

Preservation of Native Horse Breeds: Breeding Adapted Horses to their Environment



Thematic Area:

Environmental sustainability.

Priority: How can biodiversity be improved while maintaining equine activities?

Need: Introduction of more effective ways to protect native horse breeds and preserve their genetic diversity.

Solution EU Number: BD-5.

Content of the Solution:

Acquire animals that are used to living in the mountains and in the forest (e.g., Garranos, Konik polski, Hucul horses) to better withstand harsh conditions. Preservation of autochthonous horse breeds is essential for genetic diversity and environmental adaptation. Combining ecosystem services with regional breeds and extensive production systems in areas offers ecological and economic benefits.

Key Contacts:

- Studbooks.

Case Study: Not available.

Reasons for Implementing this Solution

To maintain and promote native horse breeds while supporting traditional farming systems and controlling bush encroachment, which reduces wildfire risks and help to maintain landscape.

Description of Solution Strategies

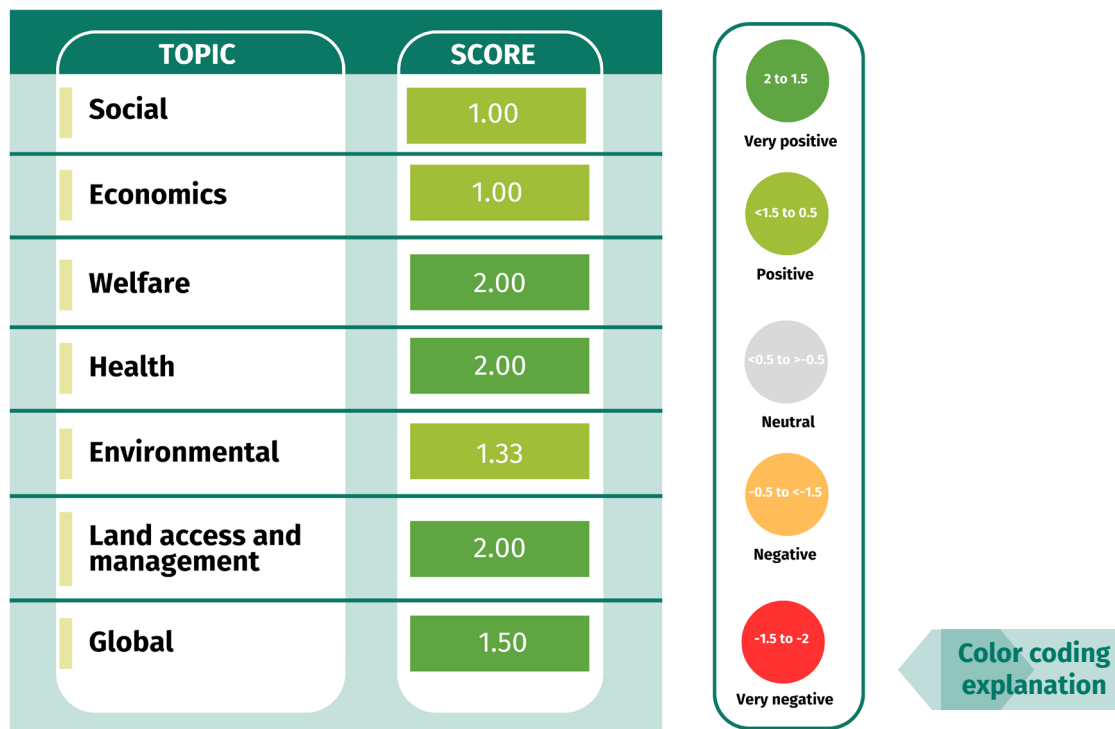
The solution involves selecting resilient local horse breeds adapted to their environment as mountain environments for example, implementing sustainable grazing practices to restore biodiversity, and supporting rural development by combining ecosystem services with traditional farming systems.

