogs were homozygously affected. The gene was also found in some American staffordshire bull terriers, Staffordshire bullterriers and Dogue de Bordeaux.
- SKK has done some genotyping. DISHVELLE 2 (dvl2). Homozygous for the bulldogs – nit found in the pug (as expected). Maybe the Continental bulldogs and Old English bulldogs should be checked as well?



Proposal to NKU/AU: Based on NKU/VK's work on Robinow-like syndrome requested from the NKU/AU, the NKU/VK is awaiting instructions from the NKU/AU on how to implement the current knowledge regarding Robinow-like syndrome in breeding strategies.

c. ***New health program for BOAS, update from SKK*** (Appendix 11c x 2)

Just launched it. The first test was in the end of august. The process has taken many years. There has been meeting with the breed clubs. In the beginning the breed clubs wanted this to be mandatory.

d. ***BOAS-grading and registering in NKKs DogWeb*** (NKK) (Appendix 11d)

Cambridge system. All information available on www.nkk.no

e. ***Evaluation of breed standards in the FCI*** (Update from last year) (SKK)

- FKK informs that there has been a proposal from the FCI Scientific Commission to the FCI General Committee. But the GC answered that they could not do this, because it would change the breeds.
- The judges have to be taught how to judge in accordance with the standards to avoid exaggerations.
- SKK has decided that only Nordic judges can judge the brachycephalic breeds; exceptions can be made.

f. ***The Nordic BOAS inventory*** – update (Appendix 11f x 4)

There are some preliminary results from the project, including phenotypic description and collecting material for DNA analyzes. The project in the different countries are done in cooperation with the universities. See the appendix' for update of students projects.

Cambridge is happy to share their materials; so far they have found some genotypic variation in genes associated with BOAS.

Hannes Lohi's group in Finland has found very little genotypic variation.

g. ***Registration of dogs that had surgery and/or are dead due to BOAS, update*** (SKK) (Appendix 11g x 2)

It is difficult to get the vets to report on the forms concerning BOAS surgery.

h. ***Brachy conferences autumn 2019*** (SKK)

SKK informed about the Jugde's conferences for brachycephalic breeds.

i. SKK informed that there are plans to start at ***BOAS center*** in Stockholm. Will have further money to run this. But they are lacking a veterinarian to take the lead.

VK decided to make a proposal to AU concerning screening for BOAS:

Proposal to NKU/AU: There are a lot of good efforts in our Nordic kennel clubs when it comes to screening programs for BOAS. To be successful, it would be beneficial to harmonize the screening programs within NKU when possible. In order to do so, additional resources and involvement of international BOAS researchers are needed.



12. Extreme conformation (SKK)

SKK has made a new video about BSI (Appendix 11a) which VK appreciated very much (see 11a)

13. Index (SKK, NKK)

a. Update from each country (Appendix 13a x 2)

SKK: no new breeds this year, but from 2020: Breton and Doberman.

NKK: two new breeds in 2019: Staffordshire bullterrier and White Swiss shepherd dog (hvit gjeterhund). Ultimo 2018 Spanish waterdog was added. Frode should be in the index group for NKK (Maria: Please update the list). There has been a lot of washing of data sets. A lot better data set today than three years ago. Less complaints about the EBVs now than earlier.

FKK: No changes.

DKK: No changes

b. Report from pilot study for Norwegian/Swedish index

Sofia/Frode: The aim is to be better able to compare Norwegian and Swedish dogs and better genetic evaluation by merging the Norwegian and Swedish data sets. There have been some meetings about what to look at. It is not very straight forward, but can see how the ranking is changing, stability over time, etc. Currently, we are weighing A, B, Cs and Ds differently in the index. An application for funding a pilot project for a few selected breeds has been made. Potential pilot breeds: Norwegian elkhound gray, Danish/Swedish farmdog, Finsk lapphund, Bernese mountain dogs. Also Tollers and Labradors?

14. Hip and Elbow Dysplasia

a. *Information from the Norwegian and Swedish HD-groups* (NKK, SKK) (Appendix 14a x 4)

The reports were finished in spring, and can be found on SKK and NKK web pages. In both countries, the genetic trend is positive for the studied breeds. In SKK, there is a decrease in both E and D; in NKK there is a decrease in E while D seems to be almost stable. The frequency of C seems to be increasing in both countries.

b. *New IT systems* (SKK, NKK)

NKK: New IT solution coming! As before, owners will buy a form online before taking the dog to the vet for X-rays, but don't have to choose the vet in advance. The vet gets the form from the net, and the x-rays will be sent online from the veterinarians (not on CD any more).

