

PETS FOR LIFE

onafhankelijk platform voor de fokkerij van gezonde honden

BREEDING GUIDE
for
BRACHYCEPHALIC
BREEDS

in Flanders (Belgium)

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Introduction

The brachycephalic breeds are quite popular, but in recent years these varieties have been under a lot of pressure. Animal rights organizations and veterinary organizations attack these breeds in the media regularly. Some countries have already taken measures with regard to these breeds.

As some of these breeds increase in popularity, some breeders don't take it too seriously in their selection of the parents. Also the import of puppies is increasing from countries where there is no control.

In Belgium there is no noticeable increase in the number of puppies with pedigrees. Most of the bona fide breeders have selected healthy parents for years.

It seems appropriate to us to set up a mating advice program, especially to help breeders to maintain healthy breed populations. Excluding animals from breeding on the basis of one or more phenotypic characteristics can have major consequences for the genetic diversity of these populations. A sensible combination has proven its usefulness in breeding for a long time.

With "Pets for life" we want to take an initiative to help the breeders of these breeds to select the parents. We want to start with an index based on a number of important criteria.

The results of the studies are recorded in a central database. In the long run it is our intention to calculate estimated breeding values based on these results.

The cooperation between the veterinarians and the breeders is important in the whole process that we want to develop.

What's the problem with the brachycephalic breeds?

Rassen met een korte snuit worden Brachycefale rassen genoemd. "Brachy" betekent kort en "cefalic" betekent hoofd.

Breeds with a short snout are called brachycephalic breeds. "Brachy" means "short" and "cephalic" means "head".

A condition in these breeds is called "BOAS" or Brachycephalic Obstruction Airway Syndrome.

BOAS is a complex of anatomical disorders of the anterior respiratory airways, which are more frequent in the brachycephalic breeds.

Dogs with the BOAS problem usually have one or more of the following abnormalities:

- Narrowed nostrils
- Too long soft palate
- Too narrow trachea

Several symptoms can be observed in dogs affected with BOAS:

- snoring
- tight feeling of the chest, sometimes during exercise, sometimes in warm weather, sometimes severe difficulty in breathing
- coughing
- reduced appetite

Dogs do not have to have all the above symptoms to suffer from BOAS, on the other hand dogs with one or more of these symptoms may be free of BOAS.

Who can issue a “BOAS” certificate?

Skilled veterinarians can issue this certificate.

Who can request a certificate?

Any dog that belongs to the list of brachycephalic breeds and that has a microchip can apply for a certificate.

What is a BOAS certificate?





The research consists of several phases.

PHASE I. Degree of bulging eyes

Picture	Description	Points
	Normal eyes	0
	Moderately large eyes	1
	Slightly bulging eyes	2
	Extreme bulging eyes	3

PHASE II. Narrowing of the nostrils

The veterinarian will assess the degree of narrowing of the nasal opening.
 The assessment will consist of 4 categories.

Picture	Description	Points
	Open nostrils	0
	Mild stenosis	1
	Moderate stenosis	2
	Severe stenosis	3

PHASE III Respiratory test

The vet will first listen to the dog's breathing in a relaxed state.

Then the dog will walk on a leash for a few minutes (see table of breeds) at a normal pace for the breed.

After that the veterinarian will listen to the breathing again and assign a degree.

Explanatory notes	Points (grade)
The dog breathes normally and is not clinically affected by BOAS syndrome.	0
The dog is not affected by BOAS syndrome but has a mild respiratory problem that does not affect training performance.	1
The dog has moderate symptoms of BOAS that may need to be monitored by the veterinarian.	2
The dog is showing severe respiratory problems. Examination by veterinarian is recommended.	3

Breed	# minutes
French bulldog	3
Pug	3
King Charles Spaniel or Toy Spaniel	3
Pekingese	2
Japanese Chin	2
Petit Brabançon	3
Griffon Belge	3
Griffon Bruxellois	3
Boston terrier	3
English bulldog	3

The BOAS index

How is the BOAS index calculated?

BOAS index = 1 times the score of the eyes + 2 times the score of the nostrils + 3 times the score of the respiratory test

Example: a dog scores 1 for the eyes, 0 for the nostrils and 1 for the respiratory test.

BOAS index = $1 + 2 \times 0 + 3 \times 1 = 4$

Lowest index = 0

Highest index = 18 ($1 \times 3 + 2 \times 3 + 3 \times 3$)

Breeding guide table

		BOAS SCORE FATHER																		
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
BOAS SCORE MOTHER	0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
	1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	2	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	3	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
	4	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
	5	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
	6	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	7	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	8	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
	9	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
	10	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
	11	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
	12	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	13	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
	14	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
	15	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
	16	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
	17	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
	18	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36

The breeding guide is based on the combination of the BOAS indexes of the father and the mother.

BOAS index puppies = (BOAS Index Father + BOAS Index Mother)

BOAS Index puppies	Breeding guide
Smaller than 20	Positive breeding advice
20-25	Higher risk on BOAS
Higher than 25	Negative breeding advice

Presentation breeding guidelines for the breeders

Just like with Estimated Breeding Values, we can setup an online Mate Select system.

The screenshot shows the 'Paringsadvies' (Mate Selection) interface for the breed 'Franse Bulldog'. The interface is in Dutch and includes the following elements:

- Header:** 'Vlaamse Fokkerijcommissie' and 'Paringsadvies' with language options for English, Français, and Nederlands.
- Breed Selection:** A dropdown menu showing 'Franse Bulldog'.
- Parents:** 'Father: Aderfia Klemente (NHSB2795204)' and 'Mother: JERFVA DE FLEUR NeLL (LOSH-01142852)'. A large traffic light icon is positioned between the parent names, with the green light illuminated.
- Inteeltpercentage:** A box showing '0,20%' and the text 'Inteeltpercentage van de combinatie'.
- Paringsadvies op basis van MSI - index:** A section with explanatory text in Dutch regarding genetic diversity and the MSI index.
- Mothers and Fathers Lists:** Two scrollable lists of potential parent names with checkboxes for selection.
- Reset selection:** A button at the bottom left.

Registration

The individual results can be registered on the website of “Pets for Life”.

In the long term, estimated breeding values could be calculated for breeds with enough registered data.

Certificate



BOAS assessment form

Name of the dog:

Breed: Withers : cm

Sex : DOG / BITCH Date of birth : .../.../..... Weightkg

Chip number : studbook number :

Name of owner :

Address :

.....

Email :

Date of BOAS tests ://

RESULTS

Degree of eye bulging	0	1	2	3
Narrowing of the nostrils	0	1	2	3
Respiratory test	0	1	2	3

BOAS INDEX : (= 1x eye test + 2x nostrils + 3x respiratory test)

Stamp & signature vet

Signature owner

The owner gives permission to "Pets For Life vzw" to use these data for scientific research and publications.