Technical Sheet for Solution Implementation

Mixed Grazing

Thematic area: Environmental Sustainability.

Priority: How to manage grassland in the face of the future challenges?

Need: Grass stock management: How can we limit the effects of climate change on the surfaces of paddocks and pastures in terms of quality and quantity?; Rotational grazing: equipment and workshops on rotational grazing

Solution EU number:GM-06.

Content of the solution: Mixed or sequential grazing with different livestock species (e.g. horses, cattle, sheep or goats) makes use of species-specific grazing behaviour and parasite cycles to improve grassland utilisation, animal health and overall sustainability.

Reasons for Implementing the Solution

Different livestock species consume plants and sward structures in complementary ways, leading to more even pasture use and improved forage quality. This increases overall pasture efficiency and can improve feed availability while reducing management pressure. In addition, mixed grazing can reduce parasite pressure in horses and enhance the ecological condition of grasslands.

Description of Solution Strategies

The strategy is based on the simultaneous or sequential use of the same pasture areas by horses and other grazing animals, either within the same farm or through cooperation with neighbouring farms or other land users. In situations where horse farms do not keep other livestock themselves, partnerships with cattle, sheep or goat farms can be established to enable mixed grazing systems.

Mixed grazing improves pasture utilisation by reducing selective grazing behaviour, as different species prefer different plant types and grazing heights. This leads to a more uniform sward structure, reduced rejected areas, and more efficient nutrient cycling through different manure distribution patterns.

Beyond farm-to-farm cooperation, agreements with municipalities or other public landowners may allow the use of communal grassland areas for mixed grazing, provided that legal and management requirements are met. Such arrangements can increase available grazing areas and improve the management of underutilised grasslands.

Implementation typically requires adapted grazing plans, clear coordination between partners, and, in some cases, additional infrastructure such as temporary fencing, water points or animal transport. Direct costs are generally moderate and mainly relate to infrastructure, transport and organisational efforts.

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Mixed grazing systems require consideration of animal health and biosecurity, as species may have different parasite profiles. However, most gastrointestinal parasites are species-specific, which limits cross-infection risk when properly managed.

Financial support may be available through agri-environment-climate measures, biodiversity conservation schemes, rural development programs or cooperation-focused funding under the Common Agricultural Policy (CAP). These schemes often support extensive grazing systems, improved grassland management and inter-farm cooperation, helping to offset initial costs.

Implementation Steps

1. Assessment of initial conditions
- Evaluation of pasture size, vegetation, soil conditions and current grazing intensity.
- Review of parasite pressure and existing pasture management.

2. Selection of suitable livestock species
- Identification of compatible species for mixed or sequential grazing.
- Consideration of animal health, biosecurity and management requirements.

3. Design of the grazing system
- Decision on simultaneous versus sequential grazing.
- Definition of grazing periods, stocking rates and rest intervals.

4. Pasture compatibility and rotation planning
- Assessment of pasture recovery times after each species.
- Estimation of forage demand differences between species.
- Adaptation of rotation length depending on combined grazing pressure.

5. Infrastructure adaptation
- Checking fencing compatibility for multiple species.
- Ensuring water access for all animals.
- Adapting handling facilities if needed.

4. Establishment of cooperation agreements
- Coordination with partner farms or landowners (e.g. neighbouring farms, municipalities).
- Clarification of responsibilities, animal transport, liability and scheduling.

5. Monitoring and system adjustment
- Regular observation of pasture condition, animal health and parasite levels.
- Adjustment of grazing plans based on monitoring results.

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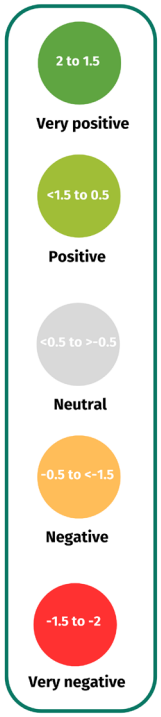
How Will this Solution Impact the Performance of your Farm?

TOPIC	SCORE
Social	0
Economics	0
Welfare	0
Health	1.00
Environmental	0.33
Pasture access and management	1.00
Global	0.33



Traffic light explanation

Socioeconomics: This solution will not have effect on the social performance of the farm because the impacts of mixed grazing systems are highly context-dependent and vary according to the existing farm structure, the species involved, and the level of cooperation required. Mixed grazing may strengthen collaboration and social exchange between farmers, but it can also increase organisational workload through coordination, contracts, and additional management requirements. Daily work organisation and animal interactions may become more complex depending on the species combination and grazing strategy implemented. This solution will not have effect on the economic performance of the farm because the balance between costs and benefits depends largely on the initial situation of the farm and the way mixed grazing is implemented. Improved pasture utilisation reduced rejected areas, better forage efficiency, and possible additional income from other livestock species may improve profitability. However, these advantages can be offset by investment costs linked to purchasing additional animals, infrastructure adaptation, transport, housing, and increased management needs. Economic outcomes therefore remain variable depending on the grazing system, cooperation arrangements, and local conditions.

