

A changing climate

Activity Report
2021/2022



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To cap climate change now means to properly deck the table. FiBL is providing impetus along the entire value chain: from soil to plants and animals to food processing.

Together one step ahead

“Together one step ahead” – it is with this motto that FiBL Switzerland celebrates its 50th anniversary in 2023. The FiBL Group’s successful work rests on three pillars: Research into the fundamentals and applied aspects of organic agriculture at the highest level, communication of research results and services for organic practitioners and the general public, and, finally, close and appreciative cooperation with many national and international partners. With an initial staff of three in 1974, FiBL Switzerland has grown to almost 300 employees in 2022. The FiBL Group overall now employs more than 400 people. The trust and confidence placed in us and our work by politicians and the public has also grown steadily. This is evidenced by the increase in public funding awarded in 2021 and 2022 to the institutes constituting the FiBL Group. FiBL Switzerland, for example, looks back with gratitude to the new performance contract for the period 2022 to 2025, which was concluded with the Swiss Federal Office for Agriculture (FOAG) in 2021 and considerably exceeds the prior contract’s scope. It provides excellent security for FiBL’s performance capacity for the benefit of agriculture and society at large for this period. In 2021, the new construction and renovation of the FiBL Campus in the Swiss Fricktal was also largely completed. Its centrepiece is the newly built “Alvarium”, meaning

beehive, a place for meetings, advanced training and the mutual exchange of knowledge and ideas, equipped with state-of-the-art communication technology and an organic restaurant.

The 2021/2022 Activity Report illustrates well the FiBL Group’s range of work and achievements. It also features a thematic focus on climate – in each of the chapters a project is presented that specifically addresses the present and future challenges posed by climate change. In future, the success of FiBL’s work will increasingly have to be measured by whether it succeeds in promoting the transformation of the food system with new ideas and concepts. In the sense of “one step ahead”, this means to see oneself as a continuous engine of innovation for a comprehensive systems approach in research, communication and extension, and to provide the relevant impetus. The challenges FiBL faces are significant, not least owing to the fact that competition for the best solutions for organic farming has increased.

We hope that this 2021/2022 Activity Report gives you, the reader, exciting insights into FiBL’s work and whets your appetite to discover more. We would like to thank all our funders, private donors and cooperation partners for their trust in our work.



Board of directors of FiBL Switzerland
From left: Marc Schärer, Knut Schmidtke, Beate Huber

M. Schärer Knut Schmidtke Beate Huber

Six FiBL, one idea

The FiBL Research Institutes of Organic Agriculture are non-governmental civil society institutions or non-profit enterprises operating as foundations or associations in a number of European countries. While each of the institutes is legally autonomous, they see themselves as part of the FiBL Group, working closely together in partnership.

The FiBL Group is united by the objective to continuously advance organic agriculture along the entire value chain of the food system through research, knowledge transfer and advisory services, practice-oriented projects and public relations work. Together with practitioner partners, other research and advisory institutions, public bodies and non-governmental organisations in Europe and on other continents, FiBL works on projects aimed at safeguarding both global food security and the natural resource base on which life depends by means of organic agriculture and sustainable food systems. The six FiBL are committed to responsibility for people, animals and the environment, and to transparency and participation both internally and externally. For FiBL, respect for colleagues, cooperation partners and people in general as well as democratic decision-making are fundamental prerequisites of successful and globally recognised work.

The FiBL Group currently includes FiBL Switzerland (established in 1973), FiBL Germany (2001), FiBL Austria (2004), ÖMKi (Hungarian Research Institute of Organic Agriculture, 2011) and FiBL France (2017) as well as FiBL Europe (2017) which is jointly supported by the five national institutes.



Director of FiBL Germany
Robert Hermanowski

Robert Hermanowski



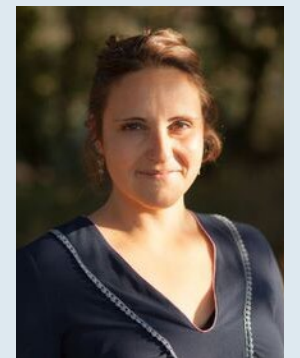
Director of FiBL Europe (until 2023)
Miguel Angel de Porras Acuña

Miguel Angel de Porras Acuña



Director of FiBL Austria
Andreas Kranzler

Andreas Kranzler



Director of FiBL France
Florence Arsonneau

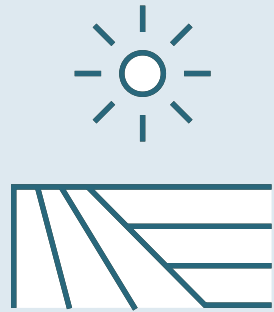
Florence Arsonneau



Director of ÖMKi Hungary
Dóra Drexler

Dóra Drexler

FiBL and the organic sector in numbers



748 149

Increase in hectares under organic management in the European organic sector in 2021

Every year, FiBL publishes comprehensive statistics on the organic sector in the statistical yearbook "The World of Organic Agriculture". Since the early 2000s it has been published jointly by FiBL and IFOAM – Organics International, the global umbrella organisation for organic agriculture. In 2021 the organic acreage in Europe increased by 748 149 hectares, corresponding to a 4.4 per cent increase in area compared to the year prior.



402

Employees in 2022

FiBL is growing: the six FiBL institutes employ a total of 402 people. In 2019 the number of employees stood at 319.



66

Per capita expenditure in euros in 2021

According to the FiBL statistical yearbook "The World of Organic Agriculture", per capita expenditure on organic products in Europe in 2021 averaged 66 euros.



286

Projects in 2022

Searching for innovative, sustainable and forward-looking solutions: FiBL has been conducting scientific research in a total of 286 projects – with a particular focus on practical relevance.



42 000 000

FiBL Group's total 2021 budget in euros

The six FiBL institutes had an annual budget of 42 million euros at their disposal. This allowed for the implementation of numerous research and advisory projects that continue to advance organic farming.



90

Peer-reviewed scientific papers in 2022

FiBL researchers published 90 papers in scientific journals, following peer review. They provide important insights for the future of organic agriculture.

Highlights



2021

JANUARY

Swiss Bioaktuell magazine turns 30
CH Bioaktuell has been publishing organic sector news and specialist information since 1991. The magazine is published jointly by Bio Suisse and FiBL.

FEBRUARY

We Care Standard takes off
DE The We Care label, launched by FiBL Germany, is awarded to companies that focus on holistic sustainability.

MARCH

Adoption of the Africa Strategy
CH The Africa strategy guides FiBL's work in Africa up to 2025.

Launch of the EU-wide organic seed database

CH The database increases the availability of organic seeds for European organic farmers.

MAY

FiBL Europe organises the first digital FiBL Open Day

EU Some 5000 participants at the FiBL Open Day explored the issues surrounding organic agriculture.

JUNE

Database for organic livestock

DE All available organic livestock for sale in Germany can be entered into the database.

Symposium on livestock ethics

CH The symposium on the ethics of the utilisation and slaughter of livestock is organised by the Department of Arts, Media and Philosophy of the University of Basel and FiBL.

JULY

1 Prominent report on FiBL France

FR Biofil, the renowned French magazine on organic agriculture, reports on the parasitology laboratory at FiBL France.

AUGUST

Support for the EAAP Conference

CH As a co-organiser, FiBL had strong representation at the EAAP (European Federation of Animal Science) conference in Davos, Switzerland.

SEPTEMBER

2 Tech & Bio, the principal organic fair in France

FR FiBL France and the FiBL Switzerland's Department Suisse Romande have a booth at the fair.

OCTOBER

3 "FiBL Focus" podcast launched

CH This format is all about the latest findings from science and practice in agriculture, animal welfare and environmental protection.

ÖMKi receives "Tradition and Innovation Award in Agricultural Economy"

ÖMKi ÖMKi's organic landrace tomato seedlings are awarded the "Tradition and Innovation Award in Agricultural Economy" at the Hungarian National Agriculture and Food Exhibition and Fair (OMÉK).

