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MEMBER

The Danish Organic on-farm Living Lab

Living Lab DKOOF | Denmark



The Danish Organic on-farm Living Lab (DKOOF) is a national holistic network where we have the opportunity to experiment, develop, document and implement in real contexts innovative solutions for organic farming. The DKOOF focus on innovation, development and documentation within three focus areas namely. 1. livestock and animal welfare, 2. soil fertility building and 3. resilient and effective cropping systems.

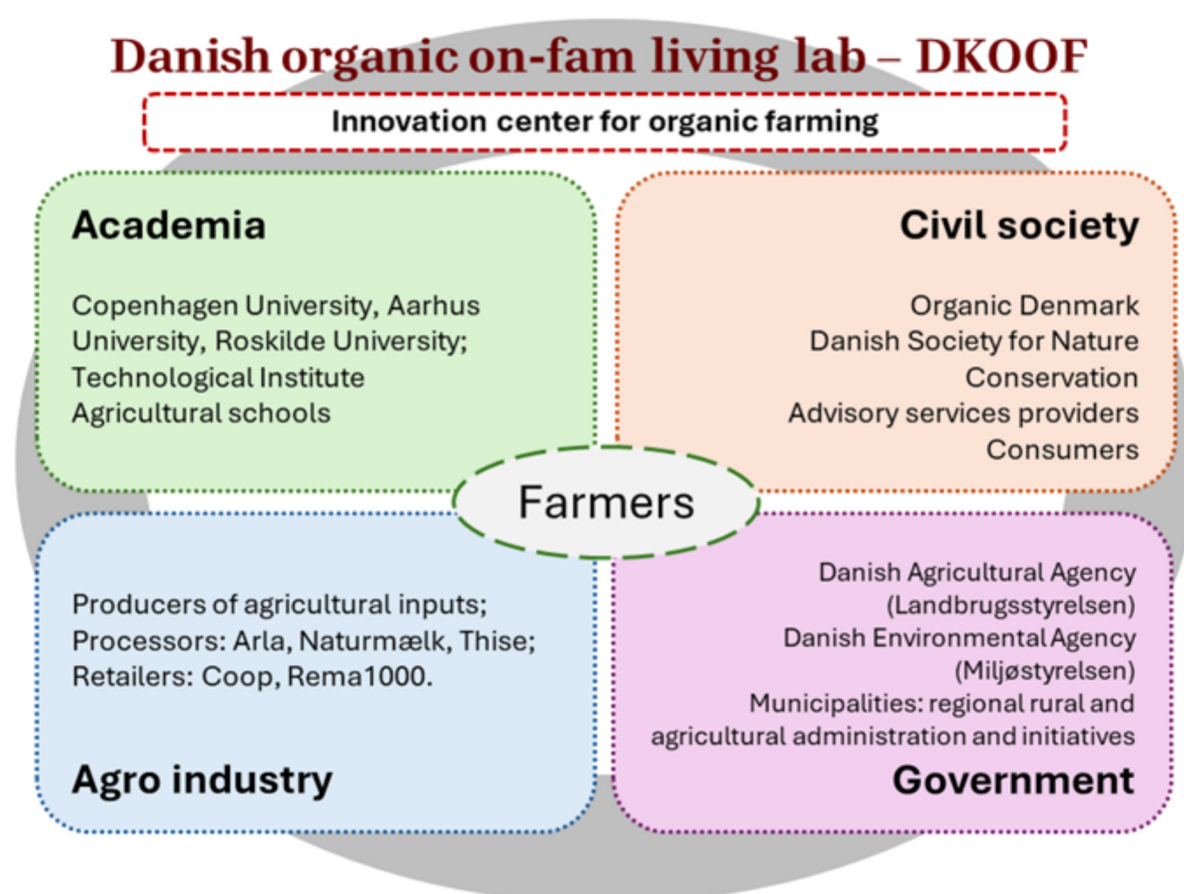
Aim

Create a better and sustainable future for the main user -farmers - in general, and organic farmers in particular, by developing and promoting innovative agricultural practices that address climate challenges, protect the environment, and enhance quality of life, income, and social well-being. Through collaborative efforts and interdisciplinary research, the living lab aims to support resilient and

thriving farming communities while advancing sustainable, organic and regenerative agriculture measures within the three focus areas.

Background information

The Danish Organic on-farm Living Lab (DKOOF) was established in 2022 to consolidate and strengthen activities in three main areas: animal welfare, soil fertility, and resilient cropping systems. Previously, these efforts were spread across a relatively uncoordinated portfolio of 10–30 living lab sites involving numerous projects and stakeholders. Managed by ICOEL, DKOOF now coordinates and enhances these efforts through co-creation, operations, and fundraising. From the start, DKOOF has engaged a broad group of stakeholders—farmers, advisors, universities, research institutes, civil society organizations, and industry—to ensure that solutions to organic challenges are developed collaboratively and are practical for real-world application.



