Technical Sheet for Solution Implementation

Early Potential Profiling & Strategic Orientation of Young Equines

Thematic area: Socio-Economic Performance.

Priority: How can farm profitability be improved?

Need: Breeding: How to improve your profitability?; What profitability for breeding? What models?; How to achieve financial balance in breeding?; How to implement a balanced economic model?

Solution EU number: PRO-06.

Content of the solution:
Early detection and strategic early sale of low-potential foals help breeders focus on high-potential sport horses, enhancing herd quality, profitability, while saving time and costs.

Reasons for Implementing the Solution

The objective is to minimize investments of time and financial resources in horses with limited future added value by identifying them at an early stage. These animals can then be sold young or redirected into an alternative market segment, before significant costs are incurred.

Description of Solution Strategies

This strategy is based on the early identification of horses with lower athletic or commercial potential and the proactive implementation of a targeted sales or redirection approach. By evaluating young horses at an early age, it becomes possible to differentiate individuals with high-performance prospects from those whose future added value in sport or breeding is likely to remain limited.

The assessment combines subjective and objective criteria, including conformation, movement quality, jumping technique (free jumping), rideability,and overall athletic aptitude. These traits, except for conformation, may be reliably assessed not earlier than in 3-year-old horses. Equally important is the evaluation of temperamental traits such as fearfulness, sensitivity, energy and adaptability to changing environments as these factors strongly influence future training success and market value. It should be noted that innate temperamental traits are strongly influenced by environmental factors, such as gentle or harsh handling, feeding practices, social interactions, and opportunities for free movement. Moreover, learning ability is of great importance when assessing future suitability for a given type of use. So, they must be closely observed during the rearing of the horse.

In addition, early veterinary health screening can be integrated into the decision-making process. Diagnostic measures such as clinical examinations and radiographic imaging help detect health conditions that may limit a sporting career, including orthopedic issues (e.g. OCD, cysts), respiratory problems, heart murmurs, or laryngeal disorders (roaring). Depending on the

issue, the earliest age of the horse at the assessment should be consulted with a veterinarian for the examination results to be valid. Based on the combined results of performance, behaviour, and health evaluations, horses with limited sporting potential can be marketed earlier or redirected into suitable alternative careers, thereby reducing long-term costs and optimizing overall herd profitability.

Implementation Steps

1.Early Performance Observation: Observe foals and young horses in free movement to assess natural athletic ability, coordination, and scope. Free-jumping, for welfare reasons, can be tested not earlier than in 2 years-old but more effective assessment results can be made in three-year-old horses.

2. Temperament and Character Observation: Observe the animals' temperament: fearfulness, sensitivity, energy and adaptability and character: reaction to humans, submissiveness, aggression during daily care. Objective behavioural tests can be made by specialized scientific teams. For this, contact your studbook/breeder's association.

3. Conformation and Functional Analysis: Evaluate physical build, limb alignment, and functional correctness to identify structural limitations that may affect long-term soundness.

4. Veterinary Health Screening: Conduct early clinical and diagnostic examinations (e.g. radiographs) at an appropriate age to identify health issues that could compromise future performance or increase training risk.

5. Strategic Decision and Market Orientation: Based on the collected data, identify horses with the lowest athletic potential and either sell them at a young age or redirect them into appropriate alternative markets.

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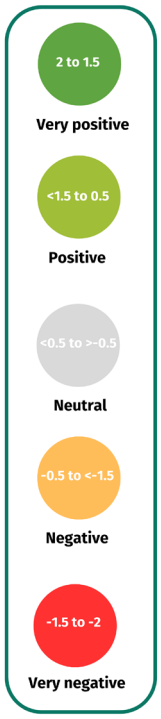
How Will this Solution Impact the Performance of your Farm?

TOPIC	SCORE
Social	0.50
Economics	1.00
Welfare	0.34
Health	0.34
Environmental	0
Pasture access and management	0.67
Global	0.42



Traffic light explanation

Socioeconomics: This solution will support the social performance of the farm because focusing on horses with higher performance potential strengthens the professional image of the farm as selective, transparent, and quality-oriented. Managing fewer horses reduces workload pressure, allowing better care, clearer communication, and more time dedicated to promoting promising animals, which enhances credibility and trust among clients and partners.

This solution will support the economic performance of the farm because early identification and sale of low-potential horses reduce long-term maintenance and training costs while concentrating resources on animals with higher expected returns. Although early assessment requires time and expertise, it ultimately saves time and expenses in the future, increases overall herd profitability, and improves the intrinsic economic value of the breeding program, even if the direct effect on farm capital remains uncertain.

