



**Practice Abstract 14 -
Farmtopia Benchmarking Tool**

14. Farmtopia Benchmarking Tool

Short Summary for Practitioners in English

Problem:

Farmers, advisors, cooperatives and AgTech providers need simple ways to understand whether farm performance is improving over time and how a holding compares with relevant peer groups at farm, regional or production-system level. In practice, benchmarking is often constrained by fragmented farm records, inconsistent data structures and manual spreadsheet-based comparisons. This limits the practical value of digital farm management systems, because observations, activities and performance indicators cannot easily be transformed into comparable insights.

Solution:

The Farmtopia Benchmarking Tool demonstrates how a functional smart farming service can be built on top of the Farmtopia Digital Fieldbook and Data Exchange modules. It reuses the Fieldbook-aligned data structures for farm observations and activity records, while the Data Exchange module supports interoperable access to comparable datasets. The implementation has also been aligned with Gaiasense FMIS integration, showing how Farmtopia core modules can be embedded into an operational farm management environment. Compared with spreadsheet-based benchmarking, the tool reuses structured farm records, applies consistent indicator definitions and updates comparisons when new data become available. This reduces manual data preparation, improves comparability and allows advisors to examine individual-farm and group-level results using the same underlying data structure. The tool was tested using 2 SIP1 farms covering avocado crops regarding the spray events.

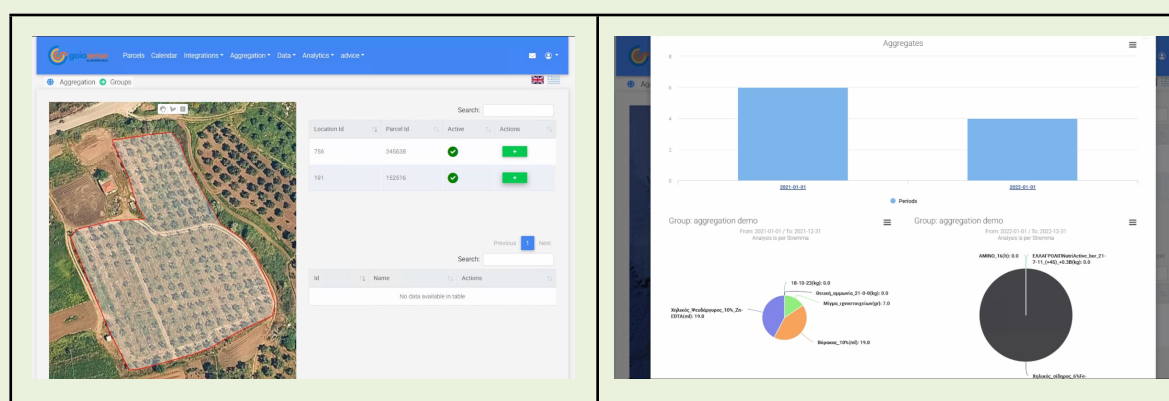


Figure X Farmtopia Benchmarking Tool

The farmer (or and advisor) compared it with values for its peer group and could monitor the same indicator during the following production period to assess improvement in terms of yield production or other parameters.

Practical Recommendations:

- Farmers can use the tool to compare selected farm performance indicators against relevant reference groups and monitor progress over time.
- Advisors can use aggregated benchmarking outputs to support group-level advisory services, training activities and targeted interventions.
- Cooperatives and producer groups can use benchmarking results to identify shared constraints and prioritize collective improvements in productivity, sustainability and resource efficiency.

-AgTech SMEs can reuse the demonstrated architecture as a reference pattern for building benchmarking functions on top of Farmtopia-compatible data assets.

Benefits:

- Performance comparison: Transforms farm records into comparable indicators for benchmarking across farms, groups or regions.
- Interoperability: Builds on standardized Farmtopia data structures rather than creating a separate benchmarking data model.
- Decision support: Helps farmers and advisors identify gaps, trends and opportunities for improvement using data already collected in day-to-day farm operations.
- Reduced implementation effort: Reuse of Digital Fieldbook and Data Exchange functionality decreases the effort required to develop a benchmarking service from scratch.

Future Development:

Additional work may include expanding the range of supported benchmarking indicators and strengthening visualization dashboards.

Further information

- Farmtopia Farm Benchmarking Service on Youtube channel: <https://www.youtube.com/watch?v=O7zjG5Xt6LM>
- For implementation questions, contact technical coordination team through the established Farmtopia support channels.

About this practice abstract and Farmtopia

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Farmtopia: The project is running from September 2023 to August 2026. The overall goal of Farmtopia (**GA No.: 101083541**) is to democratize digital farming to empower small and medium farms.

Website: <https://farmtopia.eu/>

NEUROPUBLIC: As part of the Farmtopia project, NEUROPUBLIC is the coordinator of the project, contributing across all work packages. It leads WP1 on designing the Farmtopia Digital Solutions and contributes as an agricultural digital solutions provider within the Sustainable Innovation Pilots.

Website: <https://www.neuropublic.gr/>

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