Source: Anton Rasmussen

Funding structure

The main financial source of income of DKOOF is through project funding. Therefore, ICOEL is in constant motion to access funds in national funding

Therefore, ICOEL is in constant motion to access funds in national funding schemes through the Danish agriculture promille-tax-system of the DAA. Besides these funding-schemes, additional funding is obtained through the Danish Innovation Fund, The Danish Green Growth and development schemes, and the EU Horizon and mission programs.

Activities

Livestock and animal welfare

Animal welfare in the context of organic farming means giving livestock the freedom to unfold as much as possible their natural behavior and designing the environment where they grow to provide positive experiences for the animals. All conceived in the appropriate framework for the benefit of the farmers as well. A flagship of DKOOF is the development of the cow-calf contact systems in Danish organic dairy farms. Dairy farmers, advisors, scientist dairy cooperatives have been working closely for developing strategies to prolong the time cow and calf spend together. This is especially relevant for improving health and welfare of cows and calves. You can see the relevant information on the development of the topic here: Ko med kalv (icoel.dk). Other relevant projects in relation to the topic of cow-calf contact systems and to other initiatives in relation to animal welfare are [GrazyDaiS](#), [GroBeat](#), [ENTRANCE](#) and [PATHWAYS living lab](#).

Soil fertility building

Activities and living lab sites set up around the need to expand the organic area by raising economic and environmental benefits, yields and robustness of organic crop production. Soil fertility is the basis for the organic farmer's production and economy and for a secure and climate-friendly food supply for current and future generations. DKOOF co-develop measures, optimize and document methods for building robust soils through diversification of plant growth and the addition of organic matter, to supply crops with sufficient nutrients and act as a buffer in both dry and wet weather conditions. The efforts are focused on reduced tillage, composting, use of effective cover crops and regenerative agriculture measures. A flagships in this relation is **CarbonFarm** (icoel.dk) which develops agronomic, economic, environmental (e.g., biodiversity and climate) attributes, and to document the effects of implementing sustainable and resilient cropping systems.

Resilient and effective cropping systems

Improving organic yields is a key challenge of the organic sector and DKOOF focuses on sustainable and low emission farming practices to adapt to organic principles and climate change, which means identifying, using and breeding resilient crops in systems with a conservation agriculture focus. We collaborate towards: (1) testing, adapting and scaling organic agricultural practices to increase productivity and quality; (2) developing cropping systems that are resilient to climate change, pests and diseases. The biggest initiatives in this context is the **Danish national organic field trial scheme** which is a unique collaboration between national experts, local advisors and farmers on field trials and demonstrations. These trials cover a vast scheme within crops, varieties, fertilizers use, nutrient management, crop rotation, weed control, among other aspects. They are carried out at farm sites under normal field conditions and in close collaboration with the farmers. You can find more information about this initiative here: Økologiske Landsforsøg (icoel.dk).

DKOOF sites promoting functional biodiversity in and around the fields, which is the part of nature and biodiversity that influences and creates value in organic production. We work at all levels from field to landscape with the aim of developing robust farming systems in balance with the environment. This is based on the ecological cycle principle of growing food in systems that protect and benefit the shared environment, landscapes, climate, habitats, biodiversity, air and water. With focus on Mixed crops and integrated systems, agroforestry as a climate and biodiversity tool, the value of functional biodiversity for agricultural production.

Methods, stakeholder engagements and tools

The DKOOF is managed by the Innovation Centre for Organic Farming whom facilitates the co-creation, setting up, operation and fundraising of DKOOF within the network of organic farms. In this process of activities, farmers as the main end-users, advisory services, universities and research institutes, civil society organizations and industry, are actively involved from initial stages of the collaborative and co-creational process to develop solutions for more efficient and sustainable organic farming.

Further information

<https://icoel.dk/en/nature/biodiversity-and-organic-farming/>



<https://icoel.dk/en/livestock/>



<https://icoel.dk/en/plant-production/>



<https://interaktiv.icoel.dk/kompostunivers/#/>

<https://okolyd.buzzsprout.com/2176953/episodes?search=true>

Contact

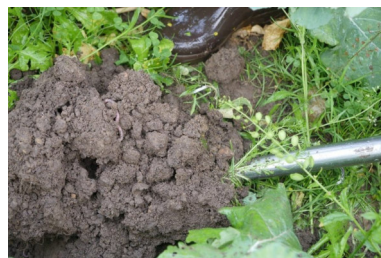


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