Technical Sheet for Solution Implementation

Using Biodiversity Analysis Tools

Thematic Area: Environmental sustainability.

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

Need: Find solutions to reduce the loss of biodiversity (and/or even increase biodiversity) in equine farms (positive and negative impacts of horses): How to identify good, pratical and biodiversity-friendly methods?

Solution EU Number: BD-12.

Content of the Solution: Different Biodiversity analysis Tools and how they help the farmer identify and calculate the biodiversity on his farmland.

Key Contacts:

- For Biotex and IBIS (french language): IDELE or Agricultural chambers.

Reasons for Implementing this Solution

The implementation of biodiversity analysis tools such as BPT, BIOTEX or IBIS helps horse farms to better understand their impact on biodiversity and improve it in a targeted manner. They make it possible to identify farm-specific strengths and weaknesses, plan well-founded measures and make the positive effects visible to the outside world. This not only strengthens ecological sustainability, but also improves the basis for argumentation with the public and customers.

Description of Solution Strategies

Biodiversity Performance Tool (BPT) is a practice-oriented analysis tool for the assessment and promotion of functional biodiversity on farms. It was developed as part of the EU LIFE project “Food & Biodiversity” and supports farmers and advisors in the creation and implementation of Biodiversity Action Plans (BAP). The BPT is available in several languages, which facilitates its use in different European countries and promotes international cooperation.

The tool facilitates the assessment of the potential for functional biodiversity at farm level by evaluating both the quantity and quality of semi-natural habitats, agricultural practices, and the farmer’s involvement in biodiversity topics. It helps identify the current situation regarding biodiversity and insect populations on the farm, assesses baseline indicators, and supports the selection of effective measures for a BAP. Moreover, it assists in evaluating the quality of implementation and monitoring the overall progress of the action plan.

The extended version, **BPT Insects**, places a special focus on insect conservation. It includes additional indicators and measures for the protection of insects and enables more detailed reporting on the development of biodiversity over time, including changes in key baseline indicators.

Examples:

Example 1 - BIOTEX is the result of a project created by several French institutions, including the Livestock Institute (IDELE), INRAE and the National Museum of Natural History (MNHN). This collaboration has led to BIOTEX being developed in France to promote biodiversity in agriculture and raise awareness of sustainable practices among farmers. The system is now used on various farms to assess and improve the biodiversity potential of agricultural land. The main functions of BIOTEX include adapting agricultural activities to the reproductive periods of flowers and insects in order to promote biodiversity. In addition, the influence of landscaping, such as bocage (fields surrounded by hedges), on the promotion of biodiversity is assessed. These landscape features play an important role in the protection and promotion of local species. The BIOTEX method is based on a diagnostic tool that includes a questionnaire to be completed by the farmers with the support of a technician. This questionnaire helps to assess biodiversity at different levels - from the overall landscape to individual plots. BIOTEX is already being used on around 350 farms, either as part of European programs or in professional training. The aim is to quantify and optimize the biodiversity potential of farms, which benefits both farmers and the environment.

Tips: IDELE organizes regularly training sessions for advisors or trainers to be able to use the Biotex diagnosis tool which completely free but requires a training to be able to use it.

Example 2 - The IBIS program offers a comprehensive biodiversity diagnosis for farms in order to better integrate the protection of biodiversity into agricultural practice. This service is currently only available in France and is offered by the local chambers of agriculture. The process begins with a request from the farmer to a consultant from the Chamber of Agriculture who specializes in biodiversity. During an on-site visit, the advisor assesses various aspects of the farm, including existing agroecological infrastructure, adjacent landscape features and the farmer's current management practices. Based on the data collected, the consultant prepares a detailed report with individual recommendations. These may include proposals for the creation of new agroecological structures, adjustments to agricultural practices or the further development of existing measures. The aim is to integrate sustainable and biodiversity-promoting methods into the farm. The entire diagnostic process requires around two working days for the consultant. This service is still used by comparatively few farmers, but offers great potential for more environmentally friendly farming.

Using Biodiversity Analysis Tools

Implementation Steps

Implementing BPT

1. **Initial Setup and Access**
   Register on the BPT platform (bpt.biodiversity-performance.eu) and select the appropriate language version. Familiarize yourself with the tool structure and indicator categories.

2. **Farm Assessment**
   Gather farm-specific data, including land use, natural habitats, management practices, and biodiversity-related measures. This step can be supported by an advisor or performed independently.

3. **Indicator Evaluation**
   Enter all relevant data into the online platform to assess both the quantity and quality of biodiversity elements. The tool evaluates key indicators related to biodiversity management, landscape structures, agricultural practices, and insect protection (if using **BPT Insects**).

4. **Biodiversity Action Plan (BAP) Development**
   Based on the analysis, develop a tailored Biodiversity Action Plan. The plan highlights strengths, identifies improvement areas, and proposes concrete, farm-specific measures.