SKK: Have had their IT program for x-rays sent from a vet clinic to the SKK office about 8 years that does not always function as well as expected. Has been working on a new system for 2 years. Owners will have to buy a form before x-raying. Don't have to choose what vets they will go to when buying the form. The scrutinizers will only see the age, sex and breed. New for ED: Tick off if they can see the actual disease. This will not be published in the open database.. There



will also be tick boxes for transitional vertebrae as well as for hip subluxations (laxity) for dogs with grade C or worse.

The database will show results for both hips and both elbows separately and show the name of the scrutinizer.

SKK also publish statistics on reevaluation and appeals (on the breed level).

SKK stores x-rays for 10 years.

DKK will do some adjustments the coming years.

FKK already has had this system for a long while.

c. Recognition of "foreign" HD results, and FCI rules

From which countries do the NKU kennel clubs accept HD and ED results to be recorded as official results in our database? (appendix 3b)

SKK: Depends on the level of the health program of the specific breed. If A and B is allowed for breeding, the demands are higher than for other breeds. FCI certificate stated that FCI procedure should be followed. For German shepherd and Rottweiler, results from the official breed clubs Germany will be recorded. In breeds that only need a result (not A or B): Foreign results are accepted for breeding, but will not be included in the database or recorded at the pedigree.

DKK: Results from OFA are also included in the BVS. Register results from every country in Europe, as long as they have a FCI certificate. In DKKs database you can see that if a result are from a foreign country.

FKK: Record foreign results in the database, but mark it as a foreign results. Have no list of countries where we accept the result.

NKK: Results from Belgium, Denmark, Finland, France, Holland, Island, Switzerland, Sweden and Germany are included in the database. Other countries: Have to have an FCI-certificate.

Country of X-raying and scrutinizing

A dog should be x-rayed and diagnosed in the country were the owner has his legal residence and the dog is registered. Is this still valid in the NKU-countries? Not in DKK, but in the other countries. In DKK, the owner can bring the dogs to another country, and X-ray and get it scrutinized there. This will, however, be marked as a foreign result.

SKK + FKK: You can x-ray the dog wherever you like, but you have to get the dog scrutinized in SKK/FKK.

In FKK you can print your X-ray certificate from the web (followed by a description)

d. International seminar on HD, Helsinki (NKK, SKK)

See issue 8

e. New video about ED (SKK) (appendix 14e)

The video was made last year, can be linked from skk.se.



- f. **ED: Experiences after the harmonization of scrutinizing-criteria?** (NKK) (Appendix 14f)
NKK, FKK and DKK did not have to change.
- g. **Previous screening results from other NKU kennel clubs**
Is the owner obliged to report on the form that follows the x-rays that the dog has previous results from another NKU kennel club – if the dog moves to another NKU and are x-rayed again in this country for new evaluation?

SKK, FKK and DKK: If the owner fails to tell us that the dog has a result in a different country, then the new result will be removed. This should also be recorded at the NKK form, but seems to be missing from the form. Will be included in the new system.

Other discussion – NKU X-ray panel/appeal panel

The NKU x-ray panel is doing an excellent job to ensure the quality of hip and elbow diagnosis within the NKU-countries. Still, there are big discussions and some discontent among breed clubs, breeders and dog owners concerning the diagnosis. Based on the HD projects in NKK and SKK, there is a wish for more transparency concerning the results from the appeal panel.

Proposal to NKU/AU: NKU/VK suggests that the x-ray panel will receive the statistics on all the appeals, as well as the individual results from the different countries on each case. If there are big differences between the results from the appeal panel, the x-ray panel should take a closer look at these x-rays in order to harmonize the scrutinizers. The x-ray panel should also make its own statistics based on the appeal cases and follow up on any trends or tendencies that might be perceived. VK suggests that the national kennel clubs must send the results of last year's appeals to the secretary of the NKU/VK by the end of January. Both the original diagnosis and the appeal diagnosis from each country must be included. The secretary will then forward the results to the X-ray panel in time for their February meeting. The first year of this arrangement (January 2020) data from the previous two years must be sent to the secretary.