Health & Welfare: This solution will have neutral effect on the health performance of the farm because many health problems have their source in environmental factors, like infectious disease or injury. However, the selection against genetic diseases or inappropriate conformation may decrease the incidences of genetically-related diseases and improve the conformation in the future breeding stock. It may be also beneficial, when early detection of health problems will be treated and the animals could enjoy painless movement and generally, a healthy state.

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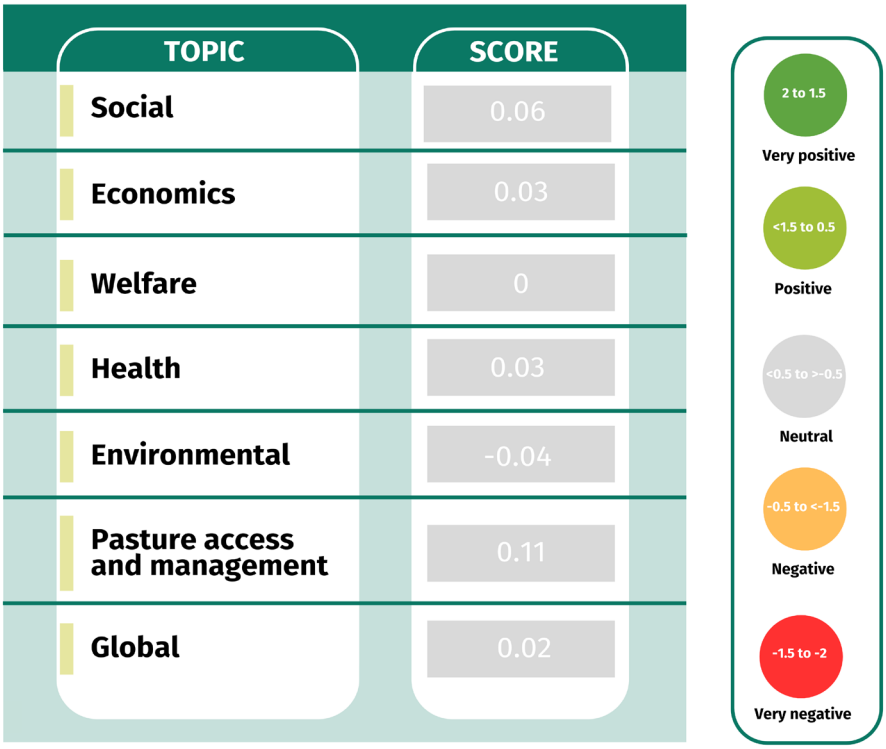
This solution will also have a neutral effect on the welfare performance of the farm because it may not translate into welfare-friendly rearing and keeping conditions, such as social interactions or long duration of free movement. As a result, the solution may not fulfil the criterion of a positive emotional state resulting from the assurance of the 3Fs' criteria. However, it may be beneficial when early detection of health problems results in a successful treatment, since the lack of health problems directly contributes to a better welfare state.

Environmental sustainability: This solution will not have effect on the environmental performance of the farm because impacts are quite limited. In a situation where there are too many equines for the available area, this solution reduces the intensity of the human impact on the environment on the farm-level. In the big picture, need of resources and space does not change, because foals are raised and trained on another farm.

This solution will support on the land access or management performance of the farm because if there too many equines in relation to the size of the farm, this solution helps to alleviate problems caused by excessive animal density. It enables better grassland management practices.

How Will this Solution Impact the Resilience of your Farm?



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Socioeconomics: This solution will not impact social performance of the farm facing external challenges assessed because its effects on workload, flexibility, and day-to-day organization remain largely internal and technical. While having fewer horses can ease management during staff shortages or stressful periods, this does not substantially change the farm's social outreach, public image, or relationships with clients and the wider community when facing inflation, pandemics, or other external shocks.

This solution will not impact economic performance of the farm facing external challenges assessed because its financial effects are highly context-dependent and often offset each other. Although reduced herd size can lower workload and justify prices in inflationary periods, external disruptions such as pandemics, disease outbreaks, or extreme weather can delay planned sales, generate unexpected feeding, health, or biosecurity costs, and increase financial uncertainty. As a result, potential gains from early sales are frequently counterbalanced by new constraints, leading to an overall neutral effect on economic resilience.