5. **Implementation and Monitoring**
   Implement the recommended actions step-by-step. Use the BPT's monitoring features to track progress over time and adapt the plan as needed. BPT also enables long-term comparisons of baseline indicators.

   Costs: The use of the BPT is free of charge. However, optional support from trained advisors or consultants may incur service fees depending on the country and provider.

Using Biodiversity Analysis Tools

Implementing BIOTEX (french language only)

1. **Initial Assessment**
   Schedule a visit with a technician to conduct a comprehensive biodiversity assessment of your farm, including the surrounding landscape.

2. **Questionnaire Completion**
   Work with the technician to fill out a detailed questionnaire about your farm's practices, plots, and the agricultural territory.

3. **Data Analysis**
   The technician will analyze the collected data to evaluate the biodiversity potential and identify key areas for improvement.

4. **Action Plan Development**
   Based on the analysis, develop an action plan that includes adjusting agricultural practices according to the reproduction periods of flowers and insects, and enhancing landscape features like hedges.

5. **Implementation and Monitoring**
   Implement the recommended changes and regularly monitor the biodiversity levels with follow-up assessments to ensure continuous improvement

   Total cost of the diagnosis: around 1000 euros.

Implementing IBIS (french language only)

1. **Request a Diagnosis**
   Contact a chamber of agriculture advisor specialized in biodiversity to request a biodiversity diagnosis for your farm.

2. **On-Site Assessment**
   The advisor will visit your farm to assess agro-ecological infrastructures, nearby areas, and your farming practices.

3. **Data Evaluation**
   The advisor will evaluate the collected data and practices to understand the current state of biodiversity on your farm.

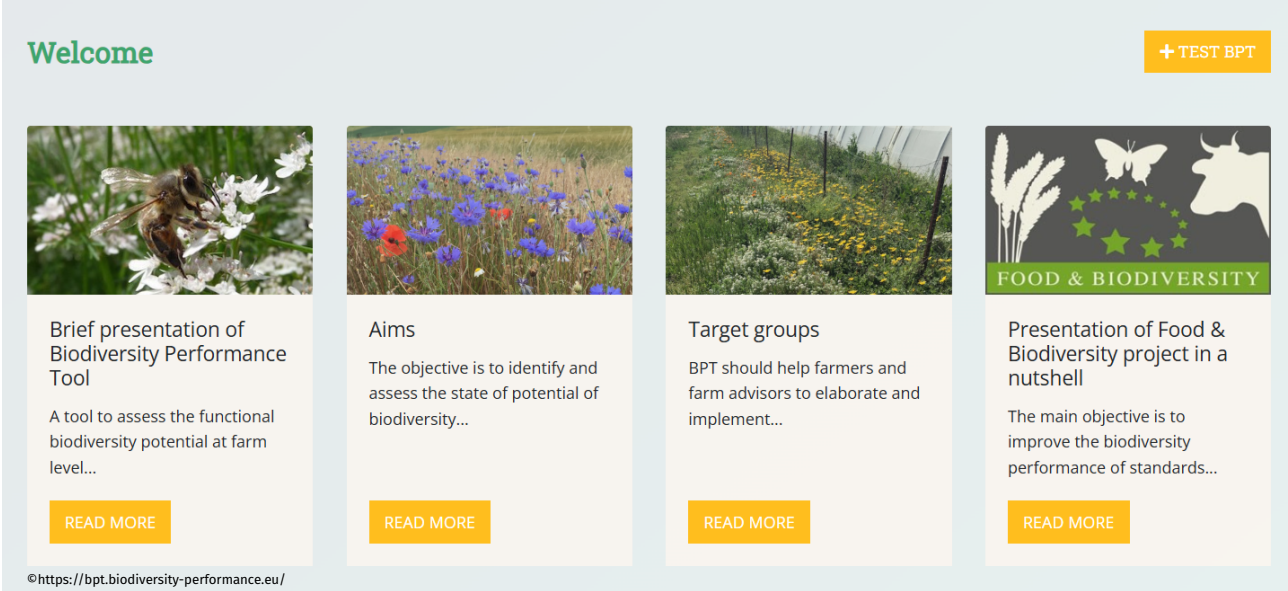
4. **Report and Recommendations**
   Receive a detailed report from the advisor with recommendations for creating new agri-environmental infrastructures, modifying existing practices, or enhancing current infrastructures.

5. **Implementation and Follow-Up**
   Implement the advisor's recommendations and schedule regular follow-up visits to monitor progress and make necessary adjustments.

How Will this Solution Impact the Performance and Resilience of your Farm?

This solution is a tool for analyzing biodiversity on a farm that has no direct impact on the performance and resilience of the farm, as the impact depends on the decisions made by the farmer at the end of the diagnosis.

