

Artificial insemination in dogs

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Transcervical insemination

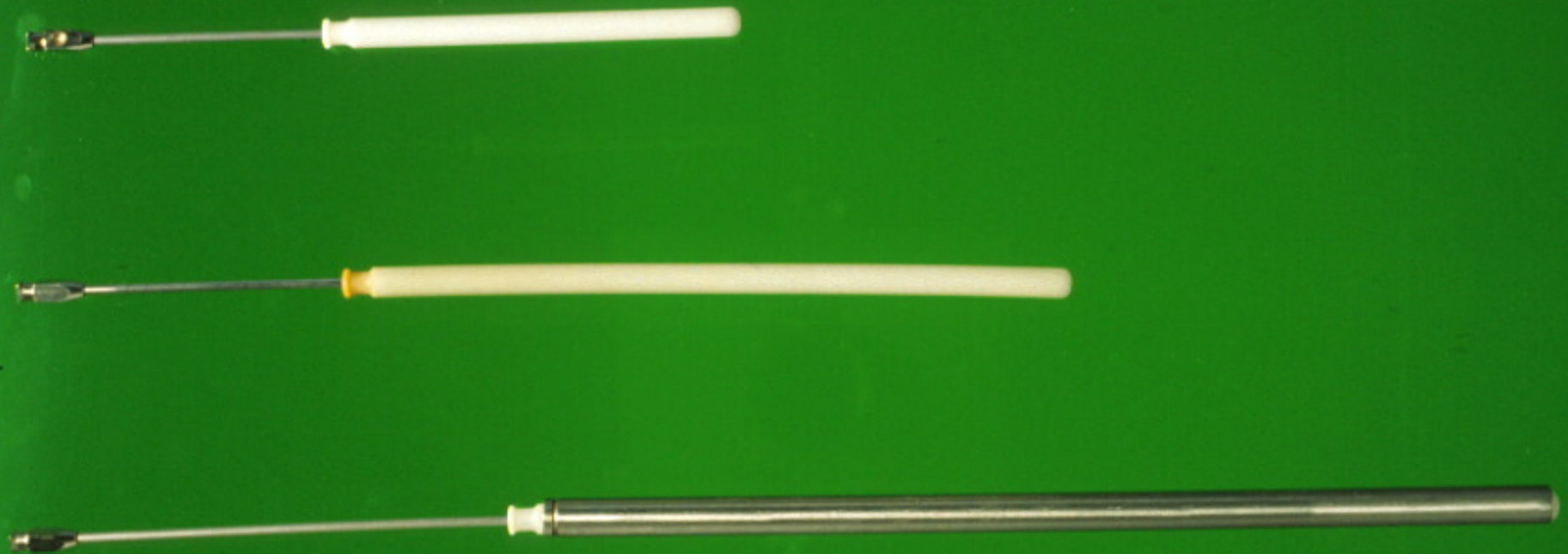
- Developed in the early 1970s by Kjell A. Berg
- In 1972 the first litter of puppies after AI with frozen semen was born.



Insemination technique

- Transcervical intrauterine deposition of semen
 - Stainless steel catheter with plastic sheet is inserted into the vagina
 - Transabdominally fixing of cervix
 - The catheter is inserted through the cervix
 - Semen deposited into the uterus

The catheter





Results after AI

	N	Whelping rate (%)	Mean litter size
Uterus	665	75	5.7
Vagina	20	10	6.0
Total	685	73	5.7

Results after optimal conditions

- **WHELPING RATE 82% (120 OF 147)**
- **MEAN LITTER SIZE 5.6 ± 0.3 SEM**

Timing of insemination

- CLINICAL EVALUATION
- VAGINAL SMEAR

- SERUM PROGESTERONE

– 15-25 NMOL/L	→	AI 2 DAYS LATER
– 25-35 NMOL/L	→	AI 1 & 2 DAYS LATER
– 35-60 NMOL/L	→	AI SAME DAY & ONE DAY LATER
– > 60 NMOL/L	→	AI SAME DAY ONLY

