



**SVENSKA
KENNELKLUBBEN**
HUNDÄGARNAS RIKSORGANISATION

Breeding dogs in Sweden

SKK's tools and efforts for improved health in Swedish dogs



Photo: Åsa Lindholm

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Outline

- The Swedish Kennel Club (SKK)
- Recording systems
- Tools and efforts for improved health
- Breed-Specific Breeding Strategies (RAS)
- Ongoing projects



Short facts about dogs in Sweden

- ✓ Approximately 800,000 dogs in Sweden
- ✓ Seven out of ten dogs in Sweden are pedigree dogs registered with the Swedish Kennel Club (SKK)
- ✓ More than 300 dog breeds registered with SKK
- ✓ A large proportion have a health insurance
- ✓ No stray dogs



*Hamiltonstövare
(Swedish scent hound)*

The Swedish Kennel Club (SKK)

- ✓ Founded in 1889
- ✓ SKK is a union of non-profit clubs with approximately 300,000 individual members
- ✓ 50,000 puppies registered per year
- ✓ 15,000 active breeders
- ✓ 70 employees at the main office
(and almost 100 dogs)



Jämthund
(Swedish hunting spitz)

SKK Department for Breeding and Health

- ✓ Employs eight persons, including two full-time breeding consultants, a geneticist and a veterinarian
- ✓ Assists the Breeding Committee and breed clubs in breeding-related issues
- ✓ Recording of health results
- ✓ Responsible for education of breeding officials from the clubs
- ✓ Contacts with authorities, researchers etc.



Recorded data

Dog registry (pedigree information)

Veterinary records (health records e.g. screening programs, genetic testing)

Trial/test/competition registry (e.g. dog mentality assessments)

Owner registry (cats and dogs)



Veterinary records

- ✓ New results added daily
- ✓ Positive as well as negative results submitted and recorded
- ✓ Yearly about:
 - 15,000 records for hip dysplasia
 - 11,000 records for elbow dysplasia
 - 3,500 records of patellar luxation
 - 18,000 records for eye examinations
- ✓ More recently also test results from various genetic tests



Open registries – a valuable source of information

- ✓ The registries are accessible to the public, anyone can view them on the SKK website
- ✓ A valuable source of information for breeding decisions as well as for research!
- ✓ SKK provides researchers with pedigree info, health records and address info to dog owners



Breeding statistics on the SKK website

- ✓ Breeding statistics for both individual dogs and for each breed as a whole
- ✓ Statistics for littermates, full-sibs and offspring
- ✓ The pedigree and coefficient of inbreeding is shown for each dog
- ✓ More recently: predicted breeding values, genetic test results, behaviour profiles

Visa: 3 led Visa titlar: nej Inavelsgrad: 4,7 % Det beräknas

N14122/93 Cariena's Thirtyfour-Four	N20776/91 Cariena's Twentysix-Eight	N06765/85 Cariena's Fourten-Ten
	S28733/89 Almanza Whispering Wind	N34076/87 Cariena's Eighteen-Nine
		N01358/86 Cariena's Fifteen-Eight
		S59040/86 Genevieve Of Bramatha
		N01358/86 Cariena's Fifteen-Eight
	N24442/87 Lönning'Go Carillo Caballero	N12553/80 Ellebo's Kanni
S28629/90 Almanza Exotic Fruit Daiquiri		S56473/85 Almanza Larry O'Grady
	S61591/87 Almanza Exotic Spice	S51521/84 Almanza Forbidden Love

www.skk.se

ING HUNDRASER MEDLEM I SKK OM SKK E-TJÄNSTER

HITTA RÄTT

Sök på skk.se

Snabbval

För fullständig lista

- Hunddata
- Avelsdata**
- Köphund.se
- DjurID.se
- SKKs bibliotek

MEDLEMSSERVICE

Internetanmälan

Prediction of breeding values (EBVs)

- ✓ SKK predicts EBVs for hip and elbow dysplasia (HD and ED) in 20 breeds
- ✓ Published on the SKK website and updated weekly
- ✓ Preliminary EBV for litter – parents' average EBV at date of mating
- ✓ Individual EBV – all dogs born since 2000 with a screening record for HD/ED
- ✓ Accuracy of prediction published (standard error of prediction)

Födda: 2012-03-01
 Kennel: RADDOX
 Preliminärt kullindex vid parning:
 ED: 108 HD: 107

