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MEMBER

# ÖMKi On-Farm Living Lab

**Living Lab** ÖMKi | Hungary



# ÖMKi





Source: ÖMKi



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ÖMKi On-farm Living Lab (ÖMKi LL) is an agroecology-focused nationwide participatory experimentation network that includes variety of field trials and technology tests co-designed and co-implemented with farmers and other agri-food stakeholders with the aim to improve and/or develop new organic and agroecology practices, products and technologies.

## Aim

To promote and improve the competitiveness of organic agriculture and agroecology through scientific research and to accelerate the transition toward sustainable agri-food systems in Hungary.

## Background information

**2011:** Foundation of the Host organisation: ÖMKi, the Hungarian Research Institute of Organic Agriculture Public Benefit Non-profit Ltd.

**2012:** Launch of on-farm participatory research network.

**2020:** Living Lab certification by ENOLL.

## Funding structure

Funding sources include European and national projects and income from products/services offered by the ÖMKi LL.

## Activities

ÖMKi On-Farm LL is an ecosystem in which several LL projects with different levels of maturity run simultaneously, focused around four main themes: **1) development of water-conserving and adaptable organic farming systems:** such as optimizing regenerative arable practices to organic farming conditions, developing species- rich cover crop mixture for vineyards and orchards, no-till organic horticultural practices, **2) biological and agrotechnical bases for sustainable crop production in a changing agroecological environment:** protein crop, organic cereal and ancient cereal variety testing and related product and agrotechnology development, **3) optimising organic matter cycles within and between sectors:** peat substitution and improvement of nitrogen cycle in horticulture and **4) digital transition in sustainable farming:** improvement of remote sensing technologies for plant protection and application of digital tools (sensors) for developing customised nutrition and animal welfare.



### Development of water-conserving and adaptable organic farming systems

- optimization of regenerative arable practices to organic farming conditions
- development of species- rich cover crop mixture for vineyards and orchards
- no-till organic horticultural practices



### Biological and agrotechnical bases for sustainable crop production in changing environment

- protein crop, organic cereal and ancient cereal variety testing and related product and agrotechnology development



### Optimising organic matter cycles within and between sectors

- peat substitution in horticulture
- improvement of nitrogen cycle in horticulture



## Digital transition in sustainable farming

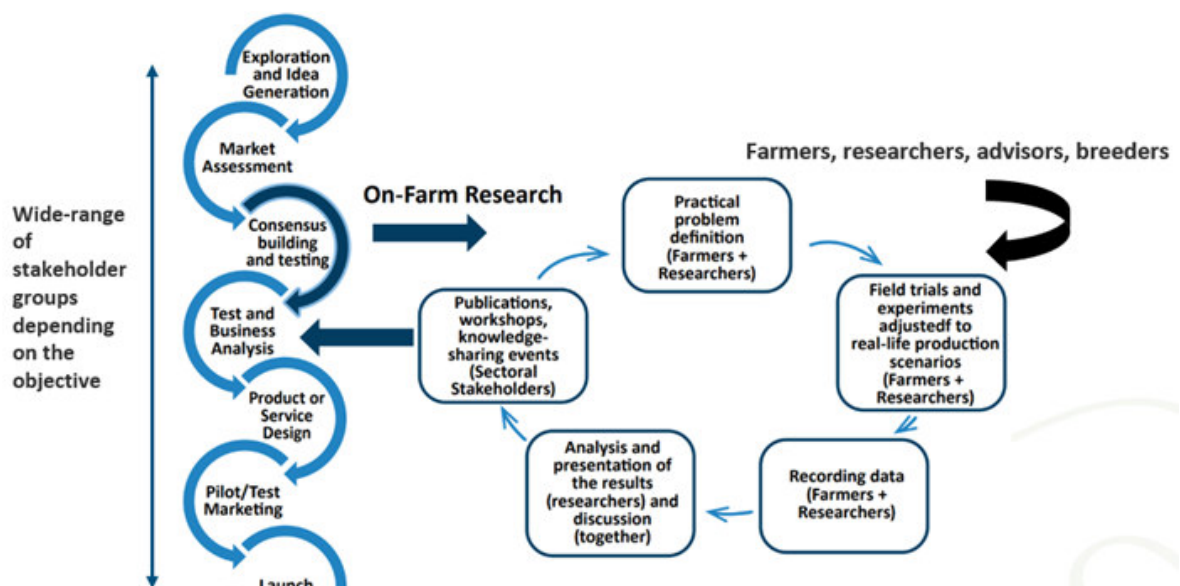
- improvement of remote sensing technologies for plant protection
- application of digital tools (sensors) for developing customised nutrition and animal welfare

Source: ÖMKi

## Methods, stakeholder engagements and tools

The ÖMKi LL combines two methodological processes into one complex system, that finally results in product/service/technology development. The so-called 'on-farm method' is an open innovation process in itself, that is used by the ÖMKi LL to improve agricultural production practices in real-life farm settings (on the farm). The research involves farmers (or other end-users) in all of the steps, therefore they become active participants in the co-creation of the research from the first step. The real environment in every case is the actual farm of the producer and the experiments are always adjusted to the farmers' production or environmental goals.

As the ÖMKi LL started to develop products, the on-farm method merged with the classical product development stages, thus creating its specific ÖMKi LL product development process. In this process, the on-farm research is used to define and/or test agricultural product ideas and services and adjust them to a market gap. New product/service testing, development and improvement can also take place as a service of the ÖMKi LL.



## Achievements

- Yearly more than 100 farms took part voluntarily across the country.
- Variety tests and agrotechnical development in winter wheat, soya, potato and wine production.
- Good information network among the stakeholders of each sector.
- New results and information become integrated into practice, production efficiency increases.
- Opportunity to take part in EU research cooperations (Horizon Europe), multi-actor approach.

*Products available on the market:*

1. ÖMKi Living Interrow: Species rich seed mixture developed for vineyards interrows
2. Landrace Tomato Seedling Package: Re-introduction of landrace tomatoes as seedling into production and diet
3. Organic Landrace Flour (Einkorn, Emmer): Reintroduction of ancient cereals in arable cropping and diet
4. Advisory service for organic and agroecology farmers
5. Number of technology and production guides about organic farming (tomato, grapevine, potato, fruit trees, soya bean, etc.) are published for farmers and amateur gardeners.





Source: ÖMKi



## Publications

[ÖMKi On-Farm LL promo video](#)



[Tomato Landraces Are Competitive with Commercial Varieties in Terms of Tolerance to Plant Pathogens – A Case Study of Hungarian Gene Bank Accessions on Organic Farms](#)

[Re-Introduction of Ancient Wheat Cultivars into Organic Agriculture–Emmer and Einkorn Cultivation Experiences under Marginal Conditions](#)

[Comparison of species-rich cover crop mixtures in the Tokaj wine region \(Hungary\)](#)



## Contact



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