

1 Description:

The SmartAG app is an advanced digital platform designed to help farmers and landowners optimize agricultural production by monitoring, reporting and verifying (MRV) crops, lands and surface water quality using satellite imagery and real-time data (updated every 5 days). Developed by AgroInsider, the platform combines Earth Observation (EO) data from Copernicus satellites with proprietary algorithms to provide valuable insights into soil health, crop performance, water usage, surface water quality and carbon sequestration. SmartAG supports sustainable farming by enabling efficient MRV of land and water resources, helping users reduce resource consumption and minimize environmental impact. It also facilitates carbon credit verification, empowering users to make informed decisions that promote both economic growth and environmental sustainability. The platform's user-friendly service aims to enhance agricultural practices, improve ecosystem health, and support climate-smart solutions and nature-based approaches to mitigate climate change.

2 Video:

Click here



3 Competitive advantages:

The SmartAG app offers a powerful yet accessible solution that stands out in the agricultural and environmental monitoring market by combining advanced satellite data, local field inputs, and artificial intelligence (AI) in a user-friendly platform tailored for non-experts. Unlike many existing tools that require technical expertise or focus solely on data delivery, SmartAG empowers users with actionable insights for sustainable land and water management.

Compared to existing solutions, SmartAG is more accessible, cost-effective, and practical, delivering not just raw data but meaningful, context-aware support for decision-making. It bridges the gap between cutting-edge EO technologies and real-world agricultural and environmental needs—contributing to both the resilience of Mediterranean landscapes and the competitiveness of the European space and agri-tech sectors.

Smart AG application

4 Target Users:

1. Farmers and agricultural cooperatives seeking practical, user-friendly tools to MRV soil conditions, crop health, and water use in real time, in order to improve productivity, reduce environmental impact, and adapt to climate variability.
2. Farmer associations and agribusinesses that need reliable data to support their members in implementing precision agriculture and ensuring traceability across the supply chain.
3. Environmental organizations and research institutions using MRV tools to assess land degradation, biodiversity, soil conservation, and carbon sequestration potential.
4. Public authorities and policymakers that require robust tools for MRV to implement environmental regulations, track climate targets, and support sustainable development under the EU Green Deal and water-related directives.

5 Quote from a local stakeholder:



The SmartAG app leverages Earth Observation (EO) and Artificial Intelligence (AI) technologies to deliver critical insights into real-time crop health status. This analytical capability enables data-driven irrigation management, optimizing water resource allocation and minimizing unnecessary consumption. These precision agriculture practices are directly aligned with the European Union's objectives for sustainable resource management and environmental stewardship.

6 Uptake of the Service:

The insights resultant from the SmartAG app will be helpful in enhancing crop management strategies for both individual farmers, associations, environmental entities, and regulatory authorities. All key findings, regarding diagnostics and discoveries, will be formally presented to the consortium within the scheduled milestone reports and in meetings with each partner.

7 Next Steps:

- Strengthen satellite-climate data integration (e.g., winter wheat)
- Improve water-use efficiency with AI and field evidence
- Promote farmer engagement and tech adoption

