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#DYNAMICAGRI #SMARTFARMING

THE FUTURE OF AGRICULTURE IN EUROPE: SMART FARMING LEADS THE WAY

SMART-AKIS CONFERENCE

Smart-AKIS Recommendations: From the field to policy

S. Fountas (AUA) & N. Bellostas (INI)

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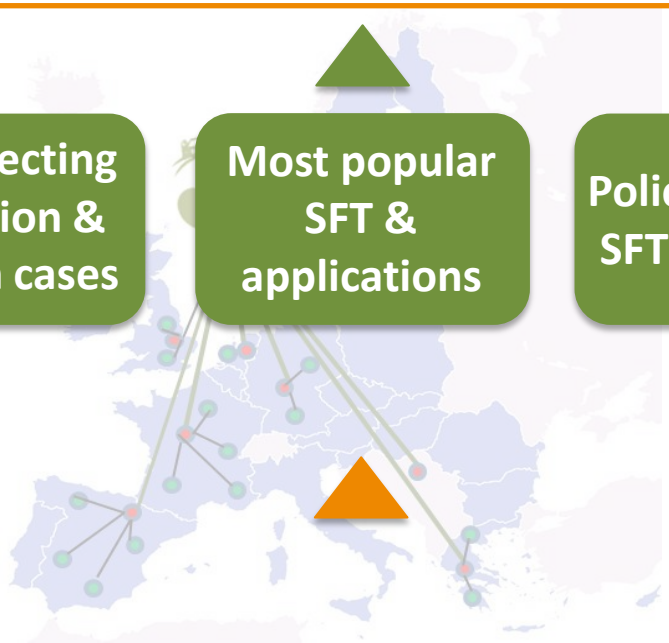
Methodology

Recommendations & policy briefs for closing the research and innovation divide in SFT in Europe



European level

- Trends in SFT research
- Factors affecting SFT adoption & innovation cases
- Most popular SFT & applications
- Policy gaps for SFT adoption
- Actions to overcome the barriers
- Validation of barriers, incentives and needs

Grassroots level

- Most popular SFT & applications
- Policy gaps for SFT adoption
- Barriers, incentives and needs

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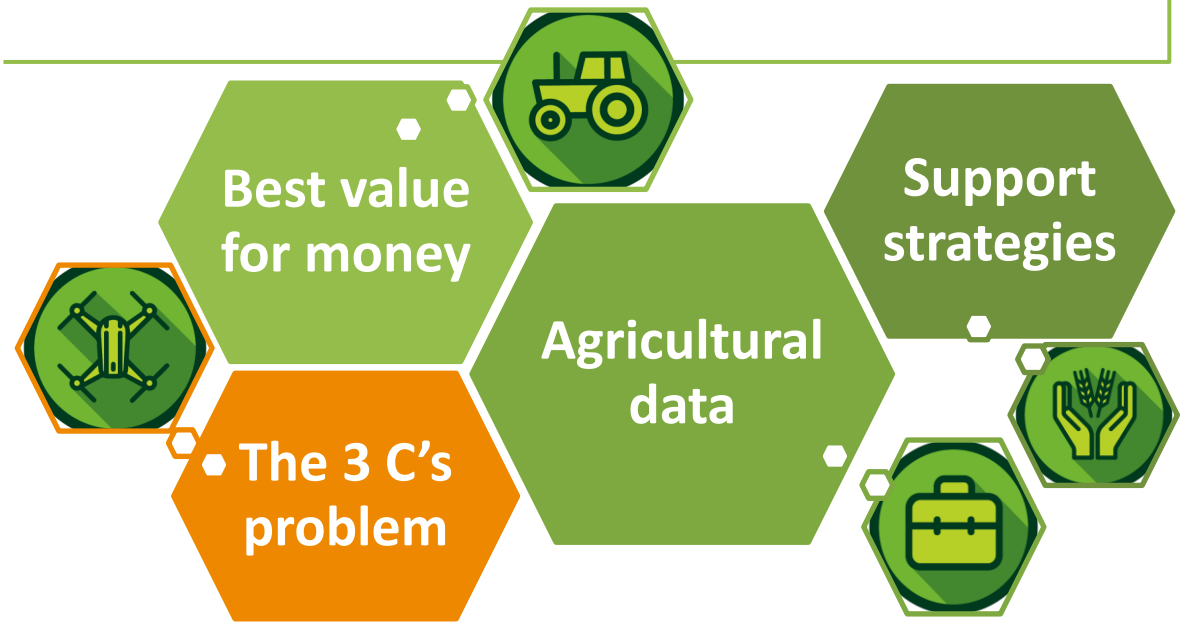
Recommendations for closing the research and innovation divide in SFT in Europe

Enhancing innovation-driven agricultural research within the EIP-AGRI ecosystem

Future research in Smart Farming

Mainstreaming Smart Farming

"Smart Farming Technologies are another tool, not an end in themselves"



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Enhancing innovation-driven agricultural research within the EIP-AGRI ecosystem

1. Increase **farmers' participation**: fund proposals' preparation, demos, visits, etc.

2. **Coordinate** TNs and MAA projects: joint workshops, integrated platforms, translation.