Health & Welfare: This solution will support the farm's daily health performance by helping to maintain low levels of pain, mortality, and drug use through more natural environmental conditions when equines are rotationally or simultaneously grazed with other grazing species. This management approach may reduce species-specific parasite infections. Since the period of sward consumption is shortened by the simultaneous or rotational presence of different animal species on the same

pasture, exposure to species-specific parasites is also reduced. However, the care should be taken to plan appropriate order of introducing the animals of different species in rotational system to ensure best anti-parasite security.

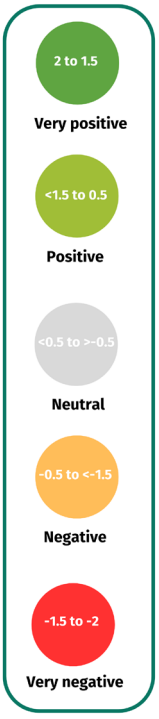
This solution will have a neutral effect on equine welfare performance; however, pasture-based management itself supports equine welfare by promoting a positive emotional state and providing welfare-friendly housing conditions. Horses are able to form social groups, express natural foraging behaviour, and engage in unrestricted locomotor activity, thereby fulfilling the 3F aspects of welfare.

Environmental sustainability: This solution will not have effect on the environmental performance of the farm because although the solution may have positive effects on flora, but effects depend on context, how the system is managed on farm level. In addition, available evidence does not clearly show that mixed grazing with equines contributes to climate change mitigation or improves water management. More research is needed to better understand these effects.

This solution will support on the land access or management performance of the farm because his solution can improve farmland use and management. Mixed grazing helps make better use of forage and increases grassland productivity and provide better use of rejected areas. The impact may also depend on the type and grazing sequence of animals (e.g., whether horses graze before cattle). Simultaneous mixed grazing may have an impact for other farm animals' health and welfare, e.g. s young horses sometimes chase young cattle and daily weight gain of cattle is lower.

How Will this Solution Impact the Resilience of your Farm?

TOPIC	SCORE
Social	-0,08
Economics	-0,08
Welfare	0
Health	0.17
Environmental	0.06
Pasture access and management	0.17
Global	0.03



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Socioeconomics: This solution will not impact social performance of the farm facing external challenges assessed because the effects of mixed grazing remain highly dependent on the initial farm situation, grazing organisation, and external conditions. While cooperation and pasture sharing may provide some flexibility, the solution offers no specific additional advantage during pandemics or disease outbreaks, and its benefits become limited when animals must remain indoors or when pasture access is reduced. Under higher welfare standards, the positive contribution of mixed grazing is also less pronounced because many welfare requirements are already addressed more generally.

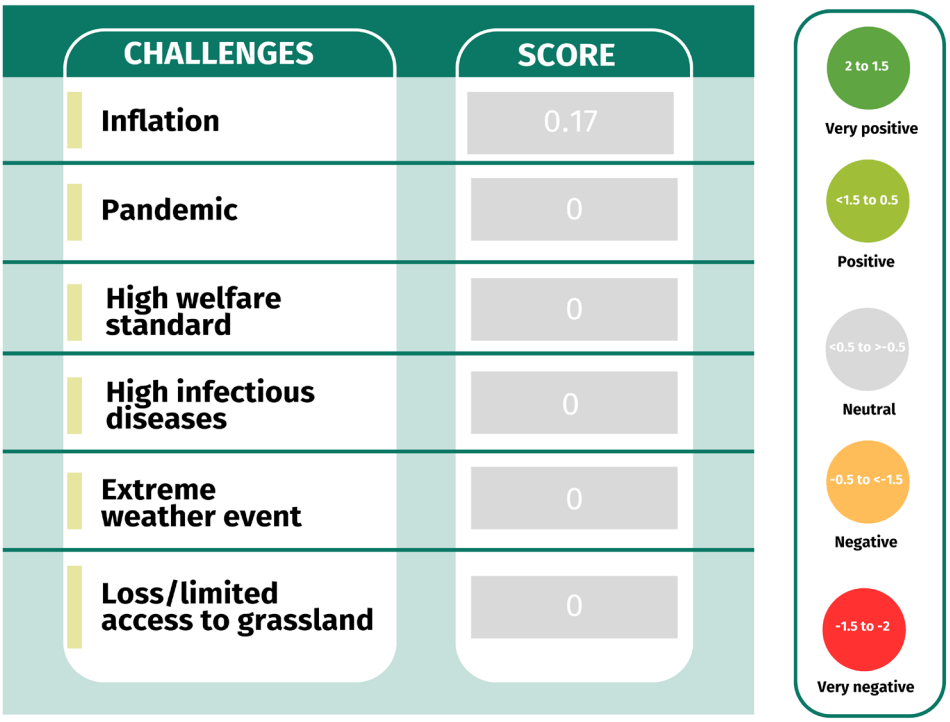
This solution will not impact economic performance of the farm facing external challenges assessed because its resilience effects vary considerably according to the availability of land, the grazing system used, and the level of cooperation between farms. Potential gains from improved pasture utilisation may decrease under extreme weather conditions or limited grassland access, and the solution may become impossible to implement when grazing areas are unavailable or restricted. Economic outcomes therefore remain uncertain and strongly context-dependent under external challenges such as inflation, disease outbreaks, or climate-related constraints.