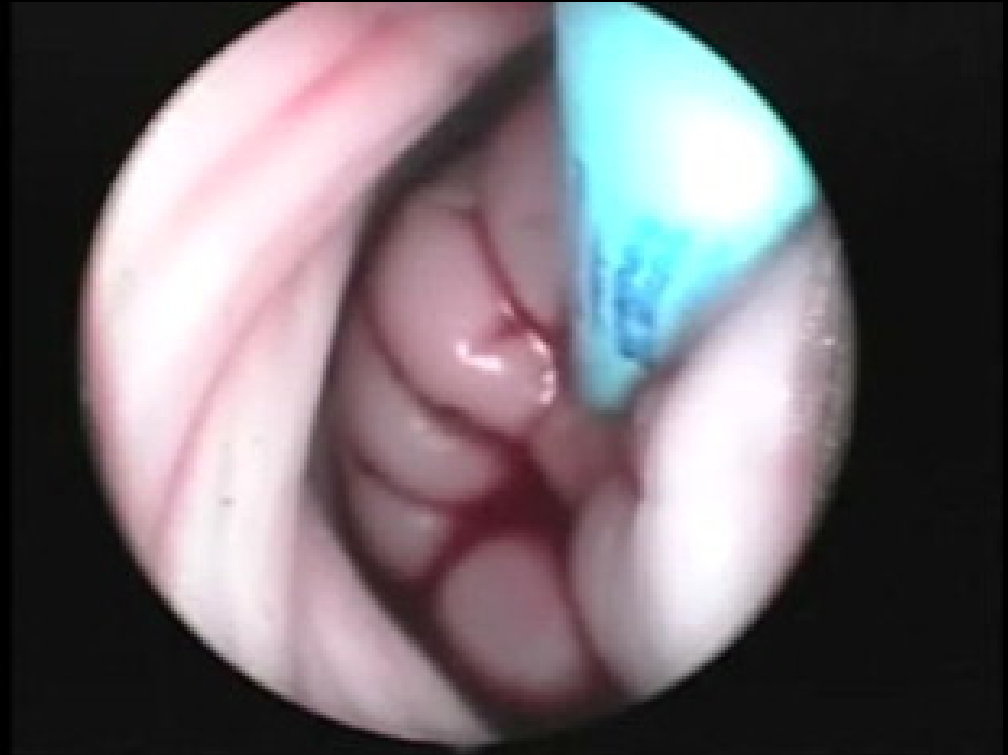
Breed differences

Breed	N	Whelping rate (%)	Mean litter size
Labrador retriever	57	84	6.4
Boxer	37	92	5.3
Golden retriever	32	66	5.0
Bull mastiff	29	83	6.7
Rhod. Ridgeback	28	93	7.9
English setter	24	63	5.2