3. **Reinforce** the intermediary role of advisory services and other facilitators

4. Create **small networks** of end-users. Empower NRN and TNs outreach to OGs

5. Increase the RDPs budget for **creation of OGs**, including **cross-border OGs**

6. Facilitate synergies between EIP-AGRI (**H2020, EARDF**), **INTERREG** for territorial cooperation and **Erasmus+** for education and training. **Challenge-based approach.**

7. **Simplify access** to R&D and innovation funding and reporting

8. Close the gap between **agricultural research and rural development:** Smart Villages Act

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Future research in Smart Farming

1. **Close the knowledge gap** between measuring the status of crop and soils and using that information to make practical decisions in farming
2. Provide the **required knowledge** in the measuring tools to be applied for different cropping systems
3. **Support research on reactive technologies**: VR fertilization, pesticide, seeding and tillage
4. **Develop robots** for weeding, precision spraying and selective harvesting
5. **Foster research on SFTs directly improving sustainability :** e.g. biodiversity, soil compaction
6. Develop and mainstream SFTs for **small farms**
7. Develop technical solutions and mechanisms for stakeholders to collaborate in all issues related to **data collection, standardization and data management**

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Future research in Smart Farming

Some ideas from workshops participants…

- Affordable sensors
- New indexes for ripening, disease, weeds…
- More flexible switch between nozzle types
- Translation of data into actionable information
- Drones for crop protection
- VRF with biological based fertilizers
- Integrated autonomous systems for in-field operations
- System-based approach: tech-plant-soil system
- Data Hubs for farmers: market and compulsory government info
- Integrate traceability and consumers requests

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Mainstreaming Smart Farming

Best value for money

Support strategies

Agricultural data

The 3 C's problem

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Best value for money

Create an **independent organization** for neutral benchmarking of SFTs including cost/benefit analysis.

Disseminate and demonstrate successful business cases at the farm level, peer-to-peer exchanges, training and demonstration of SFT. I.e. Digifermes (FR) and Digital Farm (RS)

Innovate on business models and on price schemes: “SFT-as-a-service” as a fitting model for end-users

Conduct independent and neutral research and **demos** with a wide variety of farmers, soils and crops: “ground truth evaluation”

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Mainstreaming Smart Farming

The 3 C's problem

Increase public investments for ensuring broadband connectivity

Adopt **User Experience** tools and promote **Plug & Play**

Increase the accuracy and reliability of data and **ease its translation** into intelligence

Promote interoperability standards and **increase the visibility** and outreach of standardisation initiatives

Increase **research on wireless technologies** (LoRa/LoRAWAN, etc.)

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Mainstreaming Smart Farming

Agricultural data

Promote Agricultural Open Data policies and support the development of public-private agricultural data platforms,. i.e. API-AGRO

Boost dissemination of the newly agreed EU **Code of Conduct**

Increase the transparency in the contractual agreements between farmers and industry providers

Improve the quality of data and foster automatic transfer of data

Increase research in the field of data accuracy, reliance and usability.

Embrace the Open Data Research principles

Empower farmers in the data economy: awareness raising, dissemination and training on the EU Code of Conduct.

Focus on the **valorisation of data** sharing models

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Mainstreaming Smart Farming

Support strategies

Mainstream into TNs and MAAs an **Education & Training strand**

Advisors as facilitators: trustworthy and independent bodies for connecting users with experts
Advisors as specialists: by crop or by areas of expertise

Increase participation of start-ups, applied research institutes and industry in OGs, demo farms…

Formulate applied research results in easily to understand language for facilitating take-up

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Overall conclusions

"Smart Farming Technologies are another tool, not an end in themselves"

1. Demonstrate smart farming's **benefits**
2. Improve smart farming **funding**
3. Innovate on **business models**
4. Ensure rural broadband **connectivity**
5. Develop **user friendly** solutions
6. Promote **interoperability** standards
7. Promote a **transparent framework** for agricultural data
8. **Spur growth** from agricultural data
9. Mainstream smart farming into **education & training**
10. Strengthen the **advisors role** for the digital era





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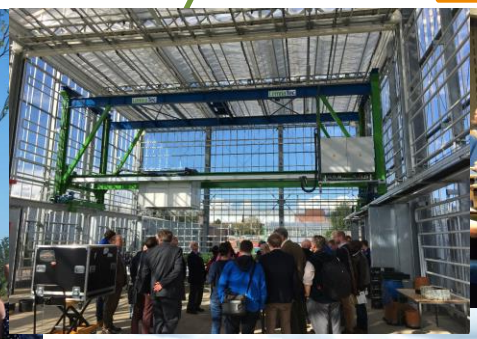
Acknowledgements









Further information

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