Health & Welfare: This solution does not directly support the farm's health performance, as it does not directly reduce pain, mortality, or the need for medication when the farm is exposed to external pressures. However, animal health may deteriorate if, due to socioeconomic or environmental challenges, the farm is unable to provide appropriate veterinary care for horses. Nevertheless, with adequate care and proper pasture management, the health status of horses may remain at a good or high level despite external pressures. This solution has a neutral effect on farm welfare performance when the farm is subjected to external pressures. Animal welfare may decline if the farm faces difficulties in managing different animal species simultaneously or in ensuring adequate environmental protection, for example due to temporary restrictions on grazing in overgrazed areas. Conversely, welfare is be supported through continued access to pasture, which can help the farm better withstand external challenges.

Environmental sustainability: This solution will not impact environmental performance of the farm facing external challenges assessed as it does not directly effect on climate change mitigation or adaption, halting biodiversity loss or water management when farm has been already using mixed grazing practices before it faces challenges. This solution will not impact land access or management performance of the farm facing external challenges assessed because it has been in use already before farm faces these challenges.

Mixed Grazing

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 mixed grazing systems do not provide specific additional resilience under sanitary crises, and their effectiveness depends on whether grazing activities can continue normally. If animals must be confined or movement restrictions are applied, the solution becomes difficult or impossible to implement, limiting its contribution to overall resilience. Economic challenge: This solution will not impact the global performance of the farm facing inflation because the economic benefits of mixed grazing remain highly dependent on the initial farm situation, pasture availability, and cooperation arrangements. While improved pasture use may reduce some feeding costs, these advantages are variable and may diminish when land access, grazing conditions, or organisational capacities are constrained.

Welfare & Diseases: Health challenge: This solution has a neutral effect on the global performance of the farm across all three areas when facing an infectious disease challenge. Socioeconomic, environmental, as well as health and welfare priorities may not be adequately fulfilled if the farm is confronted with a sudden infectious disease outbreak. Managing infectious diseases requires specific measures, including the ability to isolate sick animals, appropriate materials to ensure biosecurity, and access to veterinary care and pharmaceutical products. Therefore, this solution will neither help or decrease the global farm performance if faced with infectious disease breakout. Welfare challenge: Similarly, this solution does not significantly affect the global performance of the farm when facing high-standard welfare legislation as this not inherently differ from other pasture-related solution as it assures high welfare standards for equines.

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Climate Change & Access to Land: Environmental challenge: this solution will not impact the global performance of the farm facing abnormally low temperatures, excessive raining, windstorms and/or flood because positive effects of this solution will diminish as pasture access is limited due to harsh weather conditions. Land access/ management challenge: this solution will not impact the global performance of the farm facing loss or limited access to agricultural land because use of this solution is restircted due to loss or limited access to grassland.

Video: https://www.youtube.com/watch?v=PaxHqPcOLPY

Cost-benefit Analysis

Costs

Socioeconomics:

- Additional labour for planning, monitoring, and managing multi-species grazing.
- Time and organisational effort for establishing and maintaining cooperation agreements.
- Negotiation costs with partner farms or land managers.
- Need for technical knowledge and continuous adaptation of grazing systems.
- Investment in infrastructure (temporary fencing, water points, handling facilities, transport logistics).
- Potential costs if additional livestock species must be purchased or maintained (housing, feeding, management).

Health & Welfare:

- Need for adapted monitoring and handling due to behavioural differences between species.
- Possible biosecurity considerations depending on species combinations.
- Species-specific disease risks (rare but possible cross-species transmission under poor management).
- System outcomes depend strongly on grazing order and livestock combination (e.g. cattle vs sheep vs horses together or sequentially)

Benefits

- More efficient use of available grassland and improved forage utilisation.
- Reduced need for purchased feed due to higher pasture productivity.
- Potential diversification of income streams (e.g. livestock exchange, grazing agreements, leasing arrangements).
- Shared labour and resources between farms can reduce individual operational costs.
- Additional income opportunities when integrating or sharing livestock systems.
- Increased economic resilience through diversification of production systems.
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- Reduced parasite load through interruption of species-specific parasite cycles.
- Lower reinfestation risk, supporting gastrointestinal health.
- Reduced reliance on chemical deworming treatments.
- More balanced grazing patterns and improved pasture use.
- Improved fitness and welfare due to more stable forage availability.