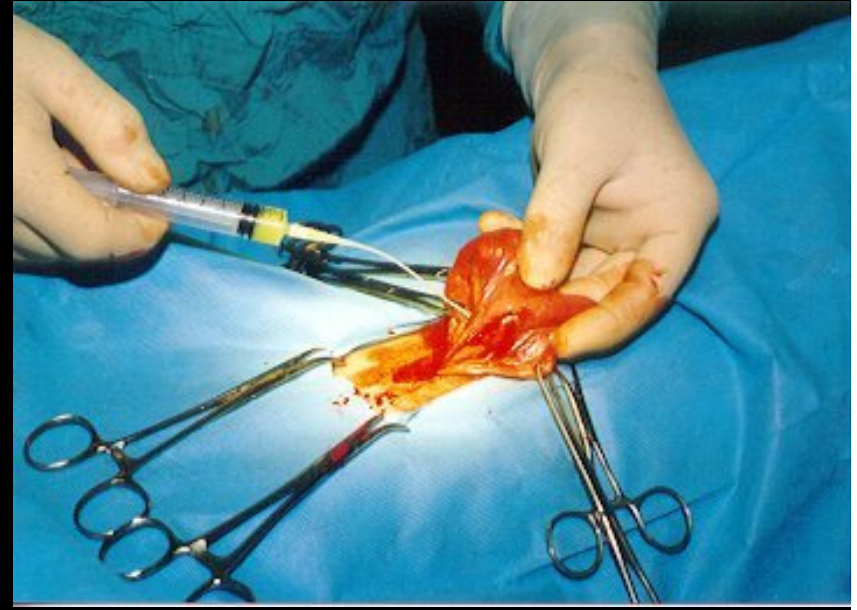
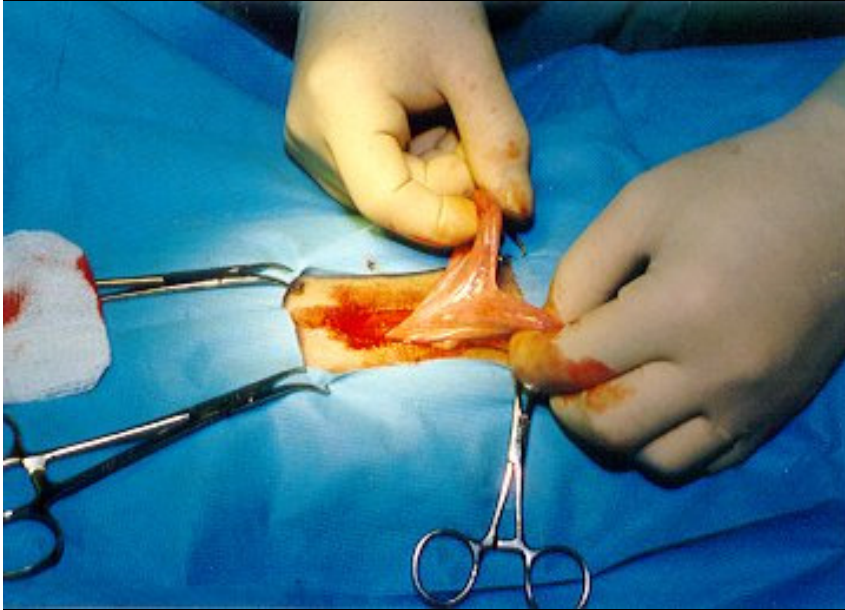
Number of AI

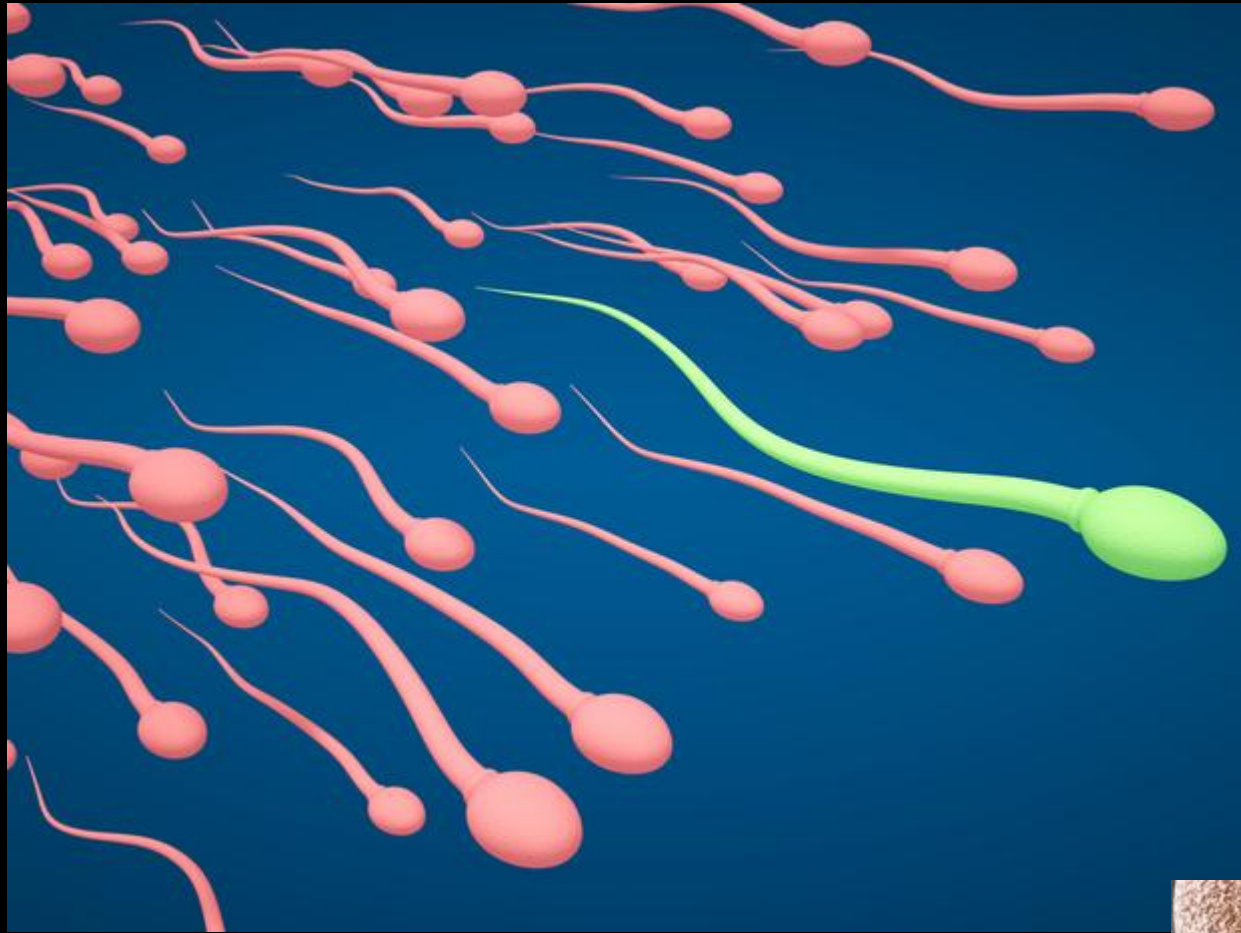
	N	Whelping rate (%)	Mean litter size
One	241	71	5.1
Two	384	78	6.0
>two	40	65	5.8

