

Note: the most recent updates can be found at: [Breeding Decision - Breeding Programmes Cats | Vlaanderen.be](https://vlaanderen.be/breeding-decision-breeding-programmes-cats)



## Other names

Karhuizer

## Aim of the programme

The breeding programme aims to reduce the most common hereditary disorders without excluding too many cats, in order to preserve genetic diversity within the breed population.

Instead of systematically excluding animals, we have drawn up breeding recommendations based on carefully considered combinations. Naturally, the physical health of the animals is taken into account, and cats suffering from one of these disorders are excluded from breeding.

# Performance tests

CONDITION	RECOMMENDATION	SCREENING METHOD	AGE	FREQUENCY
Hypertrophic cardiomyopathy (HCM)	Recommended	Echocardiography	From 12 months	Valid for 2 years
Polycystic Kidney Disease (PKD)	Recommended	Ultrasound	From 12 months	One-time
Patella Luxation (PL)	Recommended	Palpation of the kneecap	From 12 months For the <sup>1st</sup> mating	One-time
Hip dysplasia (HD)	Recommended	RX: VD and laxity recording (Vezzoni or PennHIP)	From 12 months (laxity assessment from 6 months)	One-time

\*For DNA testing:

**Free by descent:** when both parents of a breeding animal have been tested free of an affected or abnormal allele by means of DNA and parentage verification has shown that they are the parents, the breeding animal does not need to be tested again, but it can be assumed that the breeding animal is also free of the affected or abnormal allele in question.

## Breeding advice per performance test

Breeding advice is given here (schematically and in table form) for every possible parent combination.

- **Positive advice** or green means that this is a suitable mating based on this test.
- **Conditional positive advice** or orange means that this is not an ideal pairing based on this test, but that the pairing is permitted. Such combinations are permitted in order not to compromise the genetic diversity of a breed.
- **Breeding prohibition** or red means that this is not a suitable pairing based on this test. These animals may not be combined.

For **hip dysplasia**, a **laxity scan** is mandatory for all cats born in Belgium from 1/01/2025 onwards.

If the tests have not yet been carried out, it is best to always do them with laxity imaging.

CONDITION	POSSIBLE SCREENING RESULT	BREEDING ADVICE				
Hypertrophic cardiomyopathy (HCM)	1. <b>Normal:</b> no signs of HCM are visible on the echocardiography. 2. <b>suspicious:</b> signs visible on echocardiography that may indicate HCM. The cat must be retested after 1 year. 3. <b>affected:</b> there are clear signs of HCM visible on the echocardiography. 4. <b>No result:</b> no echocardiography was performed.	Male cat	Normal	Suspicious	Affected	No result
		Female cat				
		Normal				
		Suspicious				
		Affected				
Polycystic Kidney Disease (PKD)	1. <b>Normal:</b> no signs of PKD are visible on the ultrasound scan. 2. <b>Suspicious:</b> very minor abnormalities are visible on ultrasound that may be consistent with PKD. However, these are not sufficiently specific. 3. <b>Affected:</b> there are signs of PKD visible on the ultrasound scan. 4. <b>No result:</b> no ultrasound scan of the kidneys was performed.	Male	Normal	Suspicious	Affected	No result
		Female cat				
		Normal				
		Suspicious				
		Affected				
		No result				
CONDITION	POSSIBLE SCREENING RESULT	BREEDING ADVICE				

Patella Luxation (PL)	<p>The degree of the most severely affected knee is considered the final degree for the animal</p> <ol style="list-style-type: none"> <li>Grade 0: Normal.</li> <li>Grade 1: The patella can be luxated manually, but returns to its normal position when released.</li> <li>Grade 2: Patella luxates during knee flexion or manual manipulation and only returns to its normal position after knee extension or manual reduction.</li> <li>Grade 3: Patella is continuously luxated and can be manually replaced, but will spontaneously luxate again when manual pressure is removed.</li> <li>Grade 4: Patella is constantly dislocated and cannot be manually repositioned.</li> <li>No result: no examination was performed</li> </ol>	Male cat	G	G	G	G	G	No
		Female cat	r	r	r	r	r	res
			a	a	a	a	a	ult
			d	d	d	d	d	.
			e	e	e	e	e	
			0	1	2	3	4	
		Grade 0						
		Grade 1						
		Grade 2						
		Grade 3						
		Grade 4						
		No result						

CONDITION	POSSIBLE SCREENING RESULT	BREEDING ADVICE				
Hip dysplasia	Both parents have a <b>laxity score</b> and the laxity index is known: 1. <b>minimum risk:</b> LI < 0.30. There is a minimum risk of HD. 2. <b>low risk:</b> LI 0.30 - 0.49. There is a low risk of HD. 3. <b>High risk:</b> LI 0.50 - 0.69. There is a high risk of HD. 4. <b>very high risk:</b> LI ≥ 0.70. There is a very high risk of HD	Male cat	Minimal risk	Low risk	High risk	Very high risk
		Female cat				
		Minimal risk				
		Low risk				
		High risk				
		Very high risk				
	Both parents have only the <b>Pawpeds grading</b> 1. <b>Grade 0:</b> No signs of HD 2. <b>Grade 1:</b> Mild signs of HD 3. <b>Grade 2:</b> Moderate signs of HD. 4. <b>Grade 3:</b> Severe signs of HD	Male	Grade 0	Grade 1	Grade 2	Grade 3
		Female				
		Grade 0				
		Grade 1				
		Grade 2				

		Grade 3				
	If one of the parents has a laxity score, but the other only has a Pawpeds grading (e.g. for mating abroad)	Parent 2 Parent 1	Grade 0	Grade 1	Grade 2	Grade 3
		Minimal risk				
		Low risk				
		High risk				
		Very high risk				

# General breeding advice

The **mandatory tests** must be carried out in accordance with the specified conditions and frequency. If one or more of these results is a 'breeding ban', this combination may not be carried out.

Depending on the number of clinical examinations that may result in a **conditional positive breeding recommendation (orange)**, a maximum number of conditional positive results is permitted:

- 1-2 examinations: max. 1 conditional positive
- 3-4 examinations: max. 2 conditional positives
- 5 or more examinations: max. 3 conditional positive results

In such cases, **further follow-up** by the breeder is required before repeating such mating.

The **inbreeding coefficient** in the FBe database is calculated using Wright's formula **over 5 generations** (if known).

The inbreeding coefficient (COI) of an offspring may **be a maximum of 1% higher than the average COI of both parents**.

If **fewer than 3 generations** of the parents are known, the combination is only permitted if there are no common ancestors on both the paternal and maternal sides. All breeding recommendations for the mandatory tests must then be positive. A female cat may not be mated with her grandfather, her father, her brother, her half-brother, her son or her grandson.

To prevent disease-causing mutations from spreading too widely within the breed or population, it is essential not to allow a male cat to mate too often (popular sire effect). In this way, we limit the spread of harmful genetic variants and contribute to maintaining the long-term health of the breed.

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**Our Facebook page:**

<https://www.facebook.com/Felis-Belgica-255959984470978/>

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