DECEMBER

Online course on organic tofu production

CH 2021 was a turbulent year, but thanks to online course formats the coronavirus did not hamper knowledge transfer from research to practice.

FiBL's Green Cotton / Seeding the Green Future project honoured

CH With the SFIAR Award (Swiss Forum for International Agricultural Research), FiBL researchers are honoured for their achievements and commitment to organic cotton in India.

2022

JANUARY

New LeguNet network

DE FiBL Germany and partners launch a new cross-crop-cultivar network for grain legumes.

FEBRUARY

Supporting the UN World Food Summit

DE The United Nations Food Systems Summit takes place at national level in 2022 and is assisted by FiBL on behalf of Germany's Federal Agency for Agriculture and Nutrition (Bundesanstalt für Landwirtschaft und Ernährung, BLE).

MARCH

Pasture Laboratory project commences

CH In this project, FiBL Switzerland investigates dairy cows' preferences for particular fodder mixes.

MAY

4 2021 SDG Award for Schule des Essens goes Lehrlinge

A FiBL Austria's Schule des Essens goes Lehrlinge project (School of Food Goes Apprentices), which focuses on healthy, enjoyable and climate-friendly nutrition, receives the high-profile 2021 SDG (Sustainable Development Goals) Award.

JUNE

5 First "FiBL connect"

CH At the "FiBL connect" event convened by FiBL Switzerland, an open day aimed specifically at practitioners, a total of 170 farmers, colleagues from partner institutions and students attend the numerous panels and lectures on organic agriculture.

6 New FiBL Campus officially opened

CH At a three-day event, FiBL Switzerland invites the public to get to know the new FiBL Campus in Frick.

JULY

Organic Field Days in Germany

DE The Organic Field Days (Öko-Feldtage), attended by 11,500 people, receive a great deal of media attention and is well received.

SEPTEMBER

7 Recognition of the first two organic cotton varieties in India

CH The cultivars were developed as part of a participatory breeding programme run by FiBL Switzerland and various partners.

OCTOBER

Inauguration of FiBL ARTS

CH An artwork inauguration ceremony is held for the first three artworks that won the national competition as part of FiBL Switzerland's FiBL ARTS art programme.

NOVEMBER

Ways out of the climate crisis

CH FiBL Switzerland contributes to the lecture series at the Gut Gödelitz Estate in Döbeln on the topic of "Agriculture and climate change".

DECEMBER

Better conditions for on-farm and field slaughter

CH FiBL Switzerland organises an information event for the media about on-farm and field slaughter in connection with the amendment of the corresponding Swiss Ordinance. It generates great media coverage.

Follow-ups

... what has happened in the meantime?

In four follow-ups we report on exciting developments and progress made in selected FiBL projects already presented in the 2019/2020 Activity Report.



FiBL Switzerland

The cow's favourite food

In March 2022 and after two years of development, the dairy herd was able to graze in the "pasture laboratory" announced in the previous Activity Report for the first time on FiBL's farm in Frick. It consists of sixteen strip plots sown with different herb-rich forage mixtures. Researchers observe the cows' feeding behaviour here with the aim of deriving fundamentals of ethologically sound, varied and healthy dairy cow nutrition. Results from the study are expected in 2023.

fibl.org > search: "pasture laboratory"

FiBL Switzerland

Robust potato varieties for difficult environmental conditions

How did the potato variety trials progress? The year 2021 was a challenging one for organic potato producers, with a very wet summer and low temperatures. A large part of the harvest was lost to late blight. However, this also demonstrated which of the trialled varieties can cope well with this disease and still produce acceptable yields. Conversely, 2022 was characterised by heat and insufficient rainfall, so that the potatoes could be tested under environmental stress. In these two years, the cultivars Simonetta and Emmanuelle stood out in particular: these are two waxy potato varieties that are robust as well as flavourful. They were included in the Swiss list of organic cultivars and will soon be available on the market.

fibl.org > search: "potato varieties"

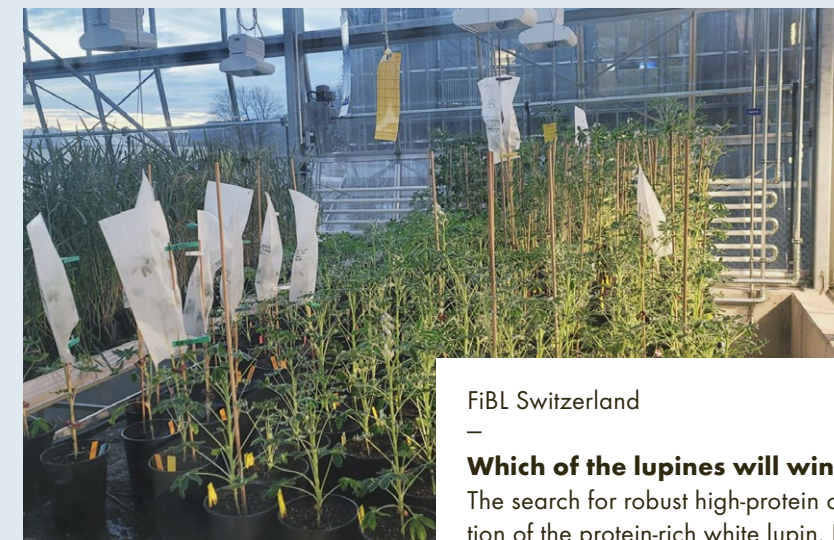


FiBL Austria

Together for a green Seestadt

The "Essbare Seestadt" (Edible Seestadt) FiBL project presented in the previous Activity Report has morphed into an association. In Vienna's Seestadt Aspern, one of Europe's largest smart city model regions, an interdisciplinary team of scientists has come together to explore the potential of urban gardening in terms of costs, maintenance effort and climate impacts. In the non-profit association "Seestadtgrün", residents are highly active in implementing a variety of greening initiatives in this part of Vienna.

seestadtgruen.at (in German)



FiBL Switzerland

Which of the lupines will win the race?

The search for robust high-protein crops continues. To promote the cultivation of the protein-rich white lupin, FiBL's Plant Breeding Group is investigating and improving resistance to anthracnose, a fungal disease. As mentioned in the previous Activity Report, Joris Alkemade, as part of his dissertation, established a screening system to be used at an early stage of the plants' development and identified genetic markers for resistance traits. In addition, PhD student András Patyi is now also looking for genetic markers related to low alkaloid content. FiBL is thus working on diagnostic tools to enable selection for resistance and sweetness in early breeding generations (marker-assisted selection). The best breeding lines are being further developed together with cereal breeder Getreidezüchtung Peter Kunz.

fibl.org > search: "lupins"

Soil

FiBL Switzerland

Carbon-neutral organic farming in Switzerland – an illusion?

In 2021/2022 FiBL, together with Bio Suisse, the umbrella organization of Swiss organic agriculture, prepared a study on the question of whether carbon-neutral organic agriculture in Switzerland is feasible and, if so, how it can be achieved. The study shows that to achieve carbon-neutral organic agriculture in Switzerland by 2040 will be a very significant challenge. It will require changes in both agricultural production and consumer behaviour.

For the first time, FiBL has compiled a comprehensive database on greenhouse gas reduction and compensation in organic agriculture and modelled various scenarios on how carbon-neutral organic agriculture could be achieved by 2040. The following results emerged from this investigation:

- Organic farm managers can reduce emissions by up to fifteen per cent through changes in feeding, livestock farm waste storage and arable and grassland management. A further forty-five per cent can be compensated directly through raising soil organic matter, the use of plant-based biochar, integration of agroforestry systems and indirectly through the expansion of on-farm photovoltaic systems.
- Consumers can reduce emissions by up to twenty-five per cent by reducing their consumption of animal products and by minimising food waste.
- Additional efforts in terms of novel techniques for emissions reduction in agriculture and consumption are needed to cover the remaining fifteen per cent on the carbon reduction pathway.