Endoscopic ai



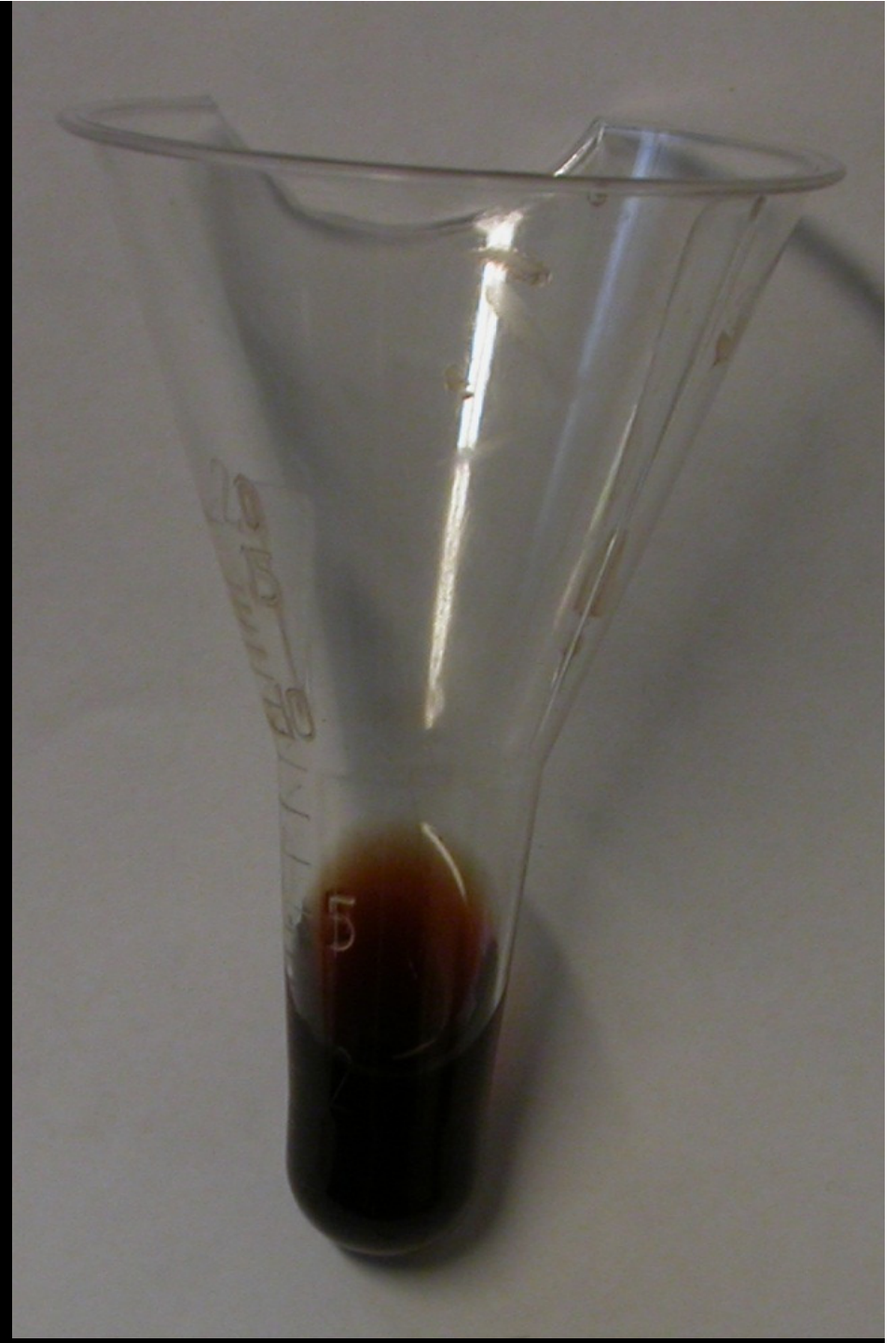
