Technical Sheet for Solution Implementation

Front Panel Feeder

Thematic Area: Socio-economic performance.

Priority: How can working conditions be improved?

Need: Arduousness of work: What mechanization, digitalization and robotics solutions to improve working conditions on my equine farm?; How to reduce arduousness?

Solution EU Number: WC-4.

Content of the Solution:
A self-service stall front allows horses to access feed without opening stall doors, improving feed distribution and horse visibility, with solid separations to prevent injuries.

Key Contacts:
Dedicated companies and advisors.

Case Study: Not available.

Reasons for Implementing this Solution

The implementation of front-panel feeders in self-service stables on horse farms offers numerous advantages. As the grooms do not have to enter the stalls, direct contact with horses is minimized, which reduces physical exertion and risks of injuries. The improved visibility of the horses makes it easier to monitor their health. Overall, this solution improves working conditions and promotes a well-organized, safe and efficient operation.

Description of Solution Strategies

The self-service stall front is a fixed or mobile stall front through which the horse's head can pass thanks to dedicated openings. This system facilitates the distribution of feed and concentrates, which are placed at the front of the stalls without the need to open the doors. An 80 cm solid separation between each openings prevents horses from injuring themselves in the event of interaction (e.g. getting their heads stuck in the neighbor's self-service front). This solution is oftenly implemented to develop feeding lanes. It ensures that feeding is done quickly and safely, benefiting both the horses and the handlers.

Implementation Steps

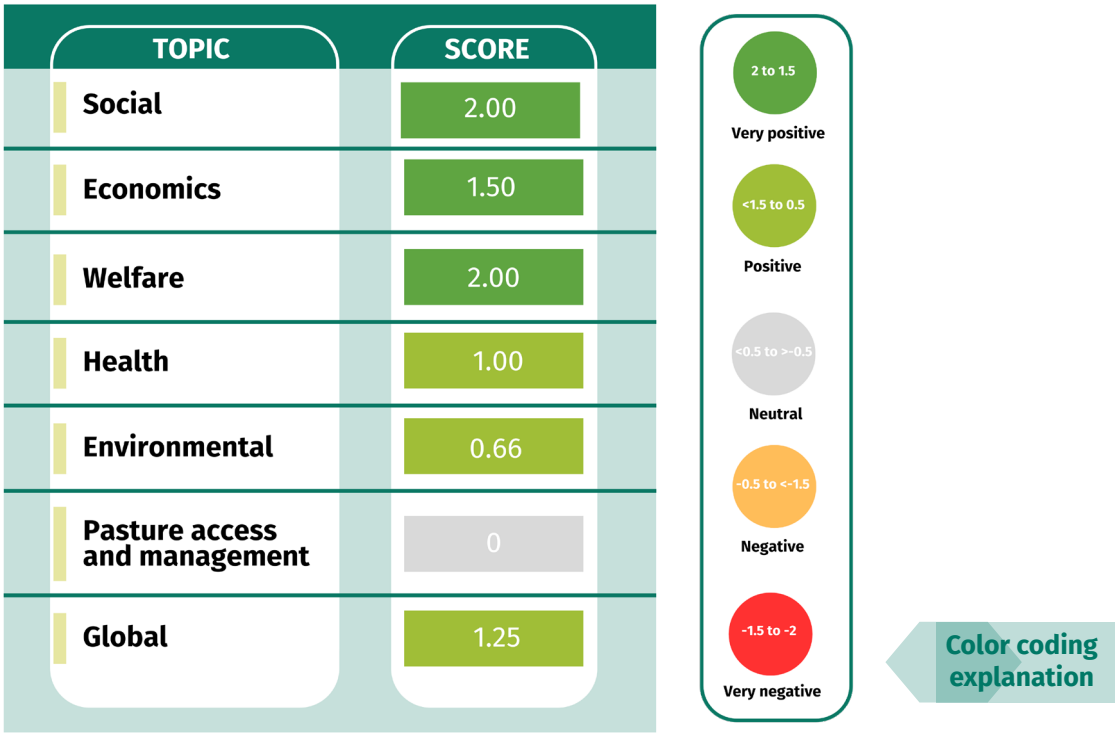
1. Assess Your Needs: Evaluate the number of stalls and the specific requirements for your horses, including the type of feed, the frequency of feeding and modalities of distribution. Purchase appropriate Model (they vary in capacity, extra functions, battery time, etc.).
2. Choose the Right Design: Select a self-service stall front design that suits your farm's layout and the needs of your horses. Ensure it includes features like feed chutes, hay racks, and solid separations. Please consider different aspects to determine the design adapted to your need:

- Panel with or without base (min of 1m80 of height in total).
- Opening of the front panel or not, sliding or not.
- Adjustable modules or not for the distance between two places or for the size of the opening, (min of 80 cm is recommended between two places and between 27 and 35cm for the size of one place).

3. Plan the Installation: Create a detailed plan for the installation process, including measurements and the location of each stall front. Consider the movement for both horses and handlers.
4. Prepare the Stalls: Clear out the existing stalls and make any necessary modifications to accommodate the new stall fronts. This might include reinforcing walls or adjusting stall dimensions.
5. Install the Stall Fronts: Follow the manufacturer's instructions to install the self-service stall fronts. Ensure that all components are securely fixed and that the openings are at the correct height for your horses.
6. Train Staff and Horses: Educate your staff on how to use the new feeding system efficiently and safely. Gradually introduce your horses to the new setup to ensure they are comfortable and understand how to access their food.

Front Panel Feeder

How Will this Solution Impact the Performance of your Farm ?



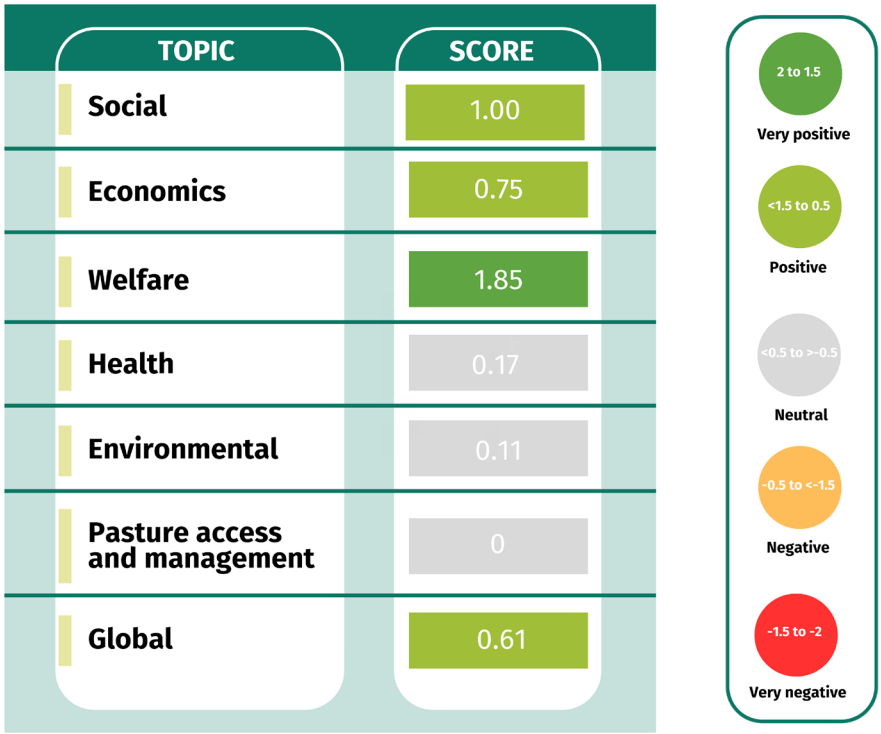
Socioeconomics: Social score is positive given that the solution improves the welfare of horses and directly enhances the farm's operational performance by showcasing better care practices, which contribute to a positive public image. The solution also significantly reduces work time and fatigue, enabling workers to focus on other essential tasks, thereby increasing overall productivity. Additionally, the economic score is positive, the solution minimizes hay waste and leverages highly durable materials, ensuring long-term efficiency and reliability that optimize resource utilization.