Implementation Steps

1. Choose horse breeds adapted to the local environment (e.g: Dülmener Wildpferd or Thüringer Waldesel for Germany, Finnhorse for Finland, Burro de Miranda or Garrano horse for Portugal, Burro Zamorano or Pura Raza Galega for Spain, Pottok or Baudet du Poitou for France, Hucul horse for Romania, Konik for Poland, “Franche Montagne” horse for Switzerland and Belgian or Flemish draft horses for Belgium).
2. Identify and evaluate potential areas for free-range or semi-free-range farming.
3. Procure suitable animals, ensuring they are healthy and resilient.
4. Monitor the animals’ health and grazing impact, providing supplementary feed if necessary.
5. Develop partnerships with local communities to share land and costs.

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How Will this Solution Impact the Performance of your Farm ?



Socioeconomics: This solution will support the socioeconomic performance of your farm because it combines strong social outreach with reduced workload due to horses' freedom of movement, though this increased freedom makes control more challenging, resulting in a neutral overall impact on working conditions.



Health & Welfare: With this solution the farm has the potential to perform better as native breeds are usually more robust and resilient. Free-living conditions are the most welfare-friendly keeping system for horses.



Environmental Sustainability: This solution has a positive effect on farm performance related to environmental sustainability and a very positive effect on pasture management. Solution with a strong positive impact due to the usage of land that otherwise could not be used sustainably. This solution helps to protect and maintain traditional biotopes in vulnerable areas (such as mountain regions, archipelagos etc.), it helps to maintain genetic variability in endangered local horse breeds. At the farm level it improves possibilities for better access to grasslands.

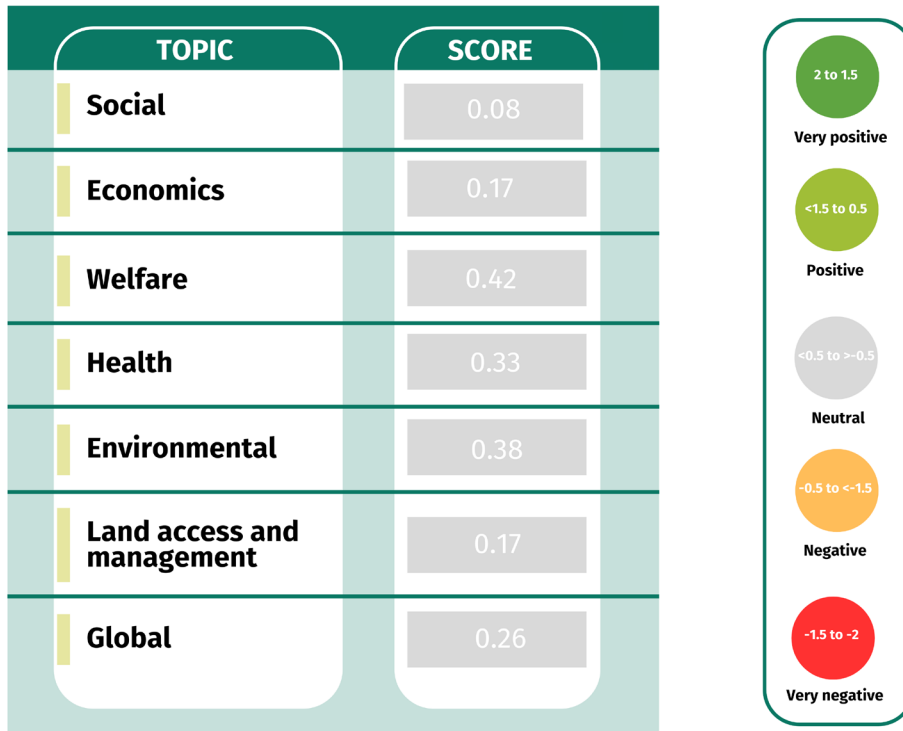
So globally the effect of this solution is positive on the performance of the farm.



Technical Sheet for Solution Implementation

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How Will this Solution Impact the Resilience of your Farm?



Socioeconomics: This solution won't influence directly the socioeconomic performance of the farm facing external challenges.