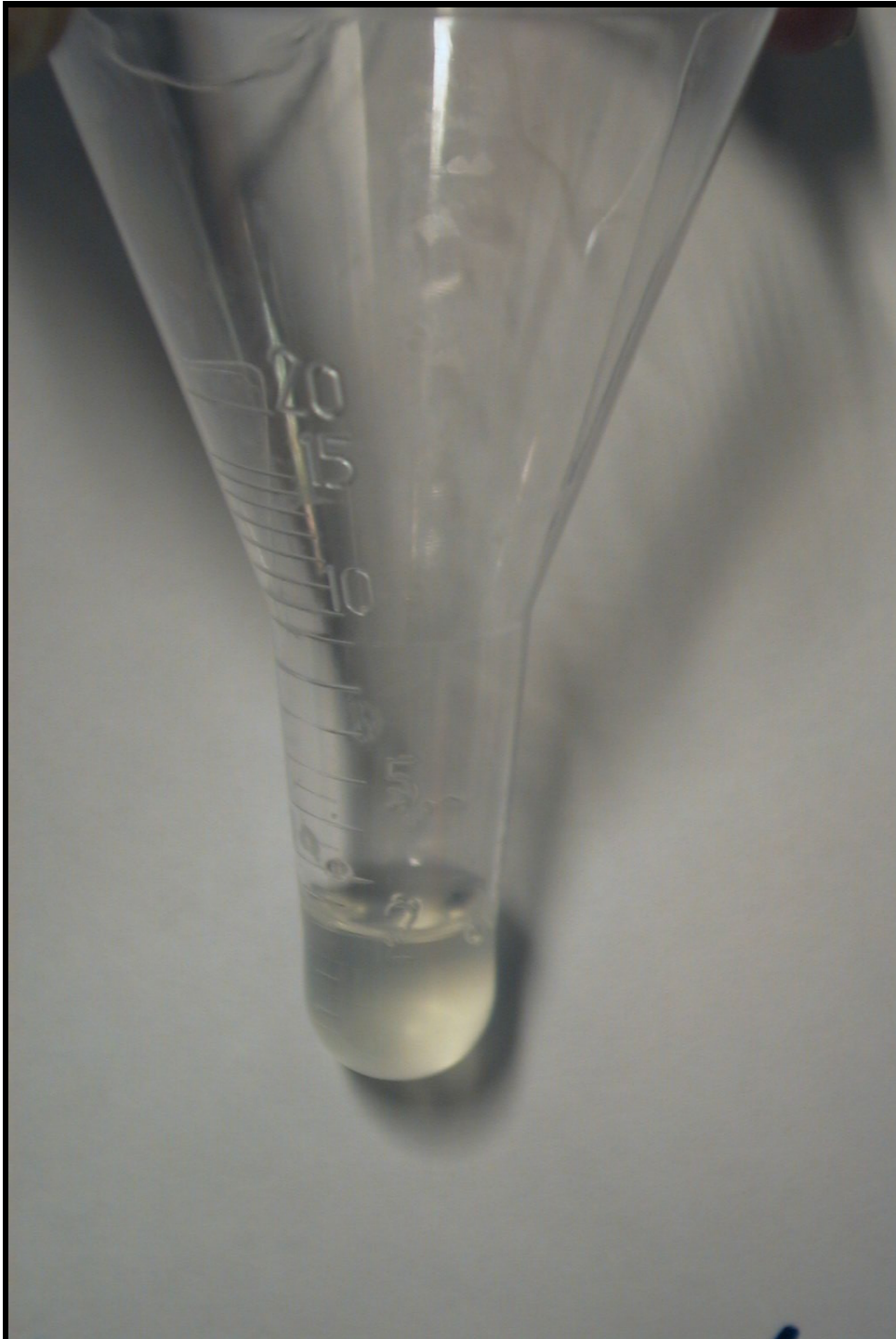
Surgical ai