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Costs

- Note: potential negativ impact on health and wellfare of other grazing animals (e. g. young horses sometimes chasing young cattle).

Benefits

- Potential improvement in overall equine health status under well-managed systems.

Environmental Sustainability:

Costs

- Risk of soil compaction or localised overgrazing if poorly managed.
- Environmental impact depends strongly on stocking balance and management quality.
- Possible reduction of microhabitat variability in highly managed systems.

Benefits

- Increased plant species diversity and improved ecosystem functioning.
- Better nutrient cycling due to complementary grazing behaviours.
- Improved soil structure and higher soil organic carbon potential.
- Reduced erosion through more continuous and diverse vegetation cover.
- More efficient use of different vegetation layers reduces weed dominance.
- Supports biodiversity conservation and sustainable grassland use.
- Enables productive use of underutilised or marginal grasslands.

Cooperation between Farms:

Costs

- Time and effort required to identify suitable partners.
- Establishment of contracts and clarification of responsibilities.
- Liability, coordination, and management complexity between partners.
- Need for ongoing communication and conflict resolution.
- Potential differences in management goals, timing, or priorities.

Benefits

- Access to additional livestock without ownership costs (leasing or exchange systems)
- Shared risk and increased resilience between farms
- Stronger cooperation with municipalities or public land managers
- Opportunities for joint funding under agri-environmental or rural development schemes
- Exchange of practical knowledge and experience between farms
- Improved long-term regional grassland management capacity
- Strengthening of local agricultural cooperation networks
- Potential social and economic benefits from collaboration

Additional Resources

Websites

- English, French, German:
  - EU CAP Network
  - https://eu-cap-network.ec.europa.eu/projects/practice-abstracts/use-multispecies-swards-allows-improve-agricultural-sustainability_en
  - https://eu-cap-network.ec.europa.eu/projects/practice-abstracts/mixed-grazing-cattlesheep-reduce-parasite-infestation_en
  - https://eu-cap-network.ec.europa.eu/projects/practice-abstracts/mixing-livestock-forest-silvopastoralism_en

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Annex

Ideas to Animate a Workshop About the Solution

- Invite livestock advisors, grassland specialists or consultant to support or sponsor the workshop.
- Cooperate with a model farm where mixed grazing (e.g. horses with cattle or sheep) is already practiced.
- Organise a field-based workshop where participants observe or simulate mixed grazing systems in practice.

Proposed Structure for the Workshop on Mixed Grazing in Equine Farms

1. Introduction to Mixed Grazing Systems
- What is mixed grazing and how does it work?
- Differences between simultaneous and sequential grazing.
- Overview of suitable livestock combinations (horses, cattle, sheep, goats).

2. Benefits of Mixed Grazing
- Improved pasture utilisation and reduced feed losses.
- Reduced parasite pressure in horses through species separation.
- Increased biodiversity and improved ecosystem function.
- More efficient use of grassland resources.

3. Practical Applications on Farms
- Designing mixed grazing systems (timing, species order, stocking density).
- Integration into existing equine farm structures.
- Coordination between farms or land users.
- Infrastructure needs (fencing, water, handling systems).

4. How to Plan a Suitable Mixed Grazing System
- Assessment of pasture conditions and farm objectives.
- Selection of compatible livestock species.
- Decision between simultaneous vs. sequential grazing.
- Planning grazing periods and rest intervals.
- Establishing cooperation agreements between partners.

5. Hands-On Demonstration
- Field assessment of pasture use under different grazing systems.
- Demonstration of fencing and paddock setup (if available).
- Observation of livestock interaction and grazing behaviour.
- Simulation of grazing rotation planning.

6. Management, Monitoring and Adaptation
- Monitoring pasture condition and animal health.
- Adjusting grazing order and stocking rates.
- Managing behavioural differences between species.
- Biosecurity considerations in mixed livestock systems.

7. Case Studies and Real-World Examples
- Farms successfully using mixed grazing systems.
- Improvements in pasture quality and productivity.
- Lessons learned from implementation challenges.

8. Cost Analysis and Practical Value
- Investment in infrastructure vs. long-term savings.
- Labour and coordination requirements.
- Potential additional income streams.
- Economic resilience through diversification.

9. Q&A Session
- Discussion of farm-specific challenges.
- Clarification of species compatibility and management issues.
- Exchange of participant experiences.

10. Wrap-Up and Resources
- Key takeaways for implementation.
- Practical guides and advisory contacts.
- Funding opportunities for cooperative grazing systems.