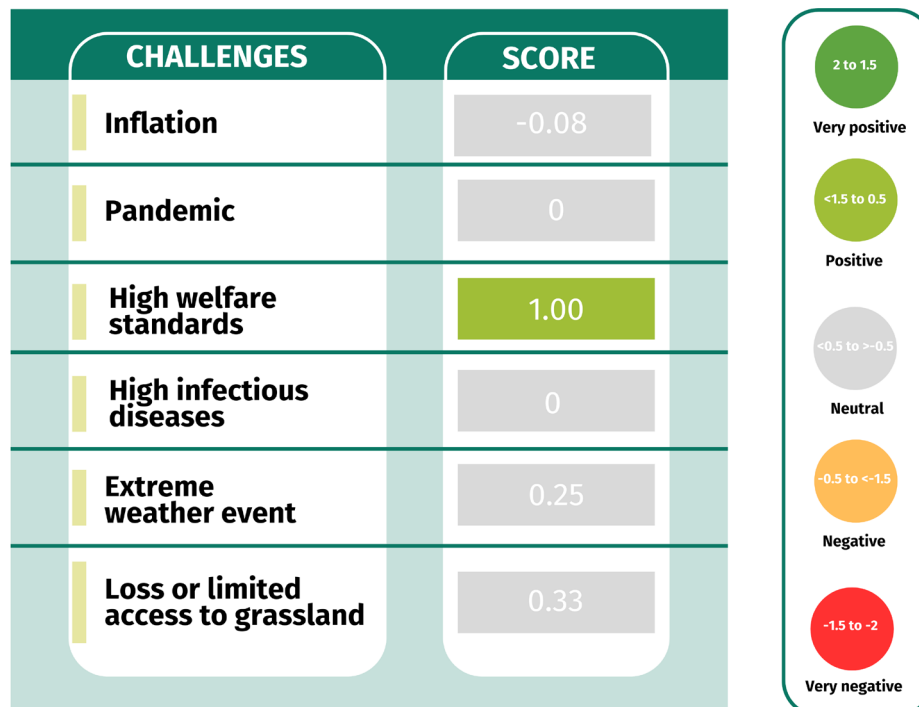
Health & Welfare: With this solution the farm has the potential to recover from external challenges from health and welfare point of view as native breeds are usually more robust and resilient. Free-living conditions are the most welfare-friendly keeping system for horses. However, it may not be sufficient to help the farm when faced with infectious disease.



Environmental Sustainability: This solution has a neutral effect from environmental point of view for the potential to recover from defined external challenges.

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How Can this Solution Help your Farm Cope with Specific External Challenges to Become More Resilient?



Inflation & Social Crises: This solution won't have direct effect on the global performance of the farm facing inflation or pandemic challenge.



Welfare & Diseases: With this solution the farm has the potential to respond better to high welfare legislation, since native breeds are usually more robust and resilient. Free-living conditions are the most welfare-friendly keeping system for horses. So, breeding native breeds in this system will surely respond to welfare and health challenges. However, free-living conditions can be challenging without human monitoring for potential welfare incidents like depredation, hoof neglect or feed scarcity. Without monitoring, potential outbreak of infectious disease can be overlooked.



Climate Change & Access to Land: This solution will have somewhat neutral overall effect on farms' ability to recover from challenges related to extreme weather event (abnormally high/low temperatures, drought excessive raining) or limited access to grassland because direct effects could not be identified. Instead, there were some positive effects on other thematic areas. But we can notice that native breeds can be more resilient to extreme weather event and can valorize lands in areas that are not used for other agricultural purpose so they can help to be more resilient in case of limited access to grasslands due to competitions with other agricultural sectors for example.

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Cost-Benefit Analysis

Costs

Socioeconomics:

- Cost of acquiring animals.
- Land rents (if applicable).
- Feeding supplements.
- Monitoring animal health.
- Loss of animals in free-range systems.
- Not always easy to find a way of economic valorization (meat or milk or leisure) for these type of breeds.

Health & Welfare:

- Monitoring for health issues.
- Additional care and feeding.
- Risk of predation.