In addition to the organic farming sector, consumers as well as food processors, retailers and politicians are called upon to achieve the transformation of the food system to carbon neutrality by 2040. This requires above all the courage to go down new paths.

Markus Steffens, FiBL Switzerland

Pathways to carbon-neutral organic farming in Switzerland

Contact: markus.steffens@fibl.org

Funding: FiBL and Bio Suisse

Project partner: Bio Suisse

Link to the study's summary:

[fibl.org > search > "Pathways to carbon-neutral organic farming in Switzerland"](https://www.fibl.org/search/Pathways%20to%20carbon-neutral%20organic%20farming%20in%20Switzerland)

Earthworm burrow lined with plant-based biochar.



< Deep, humus-rich clay soil in Frick.

Soil

**One step ahead:
FiBL was the first
institution to
project climate
neutrality for the
organic farming
sector of an entire
country.**



Soil

FiBL Switzerland

Working together for better soil quality

A network of forty-two farmers devoted five years to improving soil quality. FiBL provided scientific backstopping to the network and Proconseil delivered advisory services.

Farmers were encouraged to trial soil diagnostic tools with the aim of making them accessible for practical use.

The soil analyses carried out at the start of the project showed that the soils were highly deficient in organic matter, with implications for soil structural stability, which was determined using the “spade test” as a soil diagnostic tool. However, the soil organic matter balances were generally sufficient.

This initial diagnosis led to a search for solutions and the establishment of eight thematic working groups: controlled traffic farming (working with permanent lanes), compaction, soil moisture sensors, fertiliser use and plant sap analyses, carbon sequestration and carbon balance, soil cultivation, mechanical weed management and green manures.

Through field visits, conferences and working groups, a variety of tools were compiled to characterise soils and agricultural practices, as well as a wide range of extension materials, including videos. Of particular note is a clever calculator for determining the intensity of soil cultivation (Soil Tillage Intensity Rating STIR). Thanks to this calculator, cultivation practices can now be adjusted with a view to minimising soil disturbance.

Raphaël Charles and Marina Wendling, FiBL Switzerland

Soil fertility innovation hub: self-diagnosis and advice

Website: fibl.org > search > Soil fertility innovation hub

Contacts: raphael.charles@fibl.org, marina.wendling@fibl.org

Funding: DGAV (Direction générale de l'agriculture, de la viticulture et des affaires vétérinaires) Vaud, DGE (Direction générale de l'environnement) Vaud

Project partners: Proconseil, Mandaterre, Direction générale de l'agriculture, de la viticulture et des affaires vétérinaires (DGAV), Direction générale de l'environnement (DGE)

Soil

FiBL Europe, FiBL Switzerland

The wheat of the future: linking climate change and soil biodiversity in the BIOFAIR project

The BIOFAIR project contributes to future food security by assessing the impact of climate change on soil biodiversity in wheat production. Long-term field trials and stakeholder engagement are at the core of FiBL's activities in the project.

In the face of climate change, crop species and agricultural practices will require adaptation in order to produce high-quality food while mitigating the impact of agriculture on the environment. The main goal of BIOFAIR (Biodiversity of Soils and Farming Innovations for Improved Resilience in European Wheat Agrosystems) is to assess the impacts of climate change and farming practices on soil biodiversity, plant productivity and quality of wheat.

With the participation of the Department of Soil Sciences of FiBL Switzerland, the project is developing several trials across Europe simulating the climatic conditions of 2094 to assess the impact of climate change on wheat production systems and soil biodiversity. The main task of FiBL Europe in this project is to ensure the co-construction process of the project experiments. To this end, FiBL Europe has created a board engaging European stakeholders related to the wheat sector. This board is consulted during the whole life of the project to ensure the adaptation of project activities to the needs of stakeholders.

This research was funded through the 2019–2020 Biodiversity joint call for research proposals, under the BiodivClim ERA-Net COFUND programme, and with the funding organisations Swiss National Science Foundation (SNSF) and the Research Foundation Flanders (FWO), Wallonia-Brussels Fund for Scientific Research (FNRS).

Lisa Haller, FiBL Europe and Sarah Petris-Symanczik, FiBL Switzerland

BIOFAIR – BIOdiversity of soils and FArming Innovations for improved Resilience in European Wheat Agrosystems

Website: fibl.org > themes/project > project database > BIOFAIR biofair.uliege.be

Contacts: lisa.haller@fibl.org, sarah.symanczik@fibl.org

Funding: Biodiversa, Schweizerischer Nationalfonds (SNF), Research Foundation Flanders, Wallonia-Brussels Fund for Scientific Research

Project partners: Gembloux Agro-Bio Tech at the University of Liège, University of Hohenheim, University of Ghent, INRAE (National Research Institute for Agriculture, Food and Environment) Clermont-Ferrand, Estación Experimental de Zonas Áridas (CSIC) Almería



Soil sampling in the DOK long-term trial with the pneumatic soil corer Cobra in Therwil, Switzerland, during wheat flowering (Jennifer Michel, University of Liège, researcher; Marie-Elise Gonzales, FiBL, intern; Sandy Manfroy, University of Liège, researcher).

< The front loader proved incredibly useful in the project for determining the soil profile, both in terms of practicality and profile quality.



Soil

FiBL Switzerland

The strongest communities are built by the smallest living organisms

Microorganisms such as fungi and bacteria colonize soils, plants and animals where they form stable communities. The microbiome refers to all the microorganisms in a habitat and their activities.

The microbiome connects all organisms: the soil is the source of the plant-associated microorganisms, which in turn are a major component of the microbiota in the gut of livestock and humans. These microorganisms cycle back to the soil in the form of manures.

Some soil microbes form a symbiosis with plants, specifically a relationship where both partners benefit. Arbuscular mycorrhizal fungi (arbuscular means specific mycorrhizal fungi, short: AMF) colonize the inside of plant roots, but their hyphal network also grows out into the soil. They can reach farther than the roots and take up nutrients such as phosphorus and nitrogen which they transport to the plants in exchange for carbohydrates.

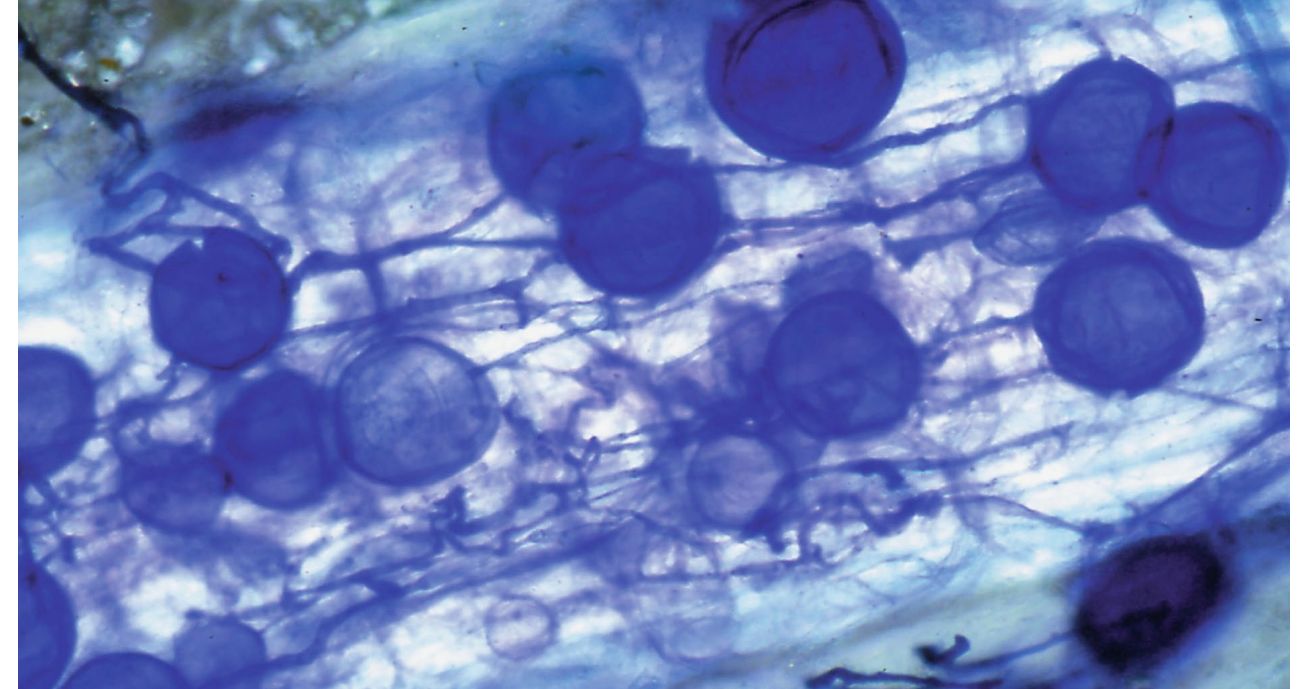
FiBL develops three strategies to benefit from the microbiome in agriculture: 1) directly by applying microbes as biofertilizers, 2) indirectly through growing a diversity of plants, 3) finally by improving soil health in general with agricultural management practices such as reduced tillage, perennial forage legumes or agroforestry.

