

HÄSTEN I SKÅNE

The Brösarp project PROGRESS REPORT



The Brösarp project: young horses on large, hilly fields

Hästen i Skåne, a non profit organization promoting the well-being of horses in the region, will, through collaboration with other stakeholders, investigate how young horses develop when given the opportunity to move freely across large, hilly lands with varying terrain. This year, we are following approximately 25 young Icelandic horses and SWB jumping horses aged one to two years old. Their physical condition and development are evaluated through visual inspection at least once a day. Meanwhile, selected horse behavior is carefully studied around the clock with the HoofStep system. Although the number of horses in the different groups is too small to draw definite conclusions, it's useful to note major differences and trends.

The current pilot project appears to be yielding promising results, and the group of collaborators intends to carry out a larger and more in-depth scientific project in the fall to increase knowledge about horse breeding in semi-wild, natural conditions.

Ultimately, the goal is to take advantage of Sweden's unique land resources to create breeding programs that produce sustainable competition horses with attractive pedigrees for a worldwide market that responds to current buyer demands. Provided the recently initiated pilot projects run smoothly and receive further research funding, the researchers aim to increase the number of jumping horses in the herd by 2020, possibly also with pregnant mares.



**To view
the video,
click!**

This year the group is mainly following the herd visually and testing an automated monitoring system. Ideally, individual horse owners will soon be able to follow the health status and activities of their horses on their smartphones. In the near future, people purchasing high-value horses could even request documentation about the horse's birth and early life experiences, a sort of "breeding journal."

Anyone buying a horse - whether young or old - should be aware of what they're acquiring. After all, automobile buyers receive documentation on meters, servicing and repairs, etc. It's therefore surprising that currently no documentation or information is provided on how horses were raised or used. Since many horses today are worth more than used cars, is it time to demand a "horse journal" to conclude horse sales?



Warmblood jumping fillies in the Brösarp project

Mitanni (SWB), born 2017
by Karmel van de Watering - Shiva by Stakkato
Push Play M&M (40) (SWB), born 2018
by Gamelus R - Caprifol by Cardento
Ask for Carmenzita (SWB), born 2017
by Karmel van de Watering - Chianti by Cortez
U-2 Dragon Lady LVST (SWB), born 2018
by Karmel van de Watering - Omega by Corrado
Hedvig (SWB), born 2018
by Hip Hop - Philipa by Waldes

Results to date

BACKGROUND: On May 15, a herd of horses was released in Brösarps Backar (a particularly hilly pasture measuring about 70 hectares), some of which equipped with the HoofStep solution for monitoring equine welfare. The purpose was to measure the long-term effects of allowing young horses to develop roaming on large, hilly terrains from a sustainability perspective.

As a basis of comparison for the study, previously collected HoofStep data was obtained from horses in two other kinds of

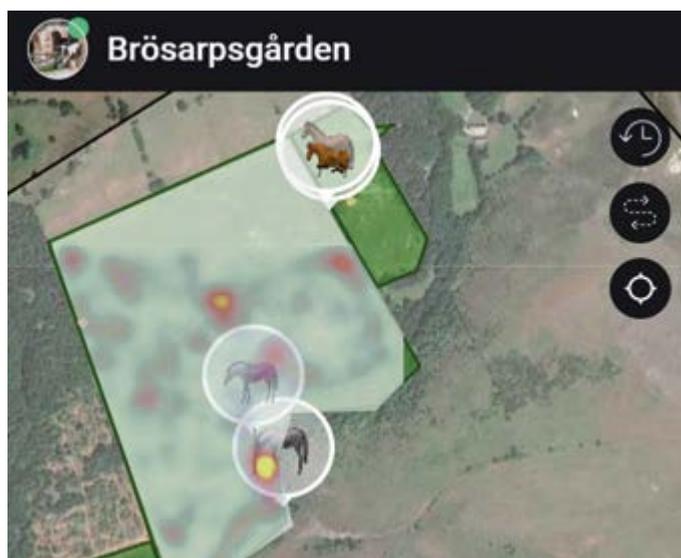
management systems: free-roaming in enclosures of about 2 hectares, 24/7 (one Icelandic horse and one warmblood), and individual pastures of 0.5 hectares during the day and a box stall with access to hay at night (two warmbloods).