Health & Welfare: This solution will not impact farm health performance, as it does not directly reduce pain, mortality, or the need for medication when the farm is exposed to different external pressures. However, regular veterinary checks may improve the animals' health status if the applied treatment is successful and durable. In contrast, when health issues occur more frequently, pain levels and the overuse of veterinary drugs may increase.

Similarly, this solution will not impact farm welfare performance when exposed to external pressures, as it does not directly improve housing under welfare-friendly conditions that promote a positive emotional state in animals. However, by selling non-promising animals, the farm may be able to provide better welfare conditions, such as increased pasture availability per capita for the best youngstock.

Environmental sustainability: This solution will not impact environmental performance of the farm facing external challenges assessed because it has very limited effect on environmental sustainability, as the assumption is that this solution is already in use when farm faces the challenges. If strategy fails and foals are not sold before extreme weather event, their sales can be delayed. This could have negative effects on climate change mitigation and adaptation, halting biodiversity loss and water management on farm level.

This solution will not impact land access or management performance of the farm facing external challenges assessed because because its effects on land management are quite limited. Nevertheless, thanks to the sale of the foals, the equine farmers have less animals and therefore the management of land could be easier when farm is facing challenges.

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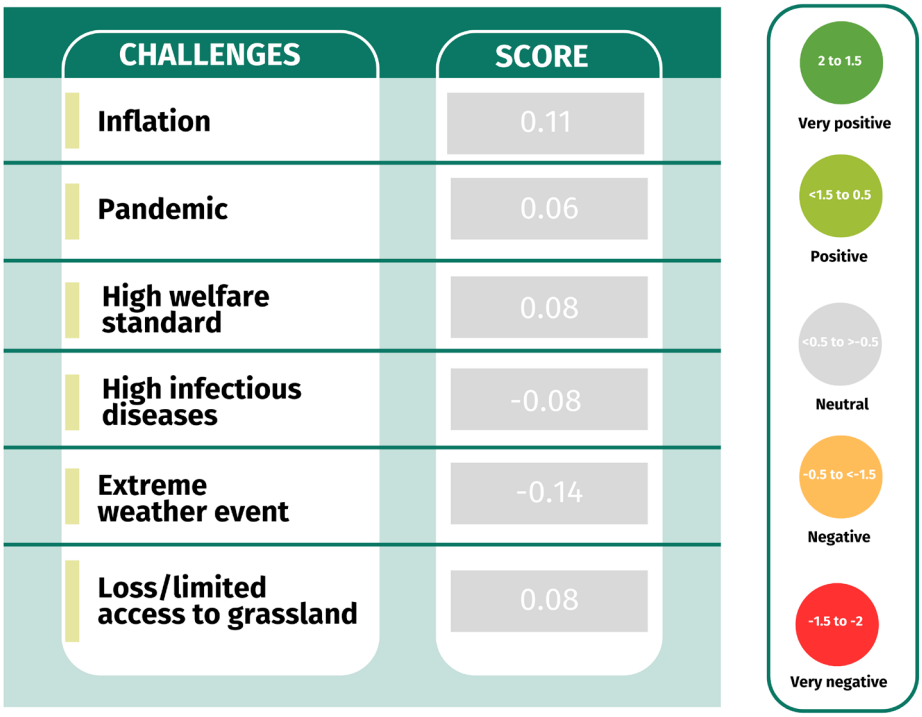
How can this solution help your farm to face specific external challenges to be more resilient?



Inflation & Social Crises: Social challenge: This solution will not impact the global performance of the farm facing pandemics because selling foals earlier mainly affects internal herd size and workload management, without significantly influencing social outreach, client relations, or the farm's role within the community during a health crisis. Economic challenge: This solution will not impact the global performance of the farm facing inflation because any financial benefits from reduced workload and adjusted sale prices are often offset by market uncertainty, fluctuating demand, and rising input costs, resulting in no clear or stable improvement in overall economic resilience.

Welfare & Diseases: Health challenge: this solution may not support the global performance of the farm across all three areas when facing an infectious disease challenge. Although well-conformed and disease-free equines are healthier, the socioeconomic, environmental, health and welfare priorities may not be fulfilled using this solution when confronted with a sudden outbreak of infectious disease. Then, it does not prevent the pain or overuse of veterinary drugs. Welfare challenge: this solution will also not affect the global performance of the farm facing high welfare standards legislation, because, despite recent animal husbandry politics encouraging breeding stress-resistant animals, the negative effect on the emotional state due to inappropriate keeping condition cannot be justified. Then, keeping on farm only healthy and fit animals may not outweigh the problems related to compulsory increased welfare standards.