Semen collection







Semen preparation

- COLLECTED BY DIGITAL MANIPULATION
- DILUTED IN A TRIS-FRUCTOSE-CITRIC ACID EXTENDER CONTAINING 8% GLYCEROL AND 20% EGGYOLK
- EQUILIBRATION TIME OF 2-3 HOURS
- FILLED IN 0.5 ML STRAWS AND FROZEN IN N₂ VAPOUR
- THAWED AT 70°C FOR 8 SEK

Semen bank/storage









**CERTIFICATE
FOR IMPORT OF DOG SEMEN TO NORWAY**

Country of dispatch: _____

I. Identification of the donor animal

Registered name	Breed	Identification number (chip or tattoo)	Date of collection

II. Origin and destination of the semen

Number of straws		Identification of the straws/container	

III. Origin and destination of the semen

Name and address _____
of the importer: _____

Name and address _____
of exporter: _____

IV. Owners statement (if required)

I, the owner of the donor dog, certify that the dog has not been used for natural service in the period between the blood sampling(s) and the semen collection.

Done at: _____ Date: _____

Signature: _____

V. Health Certificate

I, the undersigned authorised veterinarian responsible for the semen collection, certify that the donor dog with identification number _____:

1. does not show clinical signs of any contagious disease;
2. is not breed or crossbreed of Fila Brasileiro, Toso Inu, Dogo Argentino or Pit Bull Terrier;
3. (only if appropriate) is vaccinated against:

Leptospirosis (serotypes *L. canicola* and *L. icterohaemorrhagiae*)

Date of vaccination: _____

4. (only if appropriate) has been submitted to serological tests within 21 days prior to collection with

a) negative result for *Brucella canis*

Date of blood sampling: _____

b) less than 50% agglutination at dilution 1: 30 for *Letospira canicola* and *L. icterohaemorrhagiae* (required only if the dog is not vaccinated).

Date of blood sampling: _____

Point 3 and 4 are based on the original vaccination and laboratory certificates.

Date of semen collection: _____

Place: _____ Date: _____

Signature: _____

Stamp:

TO WHOM IT MAY CONCERN

Deres ref:
Vår ref:
Dato: 5/12-2011
Org.nr: 985 399 077

Statens tilsyn for planter, fisk, dyr og næringsmidler



Mattilsynet

NORWAY - AN EFTA COUNTRY

We hereby confirm that Norway, as well as the EFTA States Iceland and Lichtenstein, is a Signatory State to the European Economic Agreement (EEA) together with the EU Member States.