However, the analysis of biodiversity on the farm is the first step towards improving biodiversity, as it helps to identify problems and raise awareness of the problems encountered. It can therefore be assumed that the implementation of this solution will help to protect and promote biodiversity and thus also strengthen the image of the farm and thus the social performance of the farm in the medium term.



©https://bpt.biodiversity-performance.eu/

Using Biodiversity Analysis Tools

Cost-Benefit Analysis

Costs

Socioeconomics:

- Initial investment for the diagnosis (advisors services).
- Mentally challenging changes and diagnosis.
- Potential short-term reduction in productivity during the transition to biodiversity-friendly practices.
- Investment in creating and maintaining biodiversity-friendly infrastructures (e.g., hedges, flowering strips).
- Ongoing monitoring and evaluation efforts to track biodiversity improvements.
- Time and effort required to adjust management practices to align with biodiversity recommendations.
- Possible initial disruption to existing routines and practices.

Health & Welfare:

- None.

Environmental Sustainability:

- No effects.

Benefits

- Long-term cost savings from reduced reliance on chemical inputs like pesticides and dewormers.
- Potential for increased market value and consumer demand for sustainably managed farms.
- Good practices identified-communication about them more efficient.
- Highlighting practices in funding applications is easier.

- Improved pasture quality and nutrition, leading to healthier horses.
- Enhanced natural pest control, reducing the need for chemical dewormers and minimizing health risks.

- Increased biodiversity, leading to more resilient ecosystems and improved soil health.
- Enhanced ecosystem services such as pollination, water regulation, and carbon sequestration.

Using Biodiversity Analysis Tools

Cost-Benefit Analysis

Costs

Cooperation between farms

- Time and resources are needed to coordinate and collaborate with neighboring farms.
- Potential challenges in aligning different farms' practices and goals.

Benefits

- Strengthened community ties and shared knowledge, leading to more effective biodiversity conservation efforts.
- Collective action can lead to larger-scale environmental benefits and a more significant impact on regional biodiversity.

Additional Resources

- https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0301168
- https://biodiversite.educagri.fr/?DiagnosticIbisIntegrerLaBiodiversiteDans
- https://idele.fr/detail-article/biotex-une-demarche-devaluation-multicritere-de-la-biodiversite-ordinaire-dans-les-systemes-dexploitation-delevage-et-de-polyculture-elevage#:~:text=BIOTEX%20est%20une%20d%C3%A9marche%20d,dans%20des%20approches%20agro%2D%C3%A9cologiques
- https://bpt.biodiversity-performance.eu/
- https://bpti.biodiversity-performance.org/

Funded by the European Union

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

Technical Sheet for Solution Implementation

Using Biodiversity Analysis Tools

Annex

Ideas to Ideas to Animate a Workshop about the Solution

- Ask an advisor specialized in environmental sustainability and biodiversity to participate in 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 Workshop Structure for implementing biodiversity analysis tools in Horse Stables

1. Introduction to biodiversity analysis tools
- What tools exist?
- Key features and components of each tool.
- Types of biodiversity analysis tools available on the market.

2. Benefits of biodiversity analysis tools in Horse Stables
- Enhanced Equine Health: Improved pasture quality and natural pest control.
- Environmental Sustainability: Increased biodiversity and ecosystem resilience.
- Cost Savings: Long-term savings from reduced chemical inputs.
- Community Cooperation: Strengthened ties and shared knowledge among farms.

3. Practical Applications on Horse Farms
- Adjusting agricultural practices to align with biodiversity recommendations.
- Enhancing landscape features like hedges and flowering strips.
- Implementing biodiversity-friendly infrastructures.

4. How to Choose the Most Suitable Tool
- Evaluation of the farm's needs and biodiversity goals.
- Assessment of structural and landscape requirements.
- Comparison of features, ease of use, and costs.

5. Hands-On Demonstration
- Live demo of using **biodiversity analysis tools** for biodiversity assessment.
- Participants try out the tools and techniques.
- Proper methods for data collection and analysis.

6. Maintenance and Troubleshooting
- Regular monitoring and evaluation of biodiversity levels.
- Adjustments and improvements based on ongoing assessments.
- Care and maintenance of biodiversity-friendly infrastructures.

7. Case Studies and Real-World Examples
- Examples of farms successfully using **biodiversity analysis tools**.
- Discussion on integrating these tools into daily operations.
- Lessons learned and tips from experienced farm operators.

8. Cost Analysis and Return on Investment (ROI)
- Initial costs vs. long-term savings and benefits.
- Calculating ROI based on farm size, transition costs and subsidies.
- Financial advantages from improved productivity and reduced chemical use.

9. Q&A Session
- Open floor for participants to ask questions and share experiences.
- Addressing specific concerns and uncertainties about the tools.

10. Wrap-Up and Resources
- Summary of key points covered in the workshop.
- Additional resources for further learning (websites, suppliers, online communities).