15. Stifle joints

- a. **Plans to improve the diagnostics of patellar luxation** (FKK) (Appendix 15a)
FKK: Big variation between the vets. A Master thesis states that the diagnostics could be improved, but there is no plans on changing yet. In the FKK, certificate given to a dog less than 3 years old is valid only for two years. Certificate given to a 3-year-old dog is valid life-long.

SKK: A paper based on a master thesis is published in the Veterinary Journal: Heritability of patellar luxation in the Chihuahua and Bichon Frise breeds of dogs and effectiveness of a Swedish screening programme (K. Nilsson, S. Zanders, S. Malm).



They also saw that the older, higher chance of PL. Maybe there should not be life-long certificates? SKK did not look into the different vets diagnosis if they were close in time. Maybe not enough dogs with the higher grades (not enough variation).

The NKU kennel clubs should report on this and come back to it for the next meeting (should be put on the "things-to-do-list").

b. Stifle joints in boxers (SKK)

SKK has stopped this issue at the health program level 3 in April 2019, and stopped scrutinizing in June 2019. **NKK** stopped scrutinizing stifle joint of Boxers last year; the scrutinizing has only been done in NKK because it was mandatory in SKK to have a stifle joint result if Norwegian Boxers were used for breeding in Sweden.

16. IVDD (intervertebral disk disease) in Dachshunds (NKK,SKK)

a. New publications (SKK) (Appendix 16a x 2)

Stigen et al 2019 and Batcher 2019 on phenotypic effects of FGF4

SKK: Discussions between SKK and breed club on the matter.

NKK: Some (few) people in the breed club are very eager on this, while most of the breeders are against. We have a NKK scrutinizer (Øyvind Stigen). Only about 6% of the dogs are scrutinized.

b. Harmonizing Nordic routines for scores and standards

Decision of the NKU/VD 13.02.19 (DKK) - Gravhund (dachshund/tax), back x-ray recommendation. *NKU/VD decided to ask the VK to look into the matter to make Nordic cooperation regarding routines for score and standards.*

There are different breeding programs concerning IVDD in dachshund in NKU kennel clubs. In DKK it is mandatory to x-ray for IVDD, and in NKK and FKK there is a voluntary program. SKK does not yet have a screening program for this disease; Swedish dog owners who want an IVDD diagnose send the x-rays to NKK. To our knowledge, DKK, NKK and FKK use the same criteria to diagnose the x-rays. The number of dogs that are x-rayed is rather low, and VK suggests that there could be a common group of scrutinizers for the whole NKU, and if possible a common health program.

Decision: NKU/VK decided to set down a working group who will study the issue of screening for IVDD closer, and make proposals on how to handle this matter within the NKU. Members of the group: Sofia Malm (SKK), Katariina Mäki (FKK), Britta Sørensen (DKK) and Maria Kjeldaas Johannessen (NKK). The group is requested to report back to NKU/AU prior to mid January 2020.

17. Harmonizing practices regarding "inmønstring" in Nordic breeds - Lapponian Herders (FKK)

SKK: Inmønstring: Show, 2 judges, evaluates if the dogs look like the breed. Now, not only looks, health should also be included.



NKK: Issue recently. New system in NKK. The new rules will be sent to FKK (see last paragraph)

If a kennel club wants to “innmønstre” in a Nordic breed, the country of origin should be contacted.

Decision: Each country will look at their rules, and send these to FKK (Katariina), who will make a summary.

18. Registration of health results (SKK, NKK)

a. Dilated cardiomyopathy (DCM) in Dobermanns (SKK) (Appendix 18a)

In 2010, a German study was published, where a large number of Dobermanns was followed over a period of years. The prevalence of DCM in Dobermanns was 58% at the age of seven years.

SKK: New health program from Jan. 1st. Halter ECK for 24 hrs. Will also register a separate code for euthanasia or death. Age limit, level 1 program.

FKK has a health program as well. 5 min ECK mandatory.

b. Auscultation in Cavalier King Charles Spaniel (NKK) (Appendix 18b)