As such Norway is obliged to follow the EU legislation concerning import of live animals and products of animal origin, including fish and fishery products, from third countries. And as an EFTA-country Norway is a part of the internal market concerning trade with these products

Yours Sincerely



Marit Forbord
Official Veterinarian, Border Inspection Post, Oslo Airport





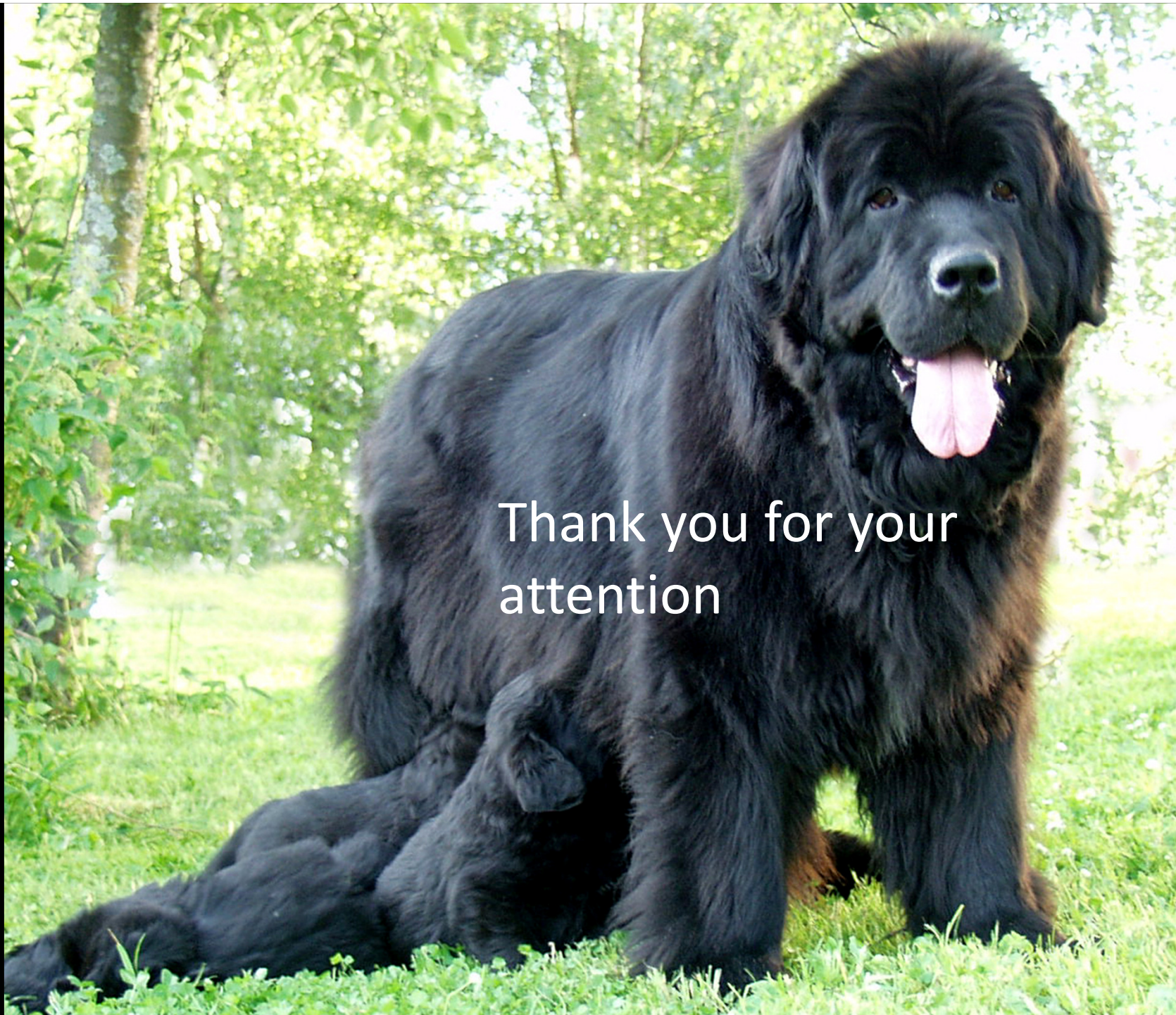






Wolf cubs born after ai





Thank you for your
attention