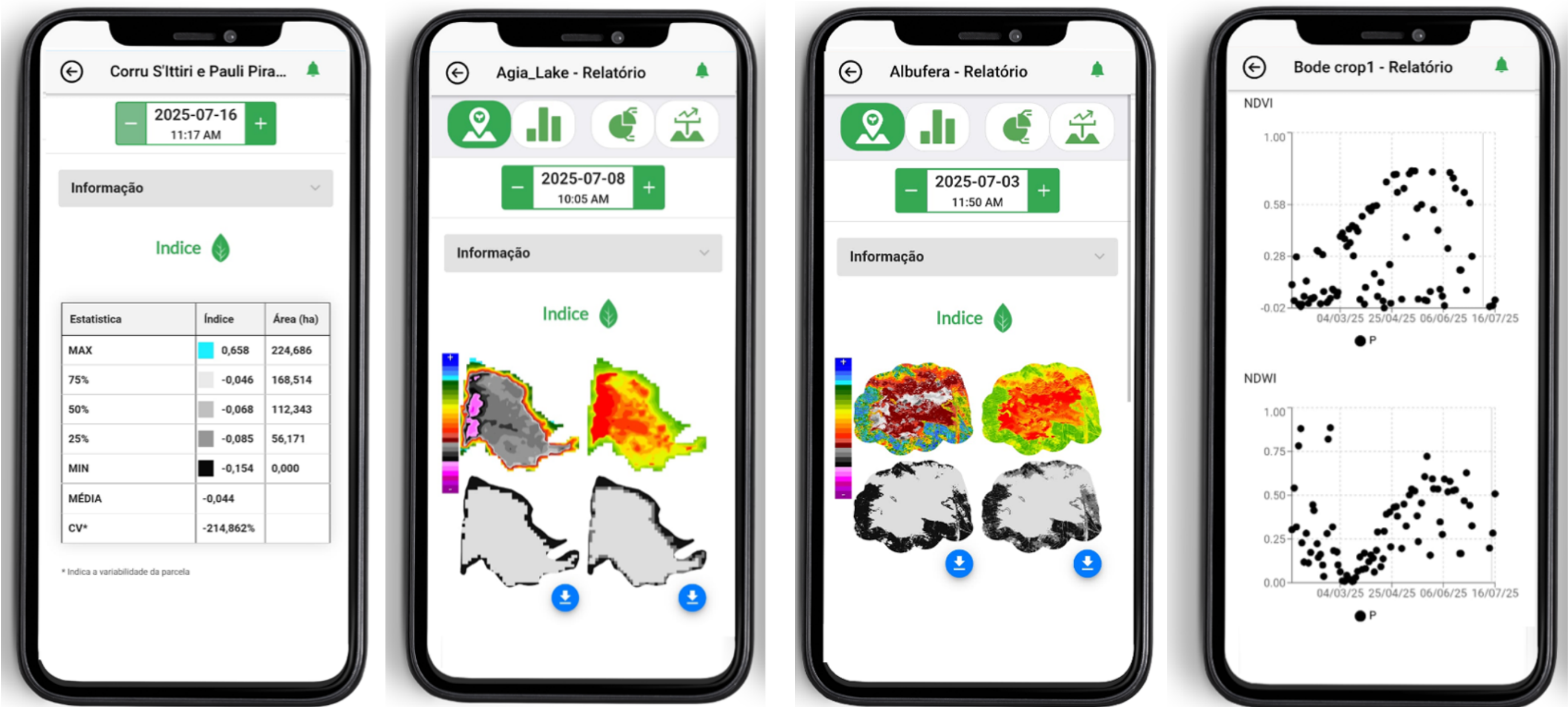
8 OurMED Demosite Application & Results:

The SmartAG application has been tested at seven demonstration sites across Mediterranean countries: Germany, Spain, Greece, Turkey, Morocco, Tunisia, and Italy, representing diverse agro-climatic zones, land uses, and crop types. Both project partners and local farmers have actively contributed to its iterative development through ongoing feedback.

Data collection spans from 2017 to 2025 across most sites, showcasing SmartAG’s ability to operate efficiently under varied conditions and plot sizes. So far, SmartAG has monitored more than 29,000 hectares, generated almost 100,000 daily reports, demonstrating its scalability, robust data processing, and adaptability to a range of environmental and socio-economic settings.

SmartAG was used to monitor various crops at each demo site, providing monthly reports that highlight the platform's versatility in supporting diverse land uses. This included typical Mediterranean crops like olive groves and almonds, staple cereals such as wheat and corn, and even carbon-oriented monitoring in CO₂ plots. The data gathered illustrate both the intensity of SmartAG's use and the specific agricultural focus of each site. This demonstrates how effectively SmartAG has been adapted to different farming systems, stakeholder requirements, and project goals.

- 1 – NDVI table of Lake Corru S'Ittiri and Pauli Pirastru, Arborea, Sardinia, Italy.
- 2 – NDVI image of Lake Agia, Greece.
- 3 – NDVI image of Albufera, Spain
- 4 – NDVI and NDWI graph of one of crops in Bode, Germany.



Technology Readiness Level (TRL): 9

Owner: AgrolInsider

Link to the service: <https://smartag.agroinsider.com>

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