



Guarantee for a healthy Saarloos Wolfdog

Plan of Action for the Outcross 2026-2033

Approved Dutch Kennel Club 04-02-2026

AVLS

General Association for Lovers of Saarloos Wolfdogs



Plan of Action 2026-2033

This version of the Plan of Action includes adjustments based on the experiences gained over the past 10 years and advice from population genetics.
For the association and its board, for the breeders, the selection committee and the Dutch Kennel Club.



Foreword

The current plan of action for the outcross "Guarantee for a healthy Saarloos wolfdog" expires in 2025. The evaluation of the project has taken place in the board and the general meeting of members and is recorded in "Outcross Saarlooswolfhond - evaluation and future". We do not discuss the how and why of the outcross here. After all, this has already been described in detail in our first Plan of Action.

A few key takeaways from the evaluation

Since the start in 2014, 7 outcross lines have been started so far and 122 outcross dogs F1, F2 and F3 have been born.

Positive effects

We have good insight into the health of the outcross dogs, because (almost) all puppies from a litter are examined for HD/ED and undergo an ECVO examination.

They also undergo the mandatory tests DM, Dwarfism and PCYT2-D for the Saarloos Wolfdog and we create an Embark profile.

- The goal of the project has been successful. The inbreeding percentage has decreased and has dropped (far) below 0.5% per generation.
- Increased genetic variation in selected lines and new health data to base selection on.
- Fertility, litter size and genetic diversity have increased.
- The percentage of carriers of the hereditary diseases DM and pituitary dwarfism has decreased to acceptable percentages, partly due to sensible breeding policy.
- For the time being, no epilepsy in the outcross lines.

In general, we can say that the dogs are healthy.

We do see that ED abnormalities are the most common abnormalities in the outcross dogs. Most likely this comes from the Saarlooswolfdog, because ED occurs in almost all outcross lines. In two cases we saw cataracts.

It is also striking that the breed-typical Saarloos wolfdog character and behavior is quickly back.



F2 father



F3 daughter



Concerns /controversy

Some breeders and enthusiasts resist outcross policies (fear of losing breed type and character). In addition, there have been individual incidents and legal disputes that sometimes influence the image. That is why transparency and strict protocols remain crucial.

The AVLS will continue to publish the results of the outcross program and the inspections on the website. Several outcross lines are currently in the F2–F3 phase and there are already some lines with a full pedigree.

Point of attention:

In 2024, the report 'Breeding healthy pedigree dogs WUR' examined the progress of the outcross: "First of all, the conclusion can be drawn that the litter size (number of puppies per litter) increases after an outcross. The second important conclusion is that the effect on inbreeding is a one-off. For a lasting effect, the outcross must be repeated regularly and/or the increase in inbreeding must be reduced in another way. The most important message is that with every backcross on a purebred animal, the effect of the outcross halves"

This report by Wageningen University & Research confirms the results from 2018: without outcross, inbreeding will continue to increase steadily. The inbreeding of one (or more) dogs from another breed must be repeated over and over again to keep the inbreeding increase permanently below 0.5% per generation. Increasing the effective population structure contributes to continuing to reduce the increase in inbreeding per generation.

Goal for the next 10 years

The goals remain the same: inbreeding coefficient below 0.5% per generation, control of COI and kinship (Mean Kinship) through good population management and outcross. We strive to increase the effective population in order to ensure fertility and health with these measures and to maintain the litter size of the Saarloos Wolfdog.

Agreements with the Dutch Kennel Club

To build in a safeguard against unwanted breeding, the outcross puppies only receive a pedigree if a positive breeding advice from the AVLS has been submitted to the Dutch Kennel Club together with the breeding declaration.

The selection committee has 5 members: two members of the AVLS, an independent judge of the Saarlooswolfdog and two representatives on behalf of the Dutch Kennel Club. The selection committee has an advisory vote at the outcross, the final decision lies with the board of the AVLS.

* the selection committee may be expanded with more AVLS members.