Inoculation with beneficial microbes

Inoculation with AMF is often successful in pot experiments, but responses are more variable in the field where inoculation success depends on soil properties and the local microbiome. In collaboration with Agroscope, fifty-four on-farm experiments were performed over three years. Maize was inoculated in spring, followed by yield assessment at harvest. FiBL identified a set of soil parameters that predict successful on-farm inoculation.

Using plants to influence the microbiome

Intercropping means that two crops are grown in mixtures on the same field. Typically, a cereal is combined with a legume which forms a symbiosis with nitrogen-fixing rhizobia, so that competition for nitrogen is reduced. FiBL performed field experiments with pea and barley. Some fungi in the roots were more abundant in diseased plants, while other microbes, including AMF, were more abundant in healthy plants. FiBL found that total yield was more stable in intercropped compared to pure stands, maybe due to contrasting drought sensitivity of both crop species.



Microscopic image of a lucerne root showing blue-stained structures of arbuscular mycorrhizal fungi. These live in symbiosis with the plant.

Organic management for improved soil health

FiBL scientists compared soil properties and microbiome of five cocoa production systems in Bolivia. Similar to Swiss long-term trial DOK, research confirmed that the microbiome in organically managed systems was more diverse and showed higher microbial activity compared to long-term conventionally managed systems.

Natacha Bodenhausen, FiBL Switzerland



Some soil microbes form a symbiotic relationship with plants through the roots. FiBL tests strategies for the inoculation of arbuscular mycorrhizal fungi on maize roots.

Gebert RUF Microbiome, ReMIX, SNF Metagenome

Website: [fibl.org](https://www.fibl.org) > search: "microbiome"

Contact: natacha.bodenhausen@fibl.org

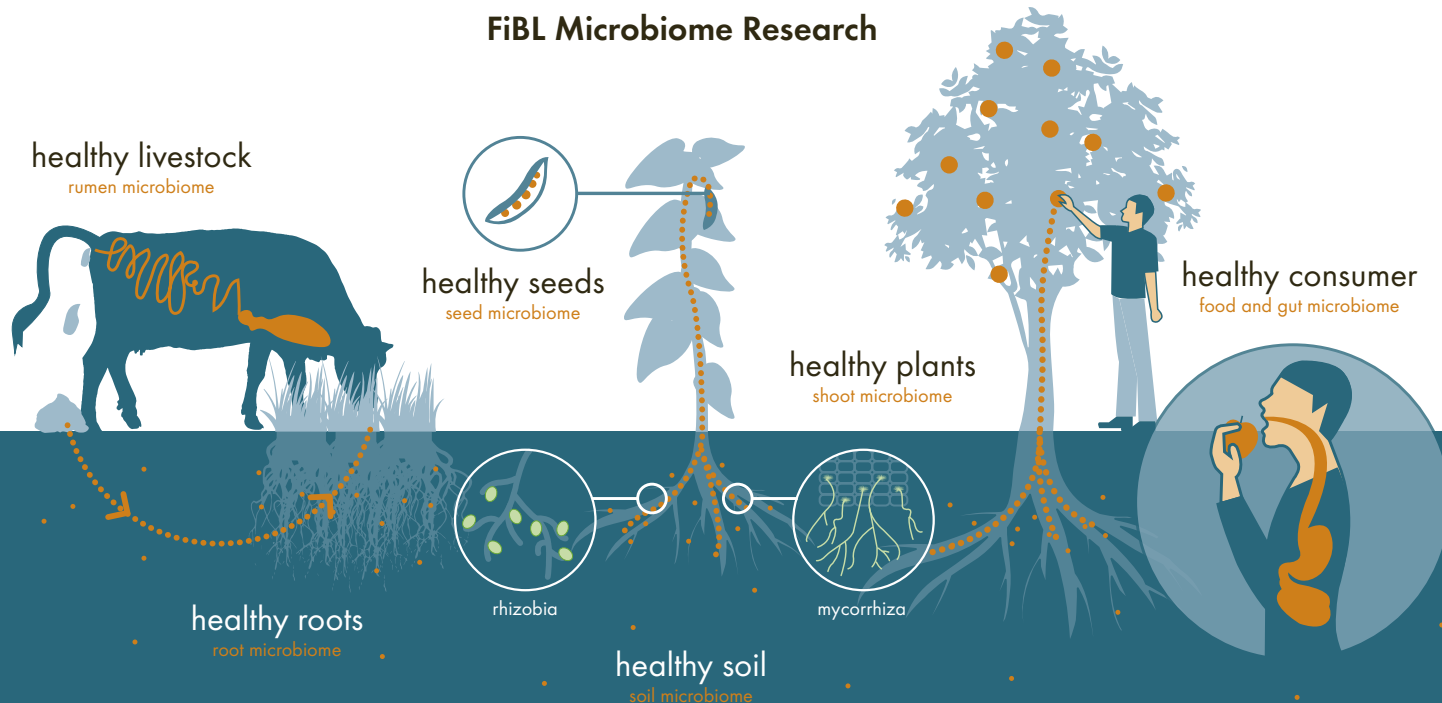
Funding: Gebert RUF Stiftung, EU Horizon 2020, State Secretariat for Education, Research and Innovation SERI, Swiss National Science Foundation (SNSF)

Project partner: Agroscope



Setting up the field experiment for the microbiome diagnostics project.

FiBL Microbiome Research



Crop plants

FiBL Switzerland

Tiny but mighty!

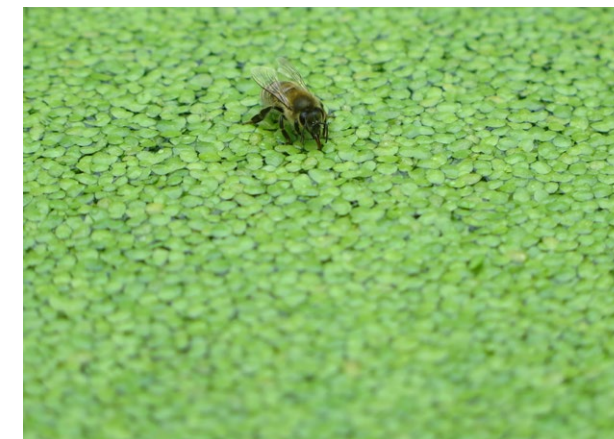
The potential of duckweed

Duckweeds are small plants that float on the water surface. They are among the most rapidly growing plants and are also very high in protein. FiBL is now undertaking research to study the extent to which these properties of duckweed can also be used to produce valuable feed.