Climate Change & Access to Land: Environmental challenge: this solution will not impact the global performance of the farm facing abnormally high temperatures and/or drought because impacts are quite limited if the foals have been sold before the event. On the other hand, if they are not sold and there are many foals on the market due to drought, it may be difficult to sell them at a good price. The price of hay is likely to increase due to draught which will lead higher production costs. Too many horses in a limited space causes them psychological stress. A higher density of horses in the fields leads to overgrazing and a reduction in plant biodiversity, and during dry periods, a larger number of horses consumes water resources faster than planned.

Land access/management challenge: this solution will not significantly impact the overall performance of the farm facing loss of or limited access to agricultural land, as its effect remains quite limited. Nevertheless, thanks to this solution - sale of the foals, the equine farmers have less animals and therefore the management of land could be easier, especially when access to land is limited.

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Cost-benefit Analysis

Costs

Socioeconomics:

- Emotional stress for breeders associated with selling foals of lower perceived quality at an early age.
- Potential negative public perception or reputational risk if a farm is seen to sell a large number of foals early.
- Financial costs related to early performance assessment and veterinary health check-ups (e.g. radiographic examinations).
- Time investment required for observation, evaluation, decision-making, and marketing of young horses.
- The assessment process is not 100% reliable, meaning that some horses with future potential may be sold prematurely.
- Experts may question whether selling many foals early leads to a loss of potential long-term capital

Benefits

- Increased overall profitability of the breeding operation through reduced expenditure on training, housing, and veterinary care for low-potential horses.
- Concentration of resources on a smaller group of high-potential horses allows the farm to produce top-quality sport horses.
- Improved farm image by promoting fewer but higher-quality horses with better performance prospects.
- Clients benefit from healthier, more reliable, and higher-performing horses, leading to increased trust and market demand.
- Increase in the intrinsic value of the herd due to targeted selection and investment.
- Significant time and cost savings by focusing promotion and training efforts only on horses with higher athletic potential.

Health & Welfare:

- Early sale can expose foals to stress related to transport, separation from familiar environments, and adaptation to new social structures.
- Horses with conformational weaknesses or biomechanical limitations may be at risk if sold to leisure or amateur riders who lack the expertise to manage and train them appropriately. Such horses often require professional training and tailored management to remain sound and healthy in the long term.
- There is a risk that early selection labels horses as “low potential” even though they could develop satisfactorily under optimal training conditions, potentially limiting their welfare prospects.

- Reduced risk of physical and psychological overload, as horses with limited athletic or health potential are not pushed beyond their capabilities/ into sport careers.
- Early identification of health issues prevents unnecessary training stress and long-term pain.
- Breeders have more time and attention available for the remaining horses, improving daily care and monitoring.
- Lower stocking density results in calmer environments and better overall welfare.
- Horses that remain on the farm benefit from more individualized and higher-quality training.

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Costs

- Once sold, the original breeder has limited control over future management, housing, training intensity, and veterinary follow-up.
- Inadequate matching between horse and rider can lead to chronic discomfort, improper workload, or behavioral issues, negatively affecting both physical and psychological welfare.

Benefits

Environmental Sustainability:

- Early sale of foals may increase the number of horse transports, particularly if buyers are located far away.
- Long-distance transport contributes to greenhouse gas emissions and increases the environmental footprint of the equine industry.

- Minor effects on farm-level: more space per horse on the farm my contribute to reductions in resource use and more sustainable land use.

Cooperation between farms:

- Requirescoordination,communication, and trust between farms, which may increase administrative effort.
- Differences in management goals or quality standards could complicate cooperation agreements.

- Specialization between farms can improve efficiency, with one farm focusing on high-performance sport horses and another on leisure or alternative markets.
- Shared expertise and resources can improve decision-making and welfare outcomes.
- Cooperation allows better market orientation and may reduce overall risk for individual farms.
- Strengthens regional networks within the equine industry and supports sustainable breeding strategies.