The selection committee has the following tasks:

- Approval of look-a-likes that are registered in the appendix of the main studbook of the Dutch Kennel Club
- Unanimously advising the board of the AVLS about the outcross matings (the individual animals)
- If necessary, assess the first, second and third generation offspring globally at the age of approx. 6 weeks by at least 2 members of the committee. The first, second and third generation offspring are assessed on a day to be organized by the AVLS when the offspring are around 12 months and about 23 to 24 months old by at least 3 members of the committee



- Determine which offspring from the F1, F2 and F3 generation will be admitted to breeding. The health results and character are explicitly taken into account. At least 3 members of the selection committee participate in this inspection.
- Publishing an annual report on the implementation of the Plan of Action.
- Determine whether a new breed/approved dog is desirable within the outcross program and advise the AVLS board.

Procedure for cross-breeding varieties

The AVLS represents the interests of the breed and is best placed to assess the pros and cons of the breeds to be crossed. The board consults with the selection committee in constant consideration. The Dutch Kennel Club assesses whether there is a careful and transparent procedure.



Cross-breeding FCI variety

1. The members/breeders/selection committee make suggestions for the breeds
2. Consultation with the members/breeders in which the pros and cons are discussed
3. The members of the AVLS have a say in the choice of varieties
4. The selection committee unanimously advises the board of the AVLS about the outcross matings (the individual animals). The board has the option not to follow the advice of the selection committee, which will then have to submit a new proposal (again unanimously). In order to control the health risks and to monitor the breed type, the G-0 axe, G-1 axe and G-2 axe are only bred for generations after a positive breeding advice from the selection committee and a decision from the board of the AVLS. This approval from the selection committee and the AVLS board is sent along with the breeding declaration
5. The board of the AVLS reports the decision taken to the Dutch Kennel Club and is accountable to the members.

The dogs to be used for the outcross must all comply with the Association Breeding Regulations (VFR) of the AVLS and have been examined for the abnormalities occurring in the breed of choice.

The latter will not always be possible with the look-a-likes. Nevertheless, look-a-like males/females must comply with the VFR of the AVLS.

All males/females should preferably have proven to be good at inheritance. They are paired with breed-typical Saarloos wolfdog bitches/males with a full FCI pedigree or appendix G-2 pedigree. Individual males/females of a different breed (or look-a-likes) are only used once in the outcross program.

Look-a-likes points 4 and 5 (see above) also apply here



Overview breeding Saarlooswolfdog Netherlands 2010-2024

In the Netherlands, the Saarloos Wolfdog is represented by two breed clubs:

- AVLS (General Association for Lovers of Saarloos Wolfdogs)
- NVSWH (Dutch Association of Saarlooswolfdogs)

Both associations have an Action Plan approved by the Dutch Kennel Club. A dog bred within the outcross program of the AVLS or NVSWH falls under the rules of the program of the association in question for the rest of its life, regardless of which association the breeder or owner is a member of.

According to the data from DutchDogData(Dutch Kennel Club), the following Saarlooswolfdogs have been bred by the AVLS and the NVSWH (population bred within the central breeding policy) in the past 14 years.

In addition, there are:

- 'Other' breeders: not affiliated with a Dutch breed club.
- Import/use abroad: dogs that have been imported from abroad or foreign males that have been used in Dutch breeding.

Populations of Saarloos Wolfdogs in the Netherlands 2010 - 2024

Jaar	AVLS		Overig	Sub totaal	Centraal fokleid NVSWH			Totaal	Import/inzet	
	SWH	Outcross			SWH	Outcross	SubTotaal		buitenland	Totaal
2024	21	9	8	38	0	4	4	42	5	47
2023	10	0	11	21	0	11	11	32	7	39
2022	31	29	0	60	0	0	0	60	13	73
2021	10	24	25	59	0	0	0	59	14	73
2020	40	11	9	60	9	0	9	69	14	83
2019	43	16	30	89	4	2	6	95	15	110
2018	46	13	0	59	0		0	59	14	73
2017	31	10	7	48	0		0	48	15	63
2016	21	7	0	28	3		3	31	19	50
2015	35	0	12	47	2		2	49	21	70
2014	37	3	15	55	0		0	55	7	62
2013	25	0	0	25	2		2	27	17	44
2012	24	0	4	28	0		0	28	22	50
2011	43	0	6	49	0		0	49	5	54
2010	37	0	0	37	0		0	37	8	45
	454	122	127	703	20	17	37	740	196	936

International cooperation

Since the nineties, Saarloos wolfdogs have also been bred outside the Netherlands. There is a lot of informal contact and cooperation between the breeders from the different countries. Because all these dogs originate from the Netherlands, there is not much to be gained in terms of inbreeding and kinship, but it does have an effect on the effective population. It is therefore larger than just the Dutch one.