Duckweed absorbs nitrogen from its nutrient medium, which can even be diluted slurry (liquid manure). This trait enables the plants to produce a much greater amount of protein per unit area and time than soybeans, while at the same time effectively recycling nutrients from the often abundantly available slurry. Although duckweed has great potential, its targeted production is quite challenging. Only a small number of manufacturers worldwide engage in the production of feed using duckweed on a commercial scale and many primarily practical issues are as yet unresolved. The "Linsenpool" (duckweed pool) project aims to address some of these practical issues as well as important scientific questions. To this end, an outdoor pilot plant for duckweed production was built at FiBL Switzerland and operated commensurate with weather conditions. Among the outstanding issues is the optimisation of post-harvest processing. Since



Duckweed outdoor facility at FiBL with four pallet boxes for propagation and four basins for duckweed production.



Bees are regular guests on dense duckweed carpets, especially during the summer. They come to drink water there as long as slurry concentrations are low or the liquid has been purified by duckweed for some time.



Experimental setup for measuring emissions of greenhouse gases and ammonia from duckweed grown on diluted slurry.

Crop plants

New feeds in the trough: duckweed for climate change mitigation.



Duckweed harvesting in the greenhouse gas experiment.



Temperature measurements and acid trap for measuring ammonia emissions in a duckweed pallet box with transparent lid.

duckweed has a high water content and conventional drying is energy-intensive, a variety of alternative processing methods are currently being tested. Does a liquid manure-based duckweed production system run the risk of emitting increased levels of greenhouse gases or ammonia, or can duckweed perhaps even reduce emissions? This question is also currently being investigated in a controlled trial. Preliminary results indicate that duckweed significantly reduces ammonia emissions.

Timo Stadlander, FiBL Switzerland

New agricultural nutrient flows using water lentils

Website: [themes/projects > project database > New agricultural nutrient flows using water lentils](https://themes/projects/project-database/new-agricultural-nutrient-flows-using-water-lentils)

Contact: timo.stadlander@fibl.org

Funding: Mercator Foundation Switzerland, Vontobel Foundation Switzerland

Crop plants

FiBL Switzerland



Plant diseases can destroy the grape harvest, which is why organic agriculture also needs crop pesticides – based on natural ingredients.

Four successful years of research on copper alternatives in the RELACS project

RELACS coordinator Lucius Tamm reports on the results of the project, which was funded under the European Union's Horizon 2020 research programme and coordinated by FiBL Switzerland and coordinated by FiBL Switzerland.

Organic farmers adhere to high standards in producing high quality food – and they maintain environmental quality at the same time. However, organic farming needs continuous improvement to achieve its ambitious objectives. One of the aims of the RELACS (Replacement of contentious inputs in organic farming systems) research project was to develop cost-effective and environmentally friendly techniques to reduce the use of copper in crop protection.

With our research and practitioner partners, we have improved and tested four products that constitute alternatives to copper. These promise protection against important crop diseases in grapes, apples and vegetable crops and under different climatic conditions – either as stand-alone applications or in combination with low-dose copper treatments. This will make it possible to continue to reduce copper use in grapes and apples in coming years, provided the alternative treatments can gain official approval.

Lucius Tamm, FiBL Switzerland

Only plants of consistent quality can be used for trials in climate cabins. Here, grapevine seedling production is being assessed. In about two weeks these seedlings will be used to test crop protection products.

RELACS – Replacement of contentious inputs in organic farming systems

Website: [fibl.org > themes/projects > project database > RELACS](https://fibl.org/themes/projects/project-database/relacs)

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Funding: EU Horizon 2020

Project partners: [fibl.org > Themen/Projekte > Projektdatenbank > RELACS](https://fibl.org/themes/projekte/projekt-datenbank/relacs)

➔ Interdisciplinary project: more on the project in the chapter on livestock, *Reducing the use of veterinary drugs and synthetic vitamins in livestock husbandry*



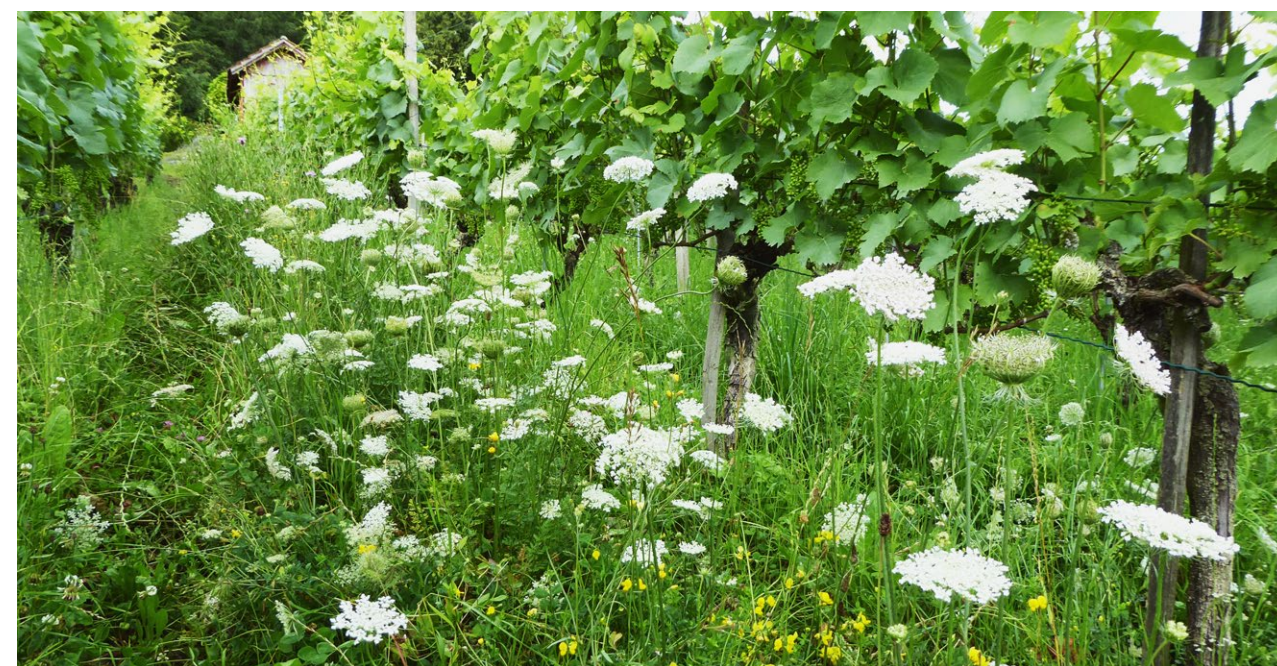
Flowers are a spider's best friend

Tailor-made sown wildflower strips, adapted to local conditions and climatic pressures, promote biodiversity in agricultural areas. The composition of the species-rich flower cover determines the diversity and frequency at which beneficial insects occur and thus promotes essential ecosystem services such as pollination and natural pest control.

With more than one million species described worldwide, insects are the group of organisms featuring the highest level of species diversity. However, habitat degradation due to agricultural intensification and climate change threaten their diversity in Switzerland, as elsewhere. Our aim is to actively promote biodiversity in agricultural areas and thus safeguard vital ecosystem services. The focus is on species-rich wildflower strips consisting of plant species that are native and characteristic of the location. These not only botanically enrich the often species-poor farmland, but primarily create a food supply and habitat for beneficial insects. A project entitled "Innovative Blühstreifen zur nachhaltigen Verbesserung von Obstkulturen" (Innovative flower strips for sustainable orchard production) investigated from 2019 to 2022 innovative sown wildflower strips for the sustainable improvement of fruit crop production. Natural aphid regulation was found to be increased significantly in cherry orchards by promoting web-building spiders, which in turn was achieved by providing sown wildflower strips. Spiders benefit from alternative prey and relatively undisturbed habitat. A comparison between 2020 and 2021 found



A European common blue butterfly on birdsfoot trefoil.



Species-rich wildflower strips promote beneficials in vineyards.

that in the spring of 2021, in which beneficial insects faced rather difficult weather conditions, hoverflies, ladybirds and common lacewings were fostered by wildflower strips as these alleviated bottlenecks in the beneficials' food supply.