	Flummox SE23413/2012	Horton SE23414/2012	Lorax SE23415/2012	Thidwick SE23416/2012	Kerle SE23417/2012	Cindy Lou Who SE23418/2012	Foona Lagoona SE23419/2012
Kön	H	H	H	H	H	T	T
Färgbeteckning	S	S	S	S	S	S	S
Notering							
Avkommor *							
Observandum							
HD-index	109	92	109	108	109	108	109
HD	A	D	A	A	A	A	A
ED-index	105	105	106	95	105	105	105
ED	ua	ua	ua	1	ua	ua	ua

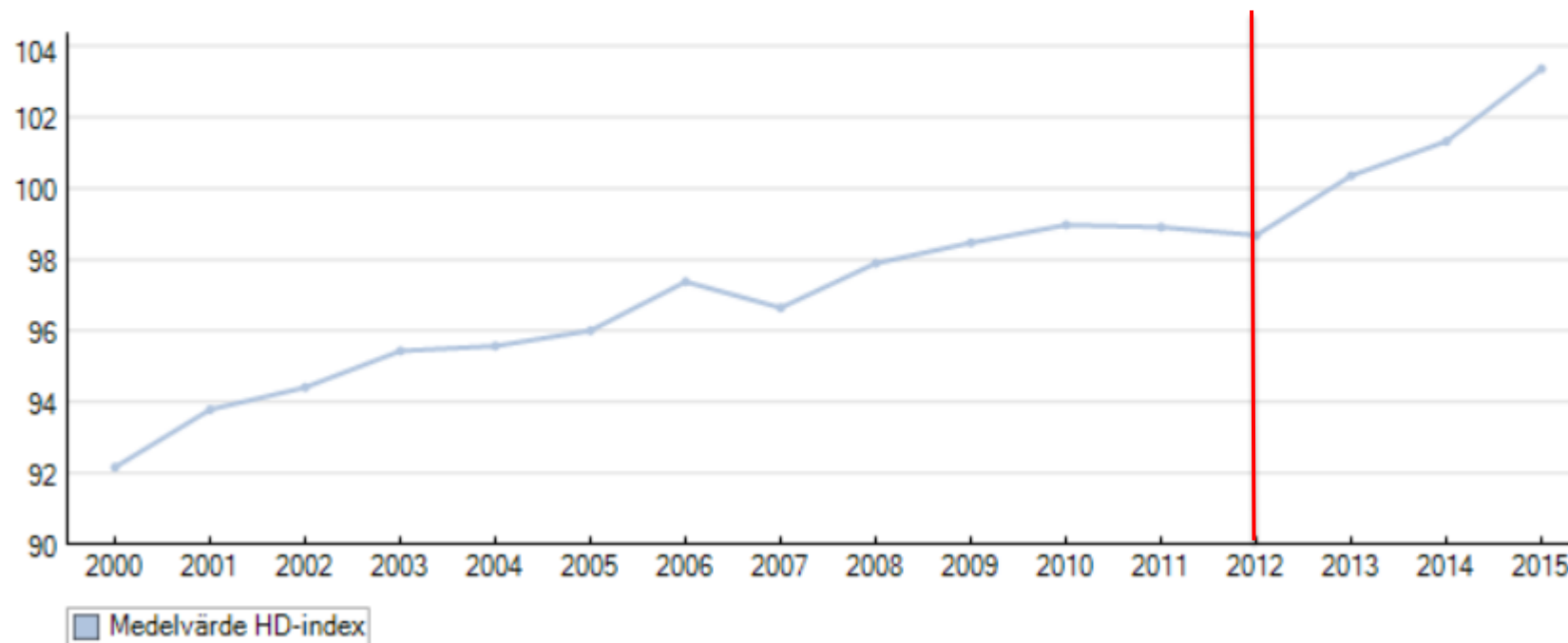
Undersöknings-/beräkningsdatum	Diagnos/Index	Medelfel
2012-10-22	ED 106	10
2012-10-22	HD 103	10
2003-06-12	ED ua (0)	
2003-06-12	HD grad A	

Prediction of breeding values (EBVs), cont.

Genetic trend for HD in the Rottweiler

Birth year - Typ: Average

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Medelvärde HD-index	92	94	94	95	96	96	97	97	98	98	99	99	99	100	101	103



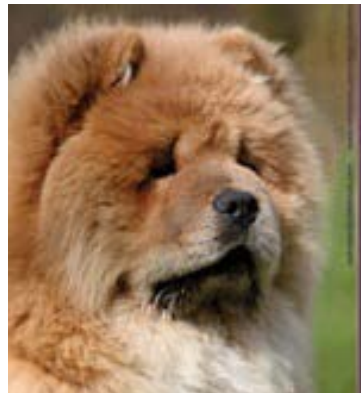
Genetic testing

- Mostly for diseases with simple recessive inheritance
 - Increasing number of "risk tests"
 - Only recorded if accurate and validated for the breed – scientific publication need to be available
 - Testing must be done by a veterinarian who checks ID of the dog
- + Enables a more subtle management of breeding programmes
- Implies new questions and challenges