In the past 14 years, almost 200 Saarloos wolfdogs have been imported from abroad or used for breeding in the Netherlands.



How often to use outcross

The answer is simple: as often as necessary to keep the inbreeding increase per generation below 0.5%. At the same time, we want to maintain sufficient breed content so that the Saarloos Wolfdog does not lose its characteristic characteristics.

How often is that?

Population geneticist Marianne Stoop calculated the ideal proportion of outcross animals in breeding based on the current inbreeding percentages:

Outcross	Generation	Share of outcross
F1 (G-0)	First generation	1 in 9 puppies
F2 (G-1)	Second generation	1 in 5 puppies
F3 (G-2)	Third generation	1 in 3 puppies

With these figures as a starting point, we make a schedule that serves as a guideline for the number of outcross animals to be used per generation.

Voorbeeld Inzet outcross Saarlooswolfhond 2022-2025					
Jaar	2022	2023	2024	2025	generatie
100% SWH Nederland	41	21	21	20	103
100 % SWH Duitsland	55	55	25	25	160
100 % SWH België	7	5	5	0	17
100 % SWH Frankrijk	64	25	57	45	191
Totaal 100% Saarlozen	167	106	108	90	471
100% SWH nodig	45	0	27	30	102

2022 1 nestje F3/G2 Husky 8 puppies

2022 1 nestje F3/G2 Northern Inuit Dog 7 puppies

Opposite these 15 F3/G2 puppies must be 45 purebred Saarloos wolfdogs.

2023 No outcross puppies

2024 1 nestje F3/G2 Husky 3 puppies

2024 1 litter F3/G2 Norwegian Elkhound 6 puppies

Opposite these 9 F3/G2 puppies must be 27 purebred Saarloos wolfdogs.

2025 1 nestje F1/G1 pups 6 puppies

Opposite these 6 F1/G1 puppies must be 30 purebred Saarloos wolfdogs.

For this period it has been calculated that 102 purebred Saarloos wolfdogs are needed compared to the number of born outcross animals

At the moment it is not yet known how many Saarloos wolfdogs will be born in the Netherlands in 2025. But even if there are fewer than 20, this is compensated because another 368 puppies have been born in the surrounding countries. The Dutch Saarloos wolfdog population is not an isolated case. Cooperation and international exchange are very important in addition to a careful breeding policy.





Stamboomanalyse en Embark

Keeping track of the pedigree data is important, but the calculation of inbreeding at the DNA level is much more accurate. This is currently the "gold standard". Most breeders know the inbreeding percentages of their dogs on paper (the pedigrees), but there are disadvantages to this. Errors in the family tree or cheating in the past sometimes result in a figure that is incorrect. Embark calculates a proxy for the inbreeding percentage by means of ROH (Runs Of Homozygosity) at DNA level and per individual. And compare this to the breed average and the average of all pedigree dogs. Embark also offers the possibility to calculate the predicted average inbreeding (COI) of a future combination.

Expected litter COI (eCOI)

eCOI: 41% · Average breed COI: 35%

Genetic coefficient of inbreeding (COI) measures the proportion of a dog's genome in which the dam's and sire's genes are identical by descent. All else being equal, a lower COI has been correlated to improved health and a longer lifespan ([Bannasch et al 2021](#), [Yordy et al 2020](#)).

The expected coefficient of inbreeding (eCOI) for this pair's offspring is 41%, which is higher than the average breed COI of 35% for Embark-tested Saarloos Wolfdogs.

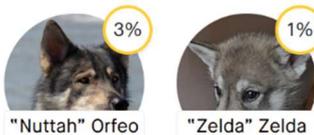


Expected litter COI (eCOI)

eCOI: 11% · Average breed COI: --%

Genetic coefficient of inbreeding (COI) measures the proportion of a dog's genome in which the dam's and sire's genes are identical by descent. All else being equal, a lower COI has been correlated to improved health and a longer lifespan ([Bannasch et al 2021](#), [Yordy et al 2020](#)).