This is the first pilot study comparing objective data on a wide variety of points, including activity, rest, foraging, and distance traveled, across three different horse husbandry systems.*

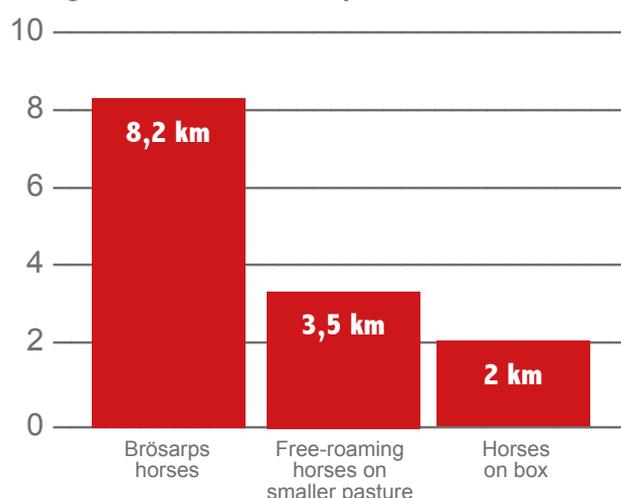
Summary of partial results

At this stage of the study, we've observed that:

- The horses at Brösarp show more than twice as much activity as the reference horses in the smaller free-roaming designs and more than four times as much as those in the box stall/paddock design. "Activity" is defined as a collective measure of all of each horse's movements, which, in addition to the horse's maintenance level, consumes energy.
- The horses at Brösarp travel a distance corresponding to horses in the wild, averaging 8 km/day. The reference horses in the small free-roaming design move about half as far during the day (with a setup that requires them to move frequently—between water, feeding, and resting areas, for example). The reference horses in the box/paddock design move a fourth as much, about 2 km per day. In order for the reference horses in the smaller free-roaming design to reach the activity level of the horses at Brösarp, they would have to be exercised approximately 1.5 hours on hilly terrains in all gaits.
- The horses at Brösarp and the reference horses all chew on average about 11 hours / day, which is close to the 14-18 hours that horses in a wild/feral natural state devote to both seeking food and moving. However, the reference horses do not show as much activity and movement to seek food as the horses at Brösarp.



Average number of km/day



Pasture Patterns

The creation of heat maps reveals how the Brösarp horses use the pasture areas. They have clearly preferred sites: at the gate, at the water source, and in the middle of the pasture on a breezy hill with a view. The herd follows a distinct daily movement pattern.

**Note: An acknowledged limitation is the age difference between the young horses (1-2 years old) in the current pilot study and the adult horses from which data had been collected in previous studies. Ideally we will have data from horses of the same age in the two other husbandry settings in the future. The currently available data serves as a basic comparison only but nonetheless point to a considerable gap worth further investigation with matched controls.*

Conclusion

These primary results* suggest that horses need large, hilly pastures for natural movement similar to horses in a wild/feral state. Horses kept in smaller pastures need to be worked at least 1.5 hours to reach an equivalent movement level. Horses kept in box stalls with daily access to pasture must be worked considerably more than that.

Our work indicates that horses kept in smaller free-roaming pastures and in box/paddock designs consume the same

amount of food but expend far less energy. If the objective is to manage horses according to conditions consistent with their natural ethology, this could be a point of further investigation and reflection.

A current debate concerns the detention of horses in confined areas leading to too little movement. This pilot study is scheduled to continue for a few more months; it will add the measure of energy consumption as a further focal area.



Development project in Hästen i Skåne

Hästen i Skåne runs three high-priority development projects:

- (1) Skåne entrepreneurial company day
- (2) Horse-assisted therapy in human health care (“equitherapy”)
- (3) Breeding of sustainable sport horses

The overall goal of the third project is to enable Sweden’s unique land resources for natural horse breeding to develop over the long term to a significant competitive advantage.

In order to attract Swedish and foreign horse breeders to place their horses in grouped breeding programs on free-roaming pastures on these lands, quality-certified breeding centers (“AUC”) need to be developed. Such centers must have access to competent personnel, veterinary expertise for artificial insemination and embryo transfer, and several recipient mares. In addition, there must be satisfactory and continuous monitoring of all horses.

If the creation of quality-certified breeding centers in different parts of the country is to become a reality, projects related to “progressive” breeding that are already in progress must be identified and coordinated. Aiming to stimulate development, Hästen i Skåne has initiated a series of seminars to encourage the use of embryo transfer with the aim of producing foals from internationally attractive mare bloodlines.

Furthermore, in cooperation with Brösarpsgården, HoofStep and Agria, Hästen i Skåne has started a pilot project on sustainable breeding of young horses on Brösarpsgården’s large, hilly pastures.

We hope to arrange a symposium next spring on breeding, reproduction, and natural breeding of quality horses, with a goal of stimulating ongoing activities for collaboration and further development over the long term to make this center an attractive quality-certified breeding center (AUCs).



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