Health & Welfare: Very positive effect since this solution assures natural feeding posture without hay wasting. It also provides a solution to provide ad libitum access to forage without waste helping to improve health. Moreover, the system mimics group feeding without competition for roughage. The farm or livery yard with such a system could propose better keeping conditions to horse owners than the traditional individual hay racks located at the hight of withers or higher, which is anatomically harmful.

Environmental Sustainability: This solution contributes positively to climate change mitigation because it generates less hay waste and is made from highly sustainable materials. The impact on other aspects of environmental sustainability is neutral.

Front Panel Feeder

How Will this Solution Impact the Resilience of your Farm?



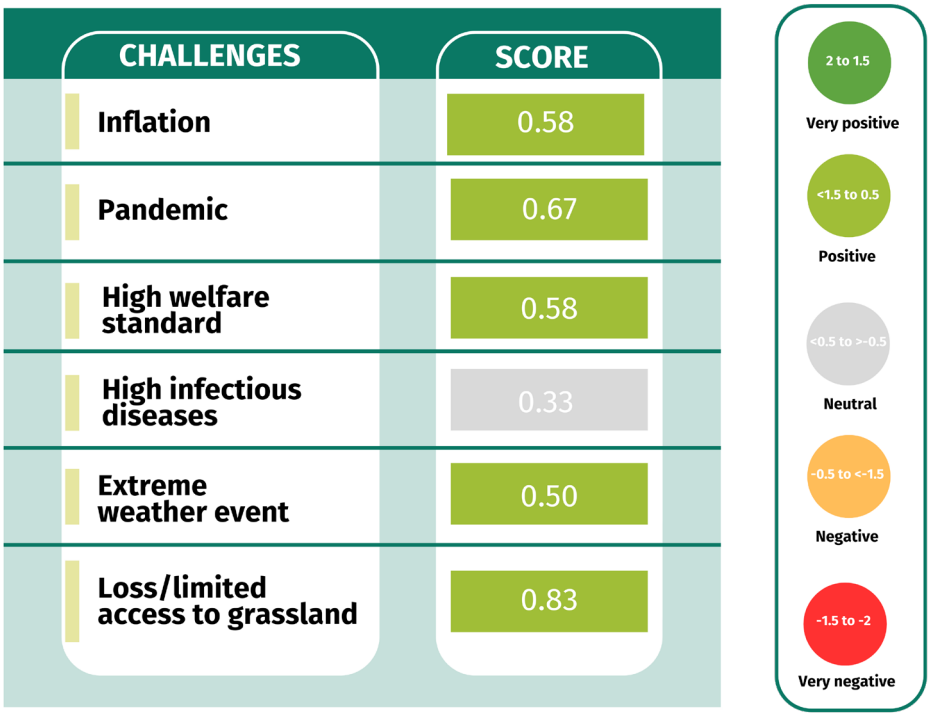
Socioeconomics: Social score is positive given that the solution enhances farm resilience by reducing labor demands and waste while ensuring safety with an "emergency exit" for workers. Economic score is also positive, due to durable design that supports long-term sustainability, maintaining welfare standards and efficiency even under strain. So, this solution can help to support socioeconomic performance of the farm facing external challenges.

Health & Welfare: This solution can support welfare performance facing external challenges. Indeed, facing an increase of costs or lack of labor due to any challenge, access to forage is guaranteed easily limiting waste. It provides also the horse owner with natural feeding posture which is good for feeding behavior and back health in conjunction with high standards of welfare. This solution will not support or weaken health performance of horses facing external challenges, the effect is neutral.

Environmental Sustainability: This solution has neutral effect on farm resilience in environmental sustainability perspective. It will not support or weaken environmental performance facing external challenges.

Front Panel Feeder

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



Socioeconomics Challenges: The front panel feeders offer a cost-effective and resilient solution, reducing labor and material waste while maintaining efficiency. This adaptability ensures positive outcomes even during challenges like inflation or pandemic.

Health and Welfare Challenges: The front panel feeder improves the posture of horses when feeding with the head in natural grazing position of the neck and back. With improved welfare legislation (the possibility to exhibit natural behaviour) and health (back in physiological position), this solution improves the resilience of the farm to potential introduction of high welfare standards. However, it can have an impact on the potential spread of infectious diseases.

