Inbreeding and kinship in harness horses

Together we are the solution

In recent months, the Working Group on Inbreeding and Relation has shed light on the possibilities of getting the inbreeding and kinship problems under control within harness horse breeding. An important conclusion? That despite changes in strategy and policy, the choice of breeders will ultimately determine success.

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The challenge for harness horse breeders is well- known: we must stop the increase of the inbreeding and kinship percentage. The harness horses are a relatively small population. Where there were more than 1,500 foals per year registered in the glory days, now that's no more than about 500 to 600. Within this population a number of bloodlines and sires are frequently used. If we look at the last few years, about six stallions are listed on paper as supplier of about 50% of the foals born. The three most popular stallions are each responsible for about 10% of the foals per year. In addition, the frequently used stallions are often above average related to the population or, due to their frequent use, will become so. All this has resulted in a continuing upward trend in inbreeding and relationship percentages. The governmental agency responsible for the recognition of studbooks (RVO) - has rang the alarm bells and asked the KWPN for an action plan: how does the registry intend to turn the tide? Previously mentioned dangers of inbreeding, like the health of the harness horse, remain, and get an extra dimension. The government is now asking us to take steps: if this does not happen, even the formal recognition of the harness breeding direction will be jeopardized.

Broad brainstorm

This subject of inbreeding is not new and much has already been done to raise awareness among breeders. Information via the online channels and in this magazine, as well as through policy changes such as the admission of registered B mares to the inspections under certain conditions. The "inbreeding tool", whereby a breeder can calculate for his own mare which stallion can help reduce the relationship percentage, has been online for some years now. Since these steps have proved inadequate and the government has asked the KWPN to come up with a substantiated plan, the Inbreeding and Kinship working group was set up at the end of last year (see box). The Breeding Council is represented in this, but active breeders were also asked to participate in a number of brainstorming sessions. The objective was: develop plans that can support stabilization and initiation of a decrease in the increasing inbreeding in the harness horse

population and elaborate these in a Plan of Action towards the RVO. And consequently also the formulation of clear changes in the (selection) policy.

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Achieve and maintain profit

Analyses has shown that if there are 30 foals per year added to the population, of which the relationship of one of the parents is 0%, the inbreeding increase can almost be stabilized. In reality, only a few parent animals are 0% related to the population, but it does indicate the influence of adding low-related horses to the active breeding population. The working group was aware that a multi-year policy is the only option, because the trend cannot be reversed in one year and the "gain" in inbreeding reduction can only be maintained through continuous application of the measures. It is also important to increase the number of (low-related) harness horses that produce offspring, because a larger population offers more opportunities to remain vital. Improving the distribution of breeding sires was a point of attention. Encouraging breeders to make matches that help with the inbreeding problem and provide even

more information to increase awareness are important links. But ultimately, breeders of course will make their own choice in breeding.

Increase the number of sires

The meeting in a larger committee has led to a number of plans. One of these plans has let the Breeding council propose to enable individual recognition of harness horse stallions. In the other breeding directions, this has been possible for some time already. The goal is to recognize stallions that have delivered extraordinary sports performances, or produce offspring that do so, after which their foals are registered in the foal book with the KWPN. Stallions to be individually recognized could be sought within the, for example, Hackney, Saddlebred or KWPN-NA registries. Those stallions are often stationed abroad. Individually recognizing them offers opportunities to get such a stallion to the attention of Dutch breeders, without them having to perform a performance test which presents practical challenges. Of course, maintaining the current selection system for stallions is still the main goal and one must strive for as many stallions as possible taking the regular route. The Member council has recently approved this plan. A number of other plans is still under discussion.



Register harness horse crosses

Until now it was not possible to register crossings between riding horses and harness horses under the breeding direction of harness horses, they were automatically registered as riding horses. This makes it difficult to get a lower relationship percentage through experiments with other breeding directions, and eventually to breed back to the harness horse direction. It concerns about 50 to 60 foals per year, which are currently automatically registered in the dressage or jumping horse breeding direction. The Member council has approved the plans to give the breeder the choice in these cases in which breeding direction he wishes to register the foal. This choice was already possible in crossings with Gelders horses.

Intensifying information and making it easier for breeders to obtain information were also discussed. Examples of this are the article about the available lower related stallions in the March KWPN Magazine, and the publication of a list of breeding values and relationships of the approved stallions on the KWPN website. The relationship percentages of the mares and foals that will be offered for inspection will be published in the catalog from next season and there are some changes in the KWPN Database that will make access to that information easier. For example, we are working on an improved breeding advice program in the database.

Encourage breeding

A larger population contributes to a healthier population. It is therefore important that the harness horse breeding is certainly not reduced. The image of the harness horse, the harness sport and also the success of the harness horse in other disciplines of the equestrian sport are things that can contribute to this. Regarding the latter, there are many harness horses or horses

with harness horse bloodlines in their pedigree active in international top sport. Perhaps the best-known example is Laura Graves' KWPN ambassador Verdades (Florett As x Goya). She won many prices with him, of which team bronze at the 2016 Games. There are in particular a lot of harness horses active and very successful in the driving sport. We can be proud of the fact that our harness horse breeding knows how to produce such top athletes, and we can radiate this pride more, also in publications through the channels of the KWPN.

The Breeding Council is also discussing the option of converting this pride into rewards within the predicate system: making it possible to award predicates based on sports performance in other disciplines. This can have a stimulating effect on breeding, just like the breeder premiums that were already awarded by the "Friends of the KWPN" to the breeders of the winner of the Oregon Trophy and the three stallions from the champion inspection at the Stallion Show in Den Bosch. There are also initiatives being developed to financially compensate breeders who make positive choices in the context of kinship reduction. In addition, several action points are planned in the near future. It is clear that one ultimate solution does not exist; tackling inbreeding and kinship in your own mares mainly comes down to customization. You as a breeder can contribute to the preservation of the harness horse. You have the key! •



Laura Graves and Verdades (Florett As x Goya x Renovo)