Environmental Sustainability:

- Potential forest damage.
- Spread of weed seeds.

Cooperation between farms:

- Coordination for land sharing.



Benefits

- Community engagement through traditional farming.
- Greater market value for local breeds.
- Increased tourism opportunities.
- Preservation and promotion of local breeds.
- Economic significance for rural development.



- Improved adaptability in harsh conditions.



- Reduced bush encroachment and fire risks.
- Biodiversity restoration and carbon sequestration.
- Sustainable shrubland management.



- Reduced costs through shared resources.
- Strengthened rural communities.



Technical Sheet for Solution Implementation

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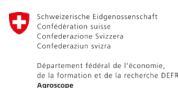
Additional Resources

Websites

- https://www.cm-viana-castelo.pt/wp-content/uploads/2023/10/Garrano_O_Bravo_Cavalo_da_Montanha.pdf

Publications

- Lopez et al., 2017. Diet selection and performance of horses grazing on different heathland types. Animal Volume 11, Issue 10, 2017, Pages 1708-1717. <https://www.sciencedirect.com/science/article/pii/S1751731117000465>
- Osoro et al. 2012. Grazing systems and the role of horses in heathland areas. In book: Forages and grazing in horse nutrition. (pp.137-146). Edition: European Association of Animal Production, publ No. 132. Wageningen Academic Publishers, The Netherlands. Editors: Saastamoinen M., Fradinho M.J., Santos A.S., Miraglia N. [DOI:10.3920/978-90-8686-755-4_15](https://doi.org/10.3920/978-90-8686-755-4_15)
- Doboszewski, P., Doktor, D., Jaworski, Z., Kalski, R., Kulakowska, G., Lojek, J., ... & Górecka-Bruzda, A. (2017). Konik polski horses as a mean of biodiversity maintenance in post-agricultural and forest areas: An overview of Polish experiences. Anim. Sci. Pap. Rep, 35(4), 333-347. <https://archiwum2.biebrza.org.pl/plik,4148,konik-polski-horses-as-a-mean-of-biodiversity-maintenance-pdf.pdf>



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Ideas to Animate a Workshop About the Solution

- Ask breeders/advisors specialized in husbandry/grazing systems/ecosystem services to sponsor the workshop.
- Find a model farm where the workshop can take place.
- Allow participants to engage in hands-on tasks to understand the system.

Proposed Structure for the Workshop on Sustainable Grazing with Local Horse Breeds

1. Introduction to the solution

- What is the sustainable grazing solution?
- Key features: using adapted breeds, ecosystem services, and traditional farming systems.
- Examples of adapted horse breeds like garranos. You can print a map of Europe or of your country and ask participant to replace native breeds in the correct country or region.

2. Benefits of the solution in rural areas

- Preservation of local breeds and ecosystems.
- Economic opportunities for less-favored regions.
- Contribution to wildfire prevention.

3. Practical Applications

- Managing grazing in shrubland areas with dry or lactating mares.
- Seasonal adjustments for feed supplementation.
- Collaborative grazing systems across farms.

4. How to Choose Suitable Breeds and Areas

- Evaluation of environmental conditions.
- Selection of breeds adapted to local ecosystems.

5. Hands-On Demonstration

- Live demo of herd management in grazing areas.
- Techniques for monitoring animal health and grazing impact.
- Showcase of land-sharing agreements in action.

6. Maintenance and Troubleshooting

- Monitoring plant biodiversity and soil conditions.
- Preventing overgrazing and managing invasive plants.



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7. Case Studies and Real-World Examples

- Farms using garranos or similar breeds for sustainable grazing.
- Success stories of community collaboration.

8. Cost Analysis and ROI

- Comparing costs of free-range farming vs. traditional systems.
- Long-term economic and ecological benefits.

9. Q&A Session

- Address specific challenges faced by participants.

10. Wrap-Up and Resources

- Summary of key points and workshop highlights.
- List of resources for further learning (e.g., websites, suppliers, funding opportunities).
- Networking opportunities with other participants and experts.