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Additional Resources

Scientific papers on temperament assessment

- Suwała, M., Górecka-Bruzda, A., Walczak, M., Ensminger, J., & Jezierski, T. (2016). A desired profile of horse personality–A survey study of Polish equestrians based on a new approach to equine temperament and character. Applied Animal Behaviour Science, 180, 65-77. https://doi.org/10.1016/j.applanim.2016.04.011
- Graf, P., von Borstel, U. K., & Gauly, M. (2014). Practical considerations regarding the implementation of a temperament test into horse performance tests: Results of a large-scale test run. Journal of Veterinary Behavior, 9(6), 329-340. https://doi.org/10.1016/j.jveb.2014.08.004
- Visser, K., Karlas, K., Van Deurzen, I., Workel, I., & Van Reenen, K. (2010). Experts' assessment of temperament in sport horses. Journal of Veterinary Behavior, 5(4), 214-215. j.jveb.2009.11.00320220430-1-7a4drp-libre.pdf
- Lansade, L., Bouissou, M. F., & Erhard, H. W. (2008). Fearfulness in horses: A temperament trait stable across time and situations. Applied Animal Behaviour Science, 115(3-4), 182-200. https://doi.org/10.1016/j.applanim.2008.06.011
- Lansade, L., Bouissou, M. F., & Erhard, H. W. (2008). Reactivity to isolation and association with conspecifics: A temperament trait stable across time and situations. Applied Animal Behaviour Science, 109(2-4), 355-373. https://doi.org/10.1016/j.applanim.2007.03.003.
- Visser, E. K., Van Reenen, C. G., Hopster, H., Schilder, M. B. H., Knaap, J. H., Barneveld, A., & Blokhuis, H. J. (2001). Quantifying aspects of young horses' temperament: consistency of behavioural variables. Applied Animal Behaviour Science, 74(4), 241-258. https://doi.org/10.1016/S0168-1591(01)00177-0
- Górecka-Bruzda, A., Jastrzębska, E., Sosnowska, Z., Jaworski, Z., Jezierski, T., & Chruszczewski, M. H. (2011). Reactivity to humans and fearfulness tests: Field validation in Polish Cold Blood Horses. Applied Animal Behaviour Science, 133(3-4), 207-215. https://doi.org/10.1016/j.applanim.2011.05.011

Funded by the European Union

This project has received funding from the European Union under Grant Agreement No. 101086551.

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Annex

Ideas to Animate a Workshop About the Solution

- Invite horse breeding advisors, veterinarians, equine trainers, and industry experts to sponsor or co-host the workshop.
- Find a model breeding farm where foals of different potential levels can be observed and assessed.
- Prepare demonstration tasks where participants can practice evaluating foals, behaviour, movement, and health indicators.

Proposed Structure for the Workshop on Early Potential Profiling and Strategic Orientation of Young Equines in Equines Farms

1. Introduction to the solution
- What is early detection and strategic sale of low-potential foals?
- Key components: movement assessment, conformation evaluation, free jumping, character traits, veterinary health check-ups.
- Types of assessments and methodologies used in the industry.

2. Benefits of solution in equine farms
- Optimized Resource Allocation: Focus time and money on high-potential foals.
- Economic Efficiency: Reduced long-term housing, training, and veterinary costs.
- Herd Improvement: Higher overall quality and market value for the remaining horses.
- Improved Animal Welfare: Low-potential young horses are not overworked; remaining horses receive better care.

3. Practical Applications on equine farms
- How to implement performance and character assessments at different ages.
- Incorporating health screenings (e.g., radiographs, clinical exams).
- Identifying foals suitable for early sale.

4. How to Choose the most suitable approach
- Evaluation of farm size, resources, and breeding goals.
- Determining which assessment tools or methods fit the operation.
- Balancing cost, accuracy, and time investment.

5. Hands-On Demonstration
- Observe foals and young horses to evaluate movement, conformation, jumping, and behaviour.
- Practice scoring and documenting results.
- Discuss real examples and make mock decisions on early sale or retention.

6. Maintenance and Troubleshooting
- How to integrate assessments into daily farm routines.
- Managing uncertainties and borderline cases.
- Handling communications with buyers for early sales.

7. Case Studies and Real-World Examples
- Examples of farms successfully implementing early detection strategies.
- Discussion of successes, mistakes, and lessons learned.
- Sharing tips from experienced breeders, trainers, and veterinarians.

8. Cost Analysis and Return on Investment (ROI)
- Initial cost modular systems vs. long-term savings in labor
- How to calculate ROI based on farm size, workload, and usage.
- Financial benefits from reducing strain on workers and improving productivity.

9. Q&A Session
- Open discussion for participants to ask questions about specific challenges or farm situations.
- Clarify doubts about assessment methods, sales strategies, and welfare considerations.

10. Wrap-Up and Resources
- Summary of key points: assessment methods, strategic sales, welfare considerations, and economic benefits.
- Additional resources: websites, books, software tools, or local advisors.
- Networking opportunities and access to partnerships or expert support for implementing the strategy.