In the spring of 2019, NKK started a screening program for heart disease in Cavalier King Charles Spaniel. The program was initiated the Norwegian Cavalier Club and has been developed in cooperation with the Norwegian Association for Veterinary Cardiology. The screening program is based on auscultation, and detection of heart murmurs. The dogs have to be 3 years or more to get an official result registered in NKK's database DogWeb. Both puncta maxima and the severity of the murmur are registered (mild= grade I-II, moderate= grade III, Severe= grade IV-VI). A new auscultation can be done minimum 2 weeks after the former examination. All examination results are visible in DogWeb, the latest result is counting. The certificate is valid one year. Members of the Norwegian Association for Veterinary Cardiology, specialists in veterinary medicine (Norwegian specialists or European Diplomates) are directly qualified to participate in the program. Veterinarians have had additional courses in cardiology, can apply. As of September 2019, 52 veterinarians are approved. Some of these are working at more than one clinic. We have good coverage of vets throughout the country. The breed club has developed breeding recommendations based on both the heart status of the breeding dogs, and their parents (se attachment). The breed club has signaled that they want an auscultation certificate of the sire and dam to be mandatory for registering puppies in NKK. NKK is awaiting an application from the breed club (deadline is not out).

SKK also have set the minimum age to 3 years. All small animal specialists can do the examination.

FKK has a screening program for Cavaliers with mandatory auscultation. If there is a murmur, the heart has to be examined with ultrasound in order for the dog to fulfil the



breeding requirements. All small animal specialists can do the examination, as well as vets who have made at least 20 auscultations (with at least 10 dogs with murmurs) in surveillance of a veterinarian approved earlier by the FKK). Other breeds with mandatory heart examinations for breeding: Boxer, Dobermann, Great Dane, Newfoundland, Chihuahua, Broholmer.)

19. BAER-testing* in Dalmatians (NKK)

Deafness in Dalmatians – each kennel club will study the policy in their country to report on the next meeting (From things-to-do-list – appendix 3b)

SKK: Policy from Breed club: Recommend avoiding combination of 2 unilateral hearing dogs. To get the litters published on the list, the parents should be BAER tested.

Unilateral hearing dogs are not a problem with the dog owner. Experienced breeders can easily detect the deaf puppies; these are taken away. Estimated frequency is 3-5%.

NKK: The Norwegian Dalmatian Club wants the opportunity to BAER-test Norwegian dogs. No Norwegian veterinarians offer this service. However, Swedish veterinarians (a car trip from Norway) do. Do the other NKU countries have any thoughts about the accuracy of the BAER test? Have you considered approval of specially trained veterinarians?

SKK has a resting group for harmonizing. Should be on the things-to-do-list next year.

FKK: Finland has a neurology working group. Veterinarians with European or American “spesialiserings-eksamen” or with good knowledge in neurology. They have made a protocol. The puppies must be at least 35 days. If the puppy is younger than 3 months, the result can be changed until 6 months of age.

DKK: One veterinarian has done these tests for more than 20 years, and have trained the others. At present, there are 4 veterinarians that are doing this test, none of them are at the university. In DKK, most Dalmatian puppies are BEAR-tested before leaving the breeder.

**BAER: Brainstem Auditory Evoked Response, a test of the dog’s ability to hear.*

20. Breeds and varieties/recognition of new breeds (SKK)

a. *Miniature American Shepherd* (MAS)

Previous proposal from NKU/VK: This breed should be accepted as a variety of Australian shepherd. The proposal was turned down by AU, and the breeds is now recognized in NKU as a separate breed. After a while, the breed club applied to SKK that they wanted to cross breed with Australian shepherd. SKK now permit to cross in Australian shepherd to the miniature breed.

DKK and NKK do not interbreed.

b. *New routines for recognition of new breeds in Sweden*

SKK has a working group that is working on this. They have made a suggestion to the SKK board, but the board has not discussed it yet.



c. Recognition of new breeds – from the NKU/AU-meetings

Decision of the NKU/AU 24.10.2018: If the non-recognized FCI breed is already recognized by an FCI country or a non-FCI member country, it can be recognized by any of the NKU countries. The country in question informs other NKU countries in NKU/AU meeting about the decision to recognize the breed and other countries may accept the breed or not.

The VK discussed the matter, and agreed to send the following statement to NKU/AU:

Statement: NKU/VK would like to stress the expressed view from March 2018 that our general opinion is that the negative effects of small populations should be taken into consideration when recognizing new breeds. The first choice should always be considering the new breed as a variety of an existing breed or permitting crossbreeding with related breeds. When new breeds (non-FCI recognized breeds) are recognized by NKU/AU on national basis, crossing with closely related breeds should be considered.