Environmental Sustainability Challenges: This solution has a positive effect on resilience in case of drought and loss or limited access to grassland as it reduces waste of hay.

Front Panel Feeder

Cost-Benefit Analysis

Costs

Socioeconomics:

- Initial investment for purchasing and installing the system.
- From € 360 for mobile modules up to around € 1000 for fixed modules (each for 3 feeding stations).
- Requires significant modifications to existing stalls, which can be time-consuming.
- May not be suitable for all barn layouts, especially those with limited space.

Health & Welfare:

- Horses may need time to adapt, potentially leading to initial stress or feed wastage.
- In group housing, more feeding places than horses are needed to ensure that low-ranking horses also have access to food.
- Difficulty of combining mare and foal for the size of openings .

Environmental Sustainability:

- Manufacturing and installation processes may have an environmental impact.

Cooperation between Farms:

No effect.

Benefits

- Organized Operation: Promotes a more organized and efficient horse farm operation.
- Long-term labor savings and increased operational efficiency.
- Reduce physical effort by decreasing the arduousness of the work for handlers.
- Enhanced Safety by minimizing the direct contact with horses, reducing the risk of injury.
- Streamlines the process of feeding forages and concentrates.
- Less hay waste.

- Improved safety and health monitoring, reducing injury risks and enhancing overall welfare.
- Potentially reduced prevalence of colic and stereotypy by forage ad libitum.

- More efficient feed use reduces waste, contributing to sustainable farm management.
- Highly durable materials.
- Less hay waste.

No effect.

Additional Resources

Websites

- https://www.stallbedarf24.de/Stall-Hof/Stalleinrichtungen/Stalleinrichtung-Pferd/Fressgitter-Pferde/?gad_source=1&gclid=EAIaIQobChMIgY3FzPWcigMVI6SDBx0OhAkKEAAYASAAEgI4ZfD_BwE
- https://hau-horsestalls.com/products/feeding-technology/roughage/safety-feeding-grid/

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Annex

Ideas to Animate a Workshop About the Solution

- Ask a company specialized in horse husbandry and feeding systems to sponsor the workshop.
- Find a model farm where the workshop can take place.
- Complete the required tasks and let the participants take part in these demonstration tasks so that they can get to know the system.

Proposed Structure for the Workshop on Self-service Stall fronts in Horse Stables:

1. Introduction to Self-Service Stall Fronts
- What are self-service stall fronts?
- Key features and components of self-service stall fronts (e.g., material, quality).
- Types of self-service stall fronts available on the market (e.g., fixed, mobile).

2. Benefits of Self-Service Stall Fronts in Horse Stables
- Reduced Physical Strain: Less manual labor for farm workers, especially important for those with physical limitations.
- Cost Savings: Potential long-term savings on labor.
- Increased Efficiency: Streamlined feed distribution.
- Improved Horse Monitoring: Better visibility of horses.

3. Practical Applications on Horse Farms
- Individual adjustment of the stall size possible.
- Group and individual stabling possible.
- Enables mechanical cleaning of the stalls.

4. How to Choose the Most Suitable System
- Evaluation of the needs of the farm.
- Assessment of the structural requirements.
- Features such as material, construction, ease of use.
- Price comparisons.

5. Hands-On Demonstration
- Live demo of handling the self-service stall fronts.
- Testing different models and giving participants a chance to try them out.
- Proper techniques for maximizing efficiency and reducing wear on the equipment.

6. Maintenance and Troubleshooting
- Cleaning and care of modules and parts such as screws, hinges, etc.
- Readjustment.

7. Case Studies and Real-World Examples
- Examples of farms or equestrian centers using self-service stall fronts.
- Discussion of how they have integrated these tools into their daily operations.
- Lessons learned and tips from farm operators using this system.

8. Cost Analysis and Return on Investment (ROI)
- Initial cost of self-service stall fronts 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 floor for participants to ask questions about specific concerns or experiences.
- Address any uncertainties regarding the effectiveness or cost of self-service stall fronts.

10. Wrap-Up and Resources
- Summary of key points covered in the workshop.
- Additional resources for further learning (websites, suppliers, online communities).
- How to access special discounts or offers on self-service stall fronts if partnered with suppliers.