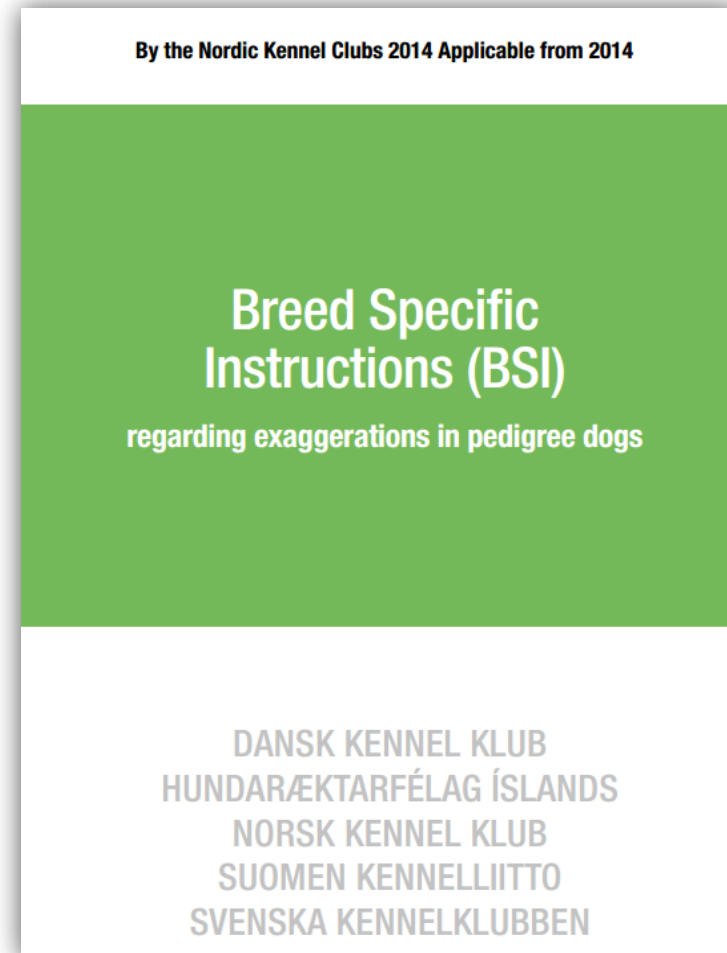
Breed-specific instructions for show judges (BSI)

- ✓ First edition developed in 2009
- ✓ Aims to identify characteristics at risk for exaggerations and remind the show judge to increase his/her awareness of those risks



Breed-specific instructions for show judges (BSI), cont.

- New Nordic BSI from 2014
- Includes 39 breeds
- General requirements for all dogs
- Revised regularly
- Available at skk.se!



Brachycephalic breeds in focus

- DVD on assessment of dogs' respiration (2012)
- Prioritize healthy dogs with less pronounced brachycephaly in breeding
- Recording of some diagnoses that disqualify dogs from breeding
- Veterinary inspection of dogs prior to breeding
- Education of breeders, show judges and veterinarians
- Increased public awareness
- International collaboration with respect to breed standards



What about behaviour?

- ✓ The Dog Mentality Assessment (DMA)
 - ✓ More than 100,000 records (from 1997 until today)
- ✓ The Behaviour and Personality Assessment (BPH)
 - ✓ About 8600 records (from 2012 until today), 233 breeds



Behaviour and Personality Assessment - BPH

- ✓ Aims to give an objective description of how the dog reacts to and cope with various situations in everyday life
- ✓ Helpful for breed clubs, breeders and dog owners in breeding and training of the dog





Breed-specific breeding strategies (RAS)

- ✓ Each breed in Sweden should have a breeding strategy, developed by the breed club and approved by the SKK
- ✓ Should include all aspects in the breeding goal for that specific breed
- ✓ Currently more than 300 breeds have a strategy
- ✓ Published on the breed club websites and the SKK website



Ongoing projects

- EBVs for additional breeds and traits, e.g. personality traits
- Veterinary inspection prior to breeding in some breeds
- Recording of mortality and cause of death
- Education of breeders - SKK Play, distance education etc.
- Increased international collaboration and exchange of information



IPFD 3rd International Dog Health Workshop

International
Partnership
For Dogs 

21 – 23 April / Avril 2017
Paris, France



3^{ème} Workshop International sur la Santé du Chien

Thanks for your attention!