It's all in the right mix

The pressures exerted on plants by an increasingly dry climate were addressed in a project entitled "Blühende Rebberge für Mensch und Natur" (Use of functional agro-biodiversity to improve ecosystem services in vineyards) conducted from 2018 to 2021 in more than 70 vineyard plots. The seed mixes tested consisted of more than 30 native plant species, including deep-rooting species with a view to promoting soil biodiversity. The optimised seed mix is currently in the approval process and is used as a measure to promote biodiversity as part of the "VinBioDiv" Interreg project (2021 to 2023). Through its investigations of wild bees in vineyards and other crops, the 2017 to 2022 project on "Bienenfreundliche Landwirtschaft im Kanton Aargau" (Bee-friendly agriculture in the canton of Aargau) similarly showed that a flower cover tailored to the site is crucial to insect diversity on agricultural land.

Fabian Cahenzli, Bea Steinemann and Lukas Pfiffner,
FiBL Switzerland

< A rich flower cover promotes a wide range of insects.

Blühende Rebberge für Mensch und Natur (Use of functional agro-biodiversity to improve ecosystem services in vineyards)

Funding: Stiftung Hauser, Fondation Sur-La-Croix, Vontobel Foundation Switzerland, Stiftung Temperatio, Dr. Bertold Suhner-Stiftung, OH Samen (Otto Hauenstein - seed supplier), FOAG and FOEN

Project partner: Agroscope (Reckenholz and Pully)

VinBioDiv

Funding: Cantons of Aargau and Basel-Country as well as the Swiss Confederation (Interreg Oberrhein)

Project partner: Birdlife Switzerland

Innovative Blühstreifen zur nachhaltigen Verbesserung von Obstkulturen (Innovative flower strips for sustainable orchard production)

Funding: AVINA Foundation, Stiftung Dreiklang, Vontobel Foundation Switzerland, IWB Öko-IMPULS and Bio Suisse

Collaboration: Seed suppliers Otto Hauenstein Samen and UFA Samen Aargau

Bienenfreundliche Landwirtschaft im Kanton Aargau (Bee-friendly agriculture in the canton of Aargau)

Funding & project partner: Trustees of the resource project entitled "Honig- und wildbienenfördernde landwirtschaftliche Bewirtschaftung im Kanton Aargau" (Agricultural management promoting honey bees and wild bees in the canton of Aargau)

Crop plants

FiBL Switzerland, FiBL Germany, ÖMKi

LIVESEED – Sowing the future

In view of the mounting challenges posed by climate change, biodiversity loss and declining soil fertility, the situation in organic farming has worsened: in addition to organically produced seeds, more organically bred varieties are needed which also allow for innovative forms of cultivation. More flexible policy frameworks are also required.

A broad portfolio of crop species and cultivars in organic farming is key to a sustainable food system. However, there is a lack of organically propagated seeds and robust cultivars that are specifically adapted to organic agriculture and drastically changing climatic conditions.

LIVESEED was an interdisciplinary and multidisciplinary European project with fifty partner organisations to promote organic seeds and crop breeding. It was coordinated by IFOAM Organics Europe and FiBL Switzerland. In this context, the market potential of organic seed was determined for the first time. The finding

is that approximately fifty per cent more organic seed would be needed to meet current demand. To close this supply gap, the project established an EU-wide database for organic seed and numerous training courses and workshops on organic seed production and seed health were held.

In parallel, the concept of systems-based breeding was developed to achieve the sustainability goals. Phenotypic tests were devised and genetic markers identified for various crops with a view to breeding disease-resistant and stress-tolerant varieties. Moreover, a network for participatory organic breeding initiatives was established. The aim is to boost buffering capacity against unpredictable weather events by means of increased crop genetic biodiversity in the form of genetically heterogeneous material such as composite cross populations, dynamic populations, and landrace selections which may now also be grown in organic agriculture. Varietal mixtures, breeding of neglected crop species, breeding for mixed cropping and agrofor-

estry similarly increase resilience to weather extremes and mitigate the risk of yield loss. For example, FiBL is working with Getreidezüchtung (cereal breeding) Peter Kunz (GZPK) to reintroduce the white lupin. Through extensive testing of genetic resources, crosses and subsequent selection, interesting breeding strains have been developed.

In addition to promoting organically bred cultivars, it is important that other cultivars are also tested on-farm for their suitability for cultivation under real-life organic conditions, allowing farmers to choose the best suited variety for their location. Recommendations for policymakers and the seed sector were derived from the results and published. The follow-up project, Live-Seeding, commenced in October 2022.

Monika Messmer & Mariateresa Lazzaro, FiBL Switzerland



In order to combine anthracnose resistance traits with a low alkaloid content, crosses are produced manually.

LIVESEED – Improve performance of organic agriculture by boosting organic seed and plant breeding efforts across Europe

Website: [fibl.org > themes/projects > project database > LIVESEED](https://fibl.org/themes/projects/project-database/LIVESEED)

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Funding: EU Horizon 2020, Swiss State Secretariat for Education, Research, and Innovation SERI

Project partners: [fibl.org themes/projects > project database > LIVESEED](https://fibl.org/themes/projects/project-database/LIVESEED)

Video: [youtube.com > Organic plant breeding and its contribution to food production](https://youtube.com)



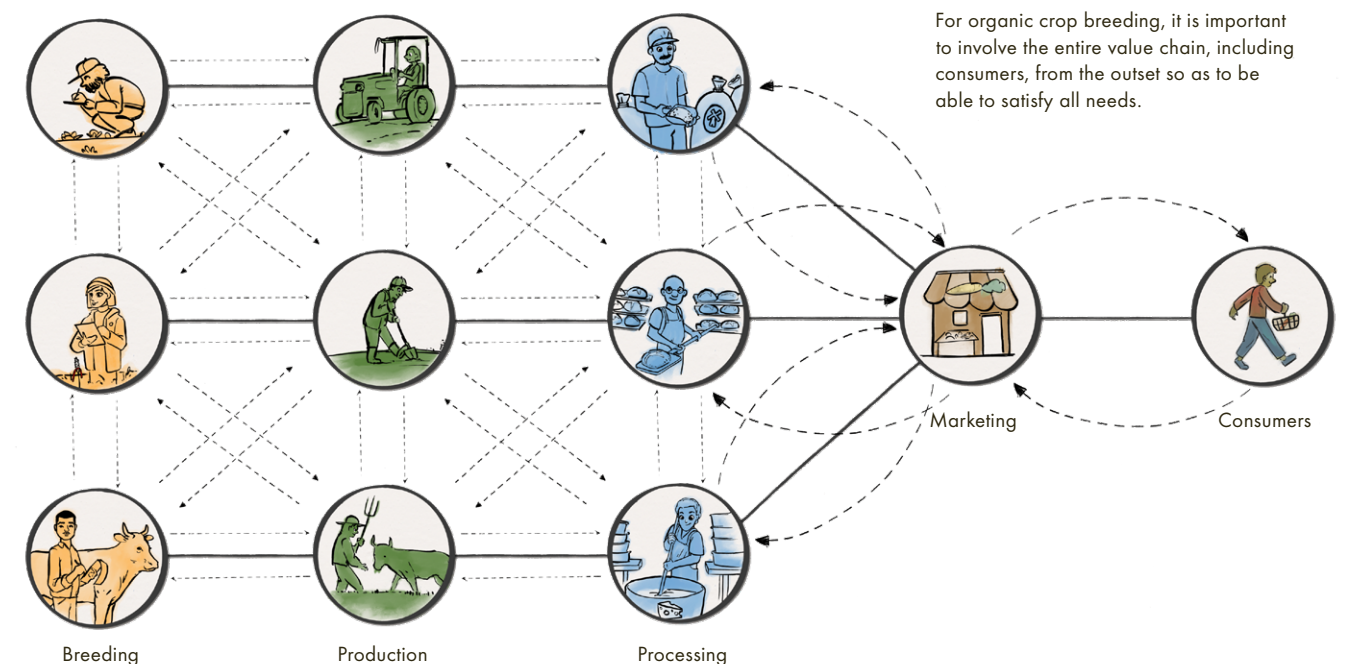
Infestation of white lupins with the anthracnose fungus (*Colletotrichum lupini*) leads to massive crop failure. That's why resistant organic cultivars are needed.