21. Gonioscopy in Norway (NKK) (Appendix 21)

Gonioscopy is an examination where the veterinarian investigates the pectinate ligaments of the eye. The width of the iridocorneal angle (ICA) can be classified as narrow or closed (graded as free, mild, moderate or severe). Only authorized eye specialists can register gonioscopy results into our database (DogWeb). The Norwegian Veterinary Association (Norwegian abbreviation: DNV) is responsible for the education and authorization of these eye examiners. The DNV collaborates with the Nordic Eye Examination Committee (NEEC) regarding the authorization.

The breeding council for Samoyed dogs has detected a worryingly divergence between diagnoses from gonioscopy exams of the same dog, within a short time span, when the exams are done by different veterinarians. At one occasion, five Samoyed dogs were re-examined by one of Norway's two ECVO Diplomates, only a short time after they had been diagnosed by other eye specialists. For several of the dogs, there was a divergence between the two diagnoses *from free to affected-severe*. According to the breeding council for Samoyed, a similar divergence has been noted for Siberian Huskies. As far as NKK has been told (both from the breed club and the European diplomate) a similar situation has been detected in Denmark, where a handful of Samoyeds have been re-examined shortly after the initial gonioscopy. Both the breed council for Samoyed and NKK have been in contact NSVO, the interest group for eye examiners. NSVO have the last years had two workshops with gonioscopy training, and the eye examiners have been given the opportunity to make reservations against performing gonioscopy when doing the standard eye examinations. Only one veterinarian made reservations. However, he is still performing gonioscopy. NKKs Sunnhetsutvalg (SU) wrote a letter to DNV in May this year, asking for a thorough investigation of the quality of the gonioscopy exams, and actions to secure a high quality. SU also wrote a letter to all the breed clubs having gonioscopy as a recommended



examination for breeding dogs, with the following advice until DNV made proper actions: For dogs regularly used for breeding, or for dogs where breeders want a quality assurance of the dog's former gonioscopy results, a new gonioscopy examination is recommended. This examination should be performed by an ECVO-approved eye examiner who has a high number of quality assured gonioscopy examinations, for example a European diplomate.

Decision: NKU/VK sees a strong need for secure diagnosis of gonioscopy results. We should bring the issue to the Nordic Eye Panel. The NKU/VK secretary (Maria) will bring the issue to the head of the Norwegian Eye Panel and ask for a discussion at the Nordic Eye Panel Meeting

22. New animal welfare legislation in Sweden (SKK)

Follow up reports from last meeting

SKK: The new law is valid since April 2019. It is not much that affect the kennel clubs, but some issues concerning dog breeding is included in the law. There will probably be more precise formulations about dog breeding when the regulations based on the law is finished.

FKK: Similar happenings are expected as in the Netherlands. The Food Safety Department has ordered a report on most important issues in dog breeding. FKK has been involved through a researcher in the kennel club, Katariina Mäki. She took a leave from FKK and did this work as a researcher employed by the Natural Resources Centre, talked to the vet specialists, etc. The report includes more than eye problems and BOAS and is mostly concentrating on exaggerated features.

23. Registration of smuggled dogs/dogs not meeting the import rules of our countries (NKK)

If you randomly discover that the import regulations have been violated, do you register the dog or not?

DKK: Has seen this in approximately 10 dogs a year. For a dog coming from outside EU/EØS to be registered in DKK, the owner has to submit a copy of the passport as a proof that it has been titer tested for rabies. The Danish law says DKK can't register dogs who are not imported illegally. If the papers are not OK, it will be sent back to the owner who has to get a permission from the authorities to get the dogs registered. Passport can not be from a different country than where the dog is registered.

SKK: Demands passport from EU. Specific statement regarding dogs from Serbia: not allowed to have a pedigree from Serbia and a passport from a different country. SKK works on the issue in "Samverkansgruppen för hundvälfärd" and campaigns on not buying smuggled dogs .

FKK: Don't have rules for checking import papers, but if they find out something's wrong, they contact the Food Safety Authority.

