Grazing4AgroEcology Self-Assessment Tool– User Guide

1. Context and Purpose

The Grazing4AgroEcology Self-Assessment Tool was developed as part of the European project Grazing4AgroEcology (G4AE). Its main purpose is to help grazing-based livestock farms evaluating their practices in relation to five key agroecological principles. These principles include the health and welfare of animals, the reduction of external inputs, the prevention of pollution and nutrient losses, the diversity and resilience of the production system, and the preservation of biodiversity.

It is important to note that this tool is not a certification system. Instead, it was designed as a decision-support instrument. By using the tool, farmers can identify the strengths of their farms, detect gaps in their practices, and prioritize areas for improvement. Over time, repeated assessments allow farms to monitor their progress and adapt their strategies to become more sustainable.

For more information about the project and its goals, you can visit the G4AE project overview or explore the Encyclopedia Pratensis.

2. How to Use the Tool

The tool is organized around the five agroecological principles. Each section contains a set of indicators, which may be presented as questions or as observable criteria. You are invited to assess their current situation based on these indicators.

When completing the assessment tool, it is important to answer truthfully according to the actual situation on the farm. Agricultural advisors can assist in this process if needed. On average, completing the tool should take 60 minutes.

You can access the online self-assessment tool online.

3. Indicators Provided by the Self-Assessment Tool

The indicators in the G4AE Self-Assessment Tool are designed to provide a clear, hands on view of farm performance in relation to the agroecological principles. They allow farmers and advisors to observe, measure, and evaluate specific aspects of the farm.

Each indicator focuses on a concrete area of management, such as:

- animal welfare: indicators might include the condition of animals, access to pasture, or measures of stress and disease prevention.
- reduction of external inputs: indicators assess the use of fertilizers, pesticides, and feed supplements, in order to lower reliance on external products imputs.
- prevention of pollution and nutrient losses: indicators examine soil management, manure handling, and runoff control.
- diversity and resilience of the production system: indicators consider crop and pasture diversity, rotation practices, and the ability of the system to cope with environmental changes.
- preservation of biodiversity: indicators focus on plant species diversity, wildlife presence, and habitat connectivity on the farm.

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Each indicator has a score, reflecting the current situation, and a weight, indicating its importance for overall agroecological performance. Together, they provide a detailed profile of strengths and weaknesses, guiding action where it is most needed.

By reviewing the indicators carefully, farmers can identify specific, actionable improvements. For example, a low score in pasture diversity may suggest introducing new forage species or adjusting grazing patterns.

Not all indicators are equally important. Some, which have a higher impact on overall farm sustainability, are weighted more heavily in the calculation of the final score. This ensures that the assessment reflects the most critical aspects of agroecological performance.

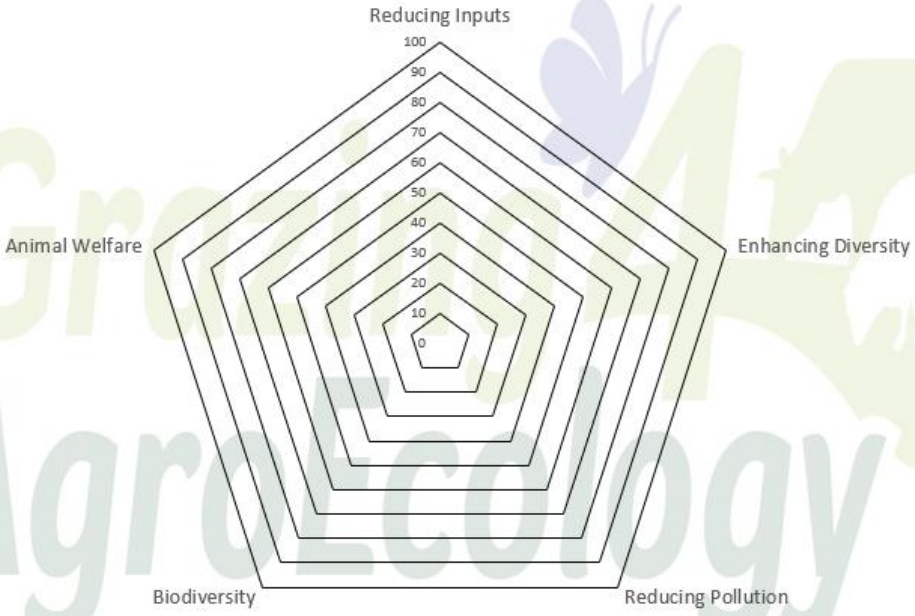

Figure 1: Radar graph

4. Results and Interpretation

After completing the assessment, the tool provides a score for each agroecological principle, as well as a global score that summarizes the farm's overall agroecological performance. The results are presented in visual or tabular form, allowing farmers and advisors to quickly see which areas are strong and which need attention.

