



Practice Abstract 3 - Farmtopia Digital Field Book

Summary for practitioners

Problem:

Adopting digital tools in agriculture has been particularly challenging for small farms, as studies have shown low uptake of Agricultural Digital Services (ADS) among them (Adamides et al., 2020; FAO, 2019). This has become a policy concern, highlighting the need for cost-effective ADS tailored to small and medium farms to improve their environmental and economic performance while bridging the digital divide.

Solution:

The **Farmtopia Digital Field Book**, developed by ITC – Innovation Technology Cluster Murska Sobota and under Digital Innovation Hub for Agriculture and Food Production – [DIH Agrifood](#) ecosystem, is a key tool within the Farmtopia Farm Management Information System (FMIS) designed to address these challenges. This innovative solution makes it easier for small farms to capture and manage essential data, including:

- **Farmers' activities:** planting, applying fertilizers, harvesting, and more.
- **Observations:** tracking plant growth, scouting for pests, and soil sampling.
- **Parcel properties:** mapping field locations, recording soil types, and noting climate conditions.
- **Assets:** managing farming equipment, machinery, and inventory like fertilizers and phytochemicals.

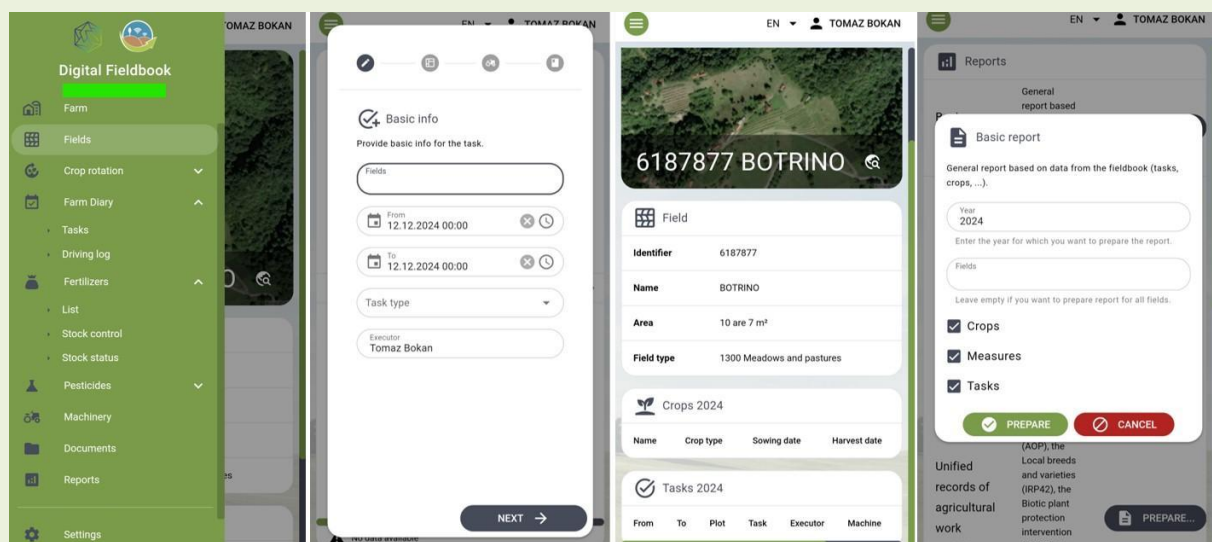
The **Digital Field Book** is designed for flexibility and ease of use, allowing farmers to input data seamlessly on personal computers or mobile devices. It consists of three main services:

1. **Field Book as a Service:** Co-developed in collaboration with farmers and the Institute of Agriculture and Forestry Murska Sobota (KGZS MS), a farming advisory service in Slovenia, this cloud-based tool is tested in Sustainable Innovation Pilot 5. It offers advanced features tailored to meet the needs of modern agriculture:
 - a. A user-friendly interface for entering and viewing data,
 - b. A backend system that ensures smooth data processing,
 - c. Secure storage for both structured data and files.
2. **Field Book Data Exchange API:** This service supports secure data sharing, enabling farmers to connect with others in the Farmtopia ecosystem. It uses standard data formats to ensure smooth communication and reliable data exchange.
3. **Field Book as Open-Source Software:** This version offers an open, easily deployable solution that developers can adapt. It allows developers to create custom tools while maintaining strong data management capabilities.

Practical Recommendations:

The Farmtopia FMIS ties these services into a comprehensive system, offering a user-friendly interface, secure data access, and tools to streamline agricultural operations. By bringing advanced digital tools to small farms, the Farmtopia Digital Field Book supports sustainability, boosts productivity, and helps small farms succeed in the digital age.

This innovative solution positions Farmtopia at the forefront of digital transformation in agriculture, fostering sustainability and operational efficiency.



Example of the tool displayed on a mobile phone

Further information

- Official website of the Digital Innovation Hub for Agriculture and Food Production, under which the Farmtopia Digital Field Book is being developed: <https://dih-agrifood.com/>
- (Adamides et al., 2020; FAO, 2019)
https://www.researchgate.net/publication/341727198_Smart_Farming_Techniques_for_Climate_Change_Adaptation_in_Cyprus
- FAO, 2023 <https://openknowledge.fao.org/items/b5875b03-ef1b-42d7-abf1-3e5c8cf88cef>
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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/>

ITC: As part of the Farmtopia project, and to optimise production, reduce fertilisation costs and support food resilience, ITC is closely collaborating with the public advisors from the Institute of Agriculture and Forestry Murska Sobota (IAF). It engages farmers to co-create, pilot and demonstrate the Smart farming/Decision support system solution.

Website: <https://itc-cluster.com/>

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