NKK: Have no rules or routines concerning this



24. Registration of litters from outcross-projects in NKU

(from «things-to-do-list» and Minutes from NKU/AU15.02.18)

Decision NKU/AU 15.02.2018 concerning outcross projects in Nordic breeds:

- The breeds' country of origin designs the outcross project, set minimum requirements (e.g. health tests) for candidate dogs and approve each mating
- A breeder that wish to conduct an outcross must first apply to the national kennel club. The national kennel club decides if the combination is approved or not
- When the crossbreeding is accepted, the national kennel club of the breed will be informed
- It is up to the Kennel Clubs to decide how to register the litter under their national registration rules
- All the Nordic Kennel Clubs accept the registered litters which are done under these crossbreeding projects

NKK: There are two «main lines» of outcross projects:

1. Crossing closely related breeds

NKK: Crossing between the 3 Norwegian hounds (haldensstøver, hygenhund and dunker, since early 90s)

- i. The breeder asks the breed club for permission about a specific first generation crossing
- ii. The offspring of the first generation are registered with "X" prior to the registration number (X-45673/15)
- iii. As a main rule, the puppies are registered as the same breed as the mother (exceptions can be done by the breed clubs)
- iv. 2. generation gets an ordinary registration number

SKK: Have crossbreeding projects with some of the Stövar-breeds (Swedish Hounds) and register the offspring in a side register. They had done too few crosses, so the genetic effect is quite small. SKK has proposed to make one Swedish stövare, and recognize different varieties of this breed. This was not accepted. The breed club has a new project on how to increase the genetic diversity on a long term basis. The SKK is involved in the project.

How can we address the issue that FCI says that you should not have a different breed in the studbook om one individual? Beneficial for breeders and clubs to have full pedigrees when doing cross breeding projects and/or open studbooks.

Decision: "The Concept of breed group" from the Dog Health Workshop should take on the issue, and work on FCI on how to do this. Also the Nordic representatives of the FCI Breeding Commission should discuss this and make a proposal to change the FCI rules.

2. Outcross projects with unrelated breeds

NKK: The Norwegian lundehund project



- **Very** small genetic diversity; in the 60's only one female, her brother, two half-brothers and one more (or less) unrelated male existed.
- Main problems: Intestinal lymphangiectasi, reproduction problems
- Out-cross project started some years ago with Norwegian buhund, Norrbottenspets and Icelandic sheepdog.
- All combinations must be approved by the breed club and NKK
 - Health results are of uttermost importance
- The puppies are registered in X-register in NKK and managed as a "side-population"
 - Example: If the mother is buhund: B1 NO50506/14(X1); X1 means 1. generation, X2 will be second generation etc
 - The puppies undergoes strict evaluation concerning health, exterior and behaviour
 - Selected individuals from the x-register are crossed with lundehund, and create new generations in the x-register
- Registration of offspring into the ordinary register can only be done after evaluation of exterior, health and temperament; must be accepted by the breed club and NKK.

None of the other NKU KCs have outcross projects with unrelated breeds crossed with their own national breeds.

Suggestion from NKK:

- The kennel club (in cooperation with the breed club) of the country of origin, needs full control of such outcross projects with national breeds
- If not, the breed club and the breeders will not cooperate and will refuse to continue the project
- The litters can be born in other NKU-countries, but all offspring must be registered in the kennel club of the country of origin. This can be done by a mutual agreement between the kennel clubs involved, in accordance Article 20.1 of FCI Standing Orders.
- They should not be bred unless it is approved by the country of origin
- If dogs from the outcross project lives in another NKU-country that the country of the breeds origin, they can be re-registered in that country in the x-register (side-register), but must keep the original registration number.

Or the dog can be registered **with limited registration** which do not allow them for breeding ("Avlsforbud"). It is stated in the FCI International Breeding Rules, art 15, that "a limited registration can only be rescinded by the national canine organisation that has established it". This makes it possible for the KC of origin (NKK for the Lundehund) to lift the limited registration if the dog is suitable for a new generation in the outcross project.

FKK: Has outcross projects of other breeds (not their own national breeds). They have updated the cross breeding rules: The first 3 generation of crossbreeding goes into the «Not for breeding Register», and only the breed club can lift the breeding banning.

DKK: Informed about the NKU Registration meeting in Copenhagen in next month (15.-16 October). This issue should be discussed there.



Decision: NKK will prepare the issue for the NKU Registration meeting 15.-16. October. A breed representative from the Norwegian Lundhund project should attend the discussion.

- 25. Sable x merle** (From “things-to-do-list” – Appendix 3b)
The issue was discussed in the DNA-meeting

26. Any other business

Update on the haemorrhagic gastroenteritis in Norway

At the beginning of the first day of the meeting, NKK informed about what we know so far about the “Norwegian disease”. NKK has close contact with Mattilsynet as well as Veterinærinstituttet almost daily, and nkk.no is always updated with the latest news.

27. Summary of issues to report to NKU/AU, October 2019

28. Next meeting

SKK will arrange the next meeting: Preliminary date: 16-18th of September