Low scores indicate priority areas for improvement. While the tool highlights where action is needed, it does not prescribe exactly how to act. Farmers are encouraged to use additional resources and practical examples to guide their decisions.

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Repeating the assessment over time is highly recommended, as it helps monitor progress and evaluate the effectiveness of changes. For examples of how scores can be improved, visit the resources at https://www.encyclopediapratensis.eu/.

5. Additional Resources

The Encyclopedia Pratensis website complements the self-assessment tool by providing a wealth of

- technical resources on grassland management,
- real case studies from European farms,
- experience-based feedback that can support decision-making.

These resources offer practical solutions and examples that can help farms address weak areas identified by the assessment and improve their overall agroecological performance. Farmers and advisors can explore these materials at the following links: https://www.encyclopediapratensis.eu/

6. Ontology and Classification

The tool is structured according to a classification system developed by Grazing4AgroEcology and applied in Encyclopedia Pratensis. This helps users understand the relationships between different components of the farm and the assessment.

The key concepts include (figure 2 : classification) :

- strategies : Ways of approaching the question or problem to be solved. These are entry points leading to functions or actions that enable the objective to be met. Strategies are not mutually exclusive
- functions : Mechanisms/phenomena/processes"biological, physical, chemical or"ecological services" to be stimulated in order to act a given strategy and thus achieve the deparding objective
- actions : Generic means, techniques or practices to be implemented to activate a function and/or respond to a given strategy. An action may be directly linked to a strategy
- and keywords : innovations/practices. Panel of alternatives or possible solutions (validated, promising, exploratory) to achieve the initial objective. Organized according to actions, functions and strategies which they respond to. Can be shared in resources in different formats (fact-sheet, video, podcast, etc.)

In this system, farms are composed of pastures, pastures are evaluated using indicators, indicators are related to agroecological principles, and each indicator has a score and a weight. The results of the assessment then guide possible actions to improve farm performance.

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STRATEGIES	FUNCTIONS	ACTIONS
REDUCING INPUTS	Maximising herbage utilisation	Legumes, Sufficient forage production, Spring grazing, Summer grazing, Autumn grazing
	Reducing feed inputs	Reducing waste, High-quality forage, High-quality feed stock
	Soil management	Optimal soil fertility, Soil health
	Optimising organic nutrients on farm	Slurry and manure management, Nitrogen plan, Chemical nitrogen
	Optimising fertilisation	Precision technology
ENHANCING DIVERSITY	Diversity of production	Grassland, Grazing animals, Fodder production, Agroforestry, Animals species
	Marketing	Quality labels, Retailer network
	Income	Income portfolio, Workload
REDUCING POLLUTION	Grassland management	Soil cover
	Pasture management	Grazing, Feeding
	Fertilisation	Equipment, Spreading
	Soil management	Soil cover
	Pest regulation	Pesticides use, Biological control, Rodents
	Waterway protection	Effluents
BIODIVERSITY	Species and taxa	Birds, Food supply for insects, Flora, Woody species
	Landscape elements	Landscape structure, Ponds/wetlands, Rocky outcrops, Riparian margins, Linked habitats
	Management of biodiversity	Livestock management, Grassland management, Controlof invasive species, Protection of natural areas, Area in biodiversity
ANIMAL WELFARE	Infrastructure	Paths and roads quality, Access to shade, Housing, Water access and auality, Balanced ration
	Health management	Veterinary services
	Animal behaviour and welfare	Grazing management
	Calf welfare and health	Health management

Figure 2: Classification

This structured approach makes the tool easier to navigate and ensures that users can efficiently access supporting resources.

7. Project, Partners, and Funding

The Grazing4AgroEcology (G4AE) project**101059626**.75€ from the European Union Horizon Europe programme. It brings together research institutes, advisory services, and networks of farmers from eight European countries.

The project aims to support sustainable grazing practices across Europe and provide tools that help farmers improve the agroecological performance of their farms. Additional information can be found on the G4AE project website, the Encyclopedia Pratensis platform, and the Horizon Europe programme.

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