The fungal disease is mainly transmitted by means of infested seeds. Seed health checks are therefore of great importance.



The fifty LIVESEED partners met annually to exchange information and plan future activities.



Livestock

FiBL Switzerland

Are we keeping them for too short a time?

On the productive lifespan of Swiss dairy cows

Almost half of all dairy cows do not reach their third lactation, even though the highest milk yields are not obtained until the cows are five to six years of age. Under diseases and fertility problems appear to be among the reasons for shortened productive lives, but that is certainly not the full story. Longer productive lifespans would also benefit the climate, as less methane per litre of milk would be generated because fewer young animals would have to be bred for milk production. A research project initiated by FiBL, BFH (Bern University of Applied Sciences) and Agridea (agricultural advisory centre of the cantonal specialist agencies) is investigating present causes and future strategies. FiBL is currently evaluating information pertaining to approximately four million cows. This analysis has made it possible to reproduce the trends in dairy cows' productive lifespans over the course of several decades. For about ten years now that figure has been stable at between three and four years.

Around seventy specifically selected representative dairy farmers gave us in-depth insights into their operations by means of a survey. Thirty of them subsequently opened their doors to us, giving us access to their barns and cows. Half of the herds had a particularly long or short productive lifespan respectively. The health pa-

rameters of the herds that were on average one to two years older were largely on par with those of younger herds. Regardless of their herds' age, the farm managers agreed that cows should be productive milk producers for significantly longer than six years.

Michael Walkenhorst, FiBL Switzerland

Increasing longevity of Swiss dairy cows: factors, future scenarios and strategy development

Website: [fibl.org > themes/projects > project database](https://www.fibl.org/themes/projects/project-database)
> Increasing longevity of Swiss dairy cows

[themes.agripedia.ch](https://www.themes.agripedia.ch) > Nutzungsdauer Schweizer Milchkühe (in German/French)

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Funding: Federal Office for Agriculture FOAG, Swiss cattle breeders' association, Bio Suisse, IP-Suisse, Migros, Swiss milk producers, Fondation Sur La Croix

Project partners: Bern University of Applied Sciences, AGRIDEA, Federal Office for Agriculture FOAG, Swiss cattle breeders' association, Bio Suisse, IP-Suisse, Migros, Swiss milk producers

→ Interdisciplinary project: more on the project in the chapter on nutrition and politics, *Why the extension of a dairy cow's productive lifespan matters economically*

Berge, the oldest cow in the FiBL herd, has reached the age of twenty.



Livestock

Lower methane emissions per litre of milk: Let the cows grow older and the climate will be better off.

Can sheep replace tractors?



Blood sampling is used to monitor for chronic copper poisoning.

Grazing orchards during the growing season is a practice that is becoming ever more popular. It is however not entirely risk-free for trees and sheep.

Driven by the climate: sheep farmers in search of additional grazing land

Rising temperatures and lower amounts of summer rainfall mean that sheep farmers are now looking for additional grazing areas: Vineyards, green cover areas, forest roads and orchards. Established green cover in orchards, which is widely used in organic fruit production to protect the soil and promote species diversity, could be an interesting source of forage. The grass, which is normally mulched, would thus be converted *in situ*.

Technical constraints such as chronic copper poisoning of sheep and damage to trees from bark stripping and browsing are major obstacles that give rise to hesitation on the part of both sheep farmers and fruit growers. Therefore it is crucial that alternative means of protection are available.

As part of the ECORCE project (Etudier la Cohabitation de l'élevage Ovin et de l'aRboriCulturE – Studies about the association of sheep breeding and fruit tree



The sheep first start grazing the inter-rows before moving on to the trees protected by electric fencing.

production), FiBL France assessed protection measures for trunks (protective sleeves, tree bark wound sealers) and crowns (electric fencing, repellents) and the risk to sheep of copper poisoning.

Trees and sheep: not an impossible coexistence

Electric fencing has proven to be effective, but their installation is somewhat cumbersome. Spraying with sheep faeces reduced browsing of fruit tree leaves by sheep during the first four days of grazing. Bark stripping by sheep has rarely been observed; this suggests that the specific nutrient needs of sheep are met by other types of feed.

Copper sprayed on trees to protect them from disease poses a risk of poisoning to sheep – especially during spring grazing, the main period during which copper is applied. Initial results indicate that the application of copper and the grazing of sheep are too close together and can have a strong, potentially harmful effect on the sheep.

Observations of sheep feeding behaviour are ongoing as part of the project. Information is also being collected on the technical-economic and organisational requirements with a view to deducing model recommendations for practitioners so that grazing under fruit trees can be made safer and more sustainable.

Martin Trouillard and Florence Arsonneau, FiBL France

ECORCE – Etudier la Cohabitation de l'élevage Ovin et de l'aRboriCulturE (Studies about the association of sheep breeding and fruit tree production)

Website: fibl.org > themes/projects > project database > ECORCE

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Funding: Fondation de France / Fondation Edouard & Geneviève Buffard, Etat Français via la caisse des dépôts, dans le cadre du programme Territoire Innovation Biovallée

Project partners: Agribiodrôme, EPLEPPA (Etablissement Public Local d'Enseignement et de Formation Professionnelle Agricole) Le Valentin, Scop Agroof (Société Coopérative et Participative, agréée Entreprise Solidaire d'Utilité Sociale), Communauté de Communes du Val de Drôme

Electric fencing for protection.



Reducing the use of veterinary drugs and synthetic vitamins in livestock husbandry

Farm animals are exposed to parasitic and bacterial infections, which are often treated with antiparasitics or antibiotics. However, excessive use of these substances can lead to antibiotic resistance in pathogens and adversely impact on the environment.

FiBL Switzerland has long been researching preventive measures and plant-based preparations to significantly reduce the use of these pharmaceuticals. Another class of substances used in livestock farming, as a feed additive, are synthetic vitamins; their use in organic agriculture must be reduced to a minimum. To this end, a new field of research has been established at FiBL aimed at reducing the use of vitamins from non-natural sources in animal feed.

Abstain without putting the animals at risk

The challenge is to reduce the use of primarily helpful substances that bring with them potentially problematic side effects, and to do so without compromising animal health. The interdisciplinary European research project RELACS (Replacement of Contentious Inputs in Organic Farming Systems) has addressed these issues in recent years. RELACS was initiated and is led by the Department of Crop Sciences at FiBL Switzerland. It pursues reductions in the use of problematic substances in organic agriculture as a whole. In cooperation with other European research institutions, FiBL has developed a number of promising measures: With the help of an advisory tool and essential oils, for example, antibiotics use in dairy farming can be reduced significantly.



A parasitic larva is trapped by the fungus *Duddingtonia flagrans* in its hyphal net. It is consumed before it can infect an animal on pasture.

Tannin-rich heather as a feed component and a nematode-trapping fungus (*Duddingtonia flagrans*) help to reduce the use of anthelmintics in sheep. Nematodes are roundworms that can occur as intestinal parasites in the digestive tract of sheep. With regard to synthetic vitamins, it was shown that it is possible to reduce the use of vitamin E in cattle rations and of vitamin B2 in poultry rations by twenty to forty per cent without risking the animals' health and performance. FiBL was thus able to deliver new solutions.

Florian Leiber, Veronika Maurer and Michael Walkenhorst, FiBL Switzerland

RELACS – Replacement of contentious inputs in organic farming systems

Website: fibl.org > themes/projects > project database > RELACS

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Funding: EU Horizon 2020

Project partners: fibl.org > Themen/Projekte > Projektdatenbank > RELACS

➔ Interdisciplinary project: more on the project in the chapter on crop plants, *Four successful years of research on copper alternatives in the RELACS project*



< Sufficient outdoor exercise is a precondition for reduced use of vitamin B.

> Heather is a natural remedy for gastrointestinal parasites.