The expected coefficient of inbreeding (eCOI) for this pair's offspring is 11%.





At the moment, the average kinship, the COI, of the Saarloos wolfdogs tested in Embark is around 35%. This value is still well above the threshold (10%) and it is much higher than that of most other dog breeds.

Only with the introduction of new blood can the close relationship be restored and the average inbreeding coefficient will increase by less than 0.5% per generation. This increase is a percentage that geneticists find acceptable.

At the DNA level, we can now make choices that are more accurate in terms of inbreeding and diversity than we used to be able to make based on the pedigrees. But the family tree remains a valuable addition.

Inzet outcross

- A maximum of 3 dogs are selected from the G-0 x SWH combinations with which one further breeding is allowed.
- From the G-1 x SWH combinations, a maximum of 5 dogs may be used per litter (regardless of the distribution by sex). These dogs may be responsible for a maximum of 7 litters together.
- From the G-2 x SWH combinations, all animals that have been approved may be used.
- Occasional crossbreeding From the F1/G1 onwards, crossbreeding with another outcross dog is allowed occasionally. A maximum of 5 dogs may be used per litter from these litters (regardless of the distribution by sex). These dogs may be responsible for a maximum of 7 litters together.
- Double coverage Double coverage within the outcross project is allowed under certain circumstances in consultation with the selection committee and after approval of the board.
- Breeding obligation for females For females from an outcross litter, the breeding obligation can be reduced to 60% – if necessary – provided that there are more than two females in the litter.
- Backcrossing Dogs from outcross lines may not be backcrossed in the same line up to and including G3/F4.

The dogs to be used for the outcross must all comply with the VFR (Association Breeding Regulations) of the AVLS. All of the above points are the responsibility of the selection committee.

From FCI to look-a-like

The AVLS also wants to use dogs for the outcross that come close to the breed standard in both appearance and character, the so-called look-a-likes. These dogs are not registered in the NHSB studbook. At the request of the AVLS, the Dutch Kennel Club has opened the studbooks for these look-a-like dogs.

- For dogs that meet the breed standard of the Saarloos wolfdog to a reasonable extent, but that are not registered in an F.C.I. recognized studbook and are valuable in the opinion of the AVLS. These dogs are included in the G-0 register.
- For offspring of males of another breed that have been selected by the AVLS and that have been mated to selected Saarloos wolfdog registered in the NHSB. These offspring are included in the G-1 register.

Offspring, once registered in the appendix of the main studbook, can participate in all show competitions and obtain all qualifications.



Legal safeguards

The population of Saarloos wolfdogs is small. The AVLS wants to give everyone, member or non-member, the opportunity to participate in the outcross program. The Saarloos wolfdogs bred within the outcross program of the AVLS will continue to fall under the rules of the outcross program of the AVLS at all times.

The owner of an outcross puppy signs a special purchase contract. This clearly states what the obligations of the owner are. The most important points are that the rules of the plan of action are adhered to, come to the inspection days, have the required medical examinations take place and are prepared to breed with the puppy in the future, if the advice is positive.

It is of the utmost importance that the buyer of an outcross puppy is aware of this responsibility and obligations. Not only for their own puppy, but also for the breed. After all, the puppy is particularly valuable to the population with its varied gene package.



Conclusion

We can conclude that we are on the right track, but we are still at the beginning. The droplet method we started with will be alternated with synthesis (the cross-breeding of backcross offspring) to introduce more genetic variation into the population and to maintain that variation for longer. For good population management, we use a combination of family tree analysis and Embark (molecular genetics). We believe that good management is necessary to keep the Saarloos Wolfdog genetically healthy and to ensure their adaptability for future generations.

The AVLS started with outcross at a time when there was a lot of resistance in cynology to introducing new blood into a pedigree dog population. Today, the wind has turned somewhat from complete rejection to cautious acceptance, but a lot of water will still have to flow through the Rhine before everyone is convinced of the need. In the meantime, we try to breed our Saarloos wolfdogs as healthy as possible. A healthy Saarloos wolfdog with a fine character, that is what the AVLS and its members stand for. Now and in the future!

The selection committee and the board dated 30 October 2025

President AVLS