



**Practice Abstract 30 -
RAMAS: An Integrated Digital Advisory Platform for
Step-by-Step Precision Farming on Small and Medium Farms
(RAMASphere SIP)**

30. RAMAS: An Integrated Digital Advisory Platform for Step-by-Step Precision Farming on Small and Medium Farms (RAMASphere SIP)

Short Summary for Practitioners in English

Problem:

“Precision agriculture is only for big farms.” That belief keeps most small and medium farms on uniform fertilizing, calendar spraying and costly irrigation, wasting inputs and money. Kievo, an 11-ha family farm of vines and cereals in the challenging Ovche Pole region of North Macedonia, with its drought, erosion-prone soils and harsh summers, represents exactly the small farms that rarely see precision agriculture as a solution.

Solution:

RAMASphere shows the opposite is true. A small farm can go digital step by step, without a big upfront investment, using a “digital farm model” built on RAMAS - AgFutura’s advisory platform. Parcels become digital plots, and an agronomist guides the farmer remotely. RAMAS was upgraded with Farmtopia’s Data Integration Module, which merges and expands the weather, satellite and pest-risk data available to the advisor. The process started with a Farm Capacity Assessment to map the parcels and diagnose the farm’s real needs; from there, the farm chose the advisory programs it needs (seeding, soil, nutrition, plant protection, irrigation and harvest). Targeted investments, solar energy for irrigation and GPS autosteering system, were then added to apply the advice precisely.

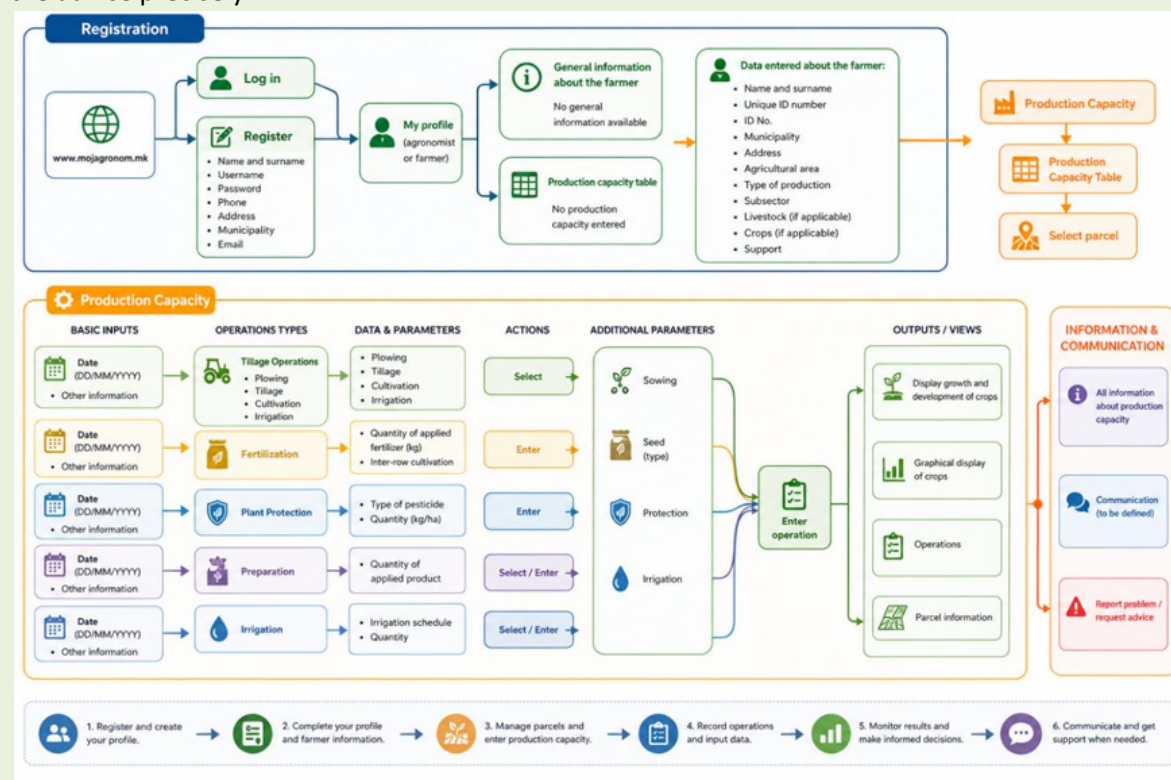


Figure X: Conceptual workflow of the RAMAS platform

Benefits:

-Right input, right place: zone-based fertilisation and risk-based spraying replace uniform application – at Kievo, vineyard sprays fell from 9 to 6 (–33%) and farm-wide pesticide use by 15%.

- Healthier, more productive crops: precise nutrition and protection support yields – pilot cereals reached 2.85 t/ha, +22% over baseline.
- Lower running costs: solar-powered irrigation and optimised operations cut expenses – the pilot saved ≈€1,965/year (target €1,500).
- Faster decisions: advice arrives within hours instead of days; farmer satisfaction was above the project target.

Practical Recommendations:

Any small farm can start the same way: begin with a Farm Capacity Assessment and soil analysis, add advisory programs season by season, and invest in equipment only where the pilot proved it pays. For advisors and cooperatives, the model scales, one team can support many members remotely at low cost.

Further information

- n/a

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/>

AgFutura Technologies (AGFT): SIP leader, ADS provider

Website: <https://agfutura.com/>

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