Nutrition and politics

A high lifetime daily yield of dairy cows also benefits the climate.

Nutrition and politics

FiBL Switzerland

Why the extension of a dairy cow's productive lifespan matters economically

The Department of Livestock Sciences at FiBL Switzerland has calculated that the economically and environmentally optimum length of productive lifespan of Swiss dairy cows is between six and seven lactations, but the current average life is around half that, which is both inefficient and ethically questionable.

Researchers from the Department of Food System Sciences interviewed expert representatives of breeder's associations, vets, retailers, agronomists, NGOs, government, and farm advisors to investigate the systemic barriers to extending the length of Swiss cows' productive lives.

Breeding associations, vets, advisors, and government agencies already commit resources to extending the productive life, but the existing system is so entrenched that farmers are locked into a behaviour that is not optimal and system change can only take place slowly. A faster system change could be led by a collective and organised demand from dairy farmers, but such a demand is only likely if farmers believe their profits will increase. Dairy farmers commonly base

their decisions (per animal) on high fertility and milk production and assumptions that veterinary costs will be low in the years when production is high. Applying these simplified decision criteria facilitates readily observable production outcomes and leads farmers to prefer high-performance, but less robust, animals.

However, the simplification leads to insufficient consideration of important variables and the interactions between them. For example, production from high milk performance cows drops, while their susceptibility to disease increases, rapidly as they age. In contrast, the production from lower performing, and more robust, cows will typically continue for a longer period, so they eventually produce more milk, with fewer production, veterinary and transaction costs per kilogram of milk, as the cows are replaced less often. This example, although it is also excessively simplified, illustrates that oversimplification of decision criteria can lead to sub-optimal decision-making and an average productive life that is economically and environmentally inefficient. Collaborative reflection, led by breeder's associations, vets, and advisors, and the further development of the

Modern technology gives farmers access to data on their dairy herd. However, culling decisions are often based on subjective criteria.

< The majority of dairy cows are culled not primarily because of low milk yields, but because of udder health or fertility problems.



existing decision support tools, in collaboration with FiBL vets, could enable farmers to make better-informed decisions that lead to optimisation of the productive life of Swiss dairy cows.

Robert Home, Rennie Eppenstein and Michael Walkenhorst, FiBL Switzerland

Increasing longevity of Swiss dairy cows: factors, future scenarios and strategy development

Website: [fibl.org > themes/projects > project database](https://www.fibl.org/themes/projects/project-database)
> Increasing longevity of Swiss dairy cows

[themes.agripedia.ch](https://www.themes.agripedia.ch) > Nutzungsdauer Schweizer Milchkühe (in German/French)

Contacts: rennie.eppenstein@fibl.org, michael.walkenhorst@fibl.org, robert.home@fibl.org

Funding: Federal Office for Agriculture FOAG, Swiss cattle breeders' association, Bio Suisse, IP-Suisse, Migros, Swiss milk producers, Fondation Sur La Croix

Project partners: Bern University of Applied Sciences, AGRIDEA, Federal Office for Agriculture FOAG, Swiss cattle breeders' association, Bio Suisse, IP-Suisse, Migros, Swiss milk producers

→ **Interdisciplinary project:** more on the project in the chapter on livestock, *Are we keeping them for too short a time? On the productive lifespan of Swiss dairy cows*



With just under four lactations, dairy cows are underutilised.

Farmers often have a deep emotional bond with their animals. This is especially true for older dairy cows – or, as seen here, sometimes even for the prime bull.



Nutrition and politics

FiBL Germany

Regional foods in school catering

In the Hessian districts of Lahn-Dill and Giessen, the “Nah.Land.Küche – Die Region im Kochtopf” project, which loosely translates as “nearby.rural.cuisine – catering from the region”, is exploring how schoolchildren can be served regional organic products more frequently. The project is being carried out by FiBL Germany and the Ecozept GbR consultancy, and is led by the “Ökomodell-Region Lahn-Dill-Giessen” eco-model region.

What is it about?

For two and a half years – from mid-2021 to the end of 2023 – the project team is assisting eight schools and six school caterers in the Lahn-Dill-Giessen eco-model region on their paths to serving more organic food from the region. The focus is on establishing value chains all the way from farms to catering kitchens.

The bottleneck: regional processing

Although organics already holds a share of roughly twenty-five per cent in the agricultural area of the Lahn-Dill-Giessen district, there are still some barriers on the path from farms to caterers. In addition to the issue of cost, the lack of a processing structure and local logistics play a major role. As part of the project, experts are working to close gaps in processing, for example by providing support for the conversion to organic processing or advice for targeted investments.

First successes

After just one year, new partnerships have already been established through many discussions with stakeholders. For example, some schools involved in the project now receive weekly deliveries of fresh potatoes and eggs, spelt pasta and pumpkins from the region. Going forward, the aim is to consolidate and strategically expand the supply relationships that have been established.

Nicole Nefzger, FiBL Germany

Nah.Land.Küche – Die Region im Kochtopf (Nearby rural cuisine – catering from the region)

Website: [fibl.org > themes/projects > project database](https://www.fibl.org/themes/projects/project-database)
> Nah.Land.Küche (in German)

oekomodellland-hessen.de > recherche: “Mehr bioregionale Lebensmittel” (in German)

Contact: nicole.nefzger@fibl.org

Funding: Commission by the Lahn-Dill district authority (Hesse, Germany)

Project partners: Ecozept GbR; close cooperation with Öko-Modellregion Lahn-Dill-Giessen



Hessian Minister of Agriculture Priska Hinz gives an interview on the Nah.Land.Küche project and more regional organic food products in schools and large-scale catering.



In May 2022, organic Hokkaido pumpkins were planted into mulch. In November, dishes made from these regional pumpkins were served to the school's students.

An organic future

New and appropriate measures and framework conditions are needed to further support the expansion of organic agriculture. The “Zukunft Bio 2030” (future of organic 2030) project is working on the delivery of tangible stimuli for the advancement of organic agriculture in Austria by 2030.

The project team is working on selected measures that were devised in the predecessor project “Bio2030” together with a wide range of stakeholders. In four work packages, tangible strategies are identified to increase knowledge exchange in the entire organic value chain between research, extension and organic farming practice. One proposal is to establish a network of organic research farms. Educational concepts for sustainable nutrition are being developed for trainees in food retailing, as are strategies for increasing the share of organics in public catering. The implementation of legally binding organic certification in the out-of-home sector is also being assisted.

Expert interviews and stakeholder workshops as well as the analysis of best practice are fundamental to this work. Proposals for measures in the field of organic knowledge systems, such as the development of a national organic research strategy, emerged from a workshop. Some stakeholders were also visited on site: a visit to the *Landhausküche St. Pölten* restaurant for ex-

ample, which has already realised an organic share of around sixty-five per cent in monetary terms in catering for years, provided crucial impetus for the “more organics in public catering” implementation strategy.

Some of the proposals are also to be included in the upcoming Austrian Organic Action Programme and will thus specify tangible objectives for the further development of organic farming, such as the strategic strengthening of organic knowledge systems or the significant advancement of organic sales in the out-of-home sector.

Elisabeth Klingbacher, FiBL Austria

“Zukunft Bio 2030”: Implementation of selected measures to strengthen organic agriculture in Austria

Contact: susanne.kummer@fibl.org

Funding: Federal Ministry of the Republic of Austria for Agriculture, Forestry, Regions and Water Management



A campaign to put more organic food on plates – “Zukunft Bio 2030” is campaigning for the implementation of selected measures to strengthen organic farming in Austria.

We Care Comprehensive sustainability instead of greenwashing

Sustainability is “in” and there are many companies that like to use it to forge a green image for themselves. The We Care label developed by FiBL Germany is the first comprehensive standard for an across-the-board assessment of a company’s management system.

“The We Care label calls for responsibility along the supply chain: from production to transport, processing and all the way to the shelf,” says Axel Wirz, We Care project manager. If, for example, a company’s coffee is We Care-labelled, it means that a comprehensive assessment was made of 164 criteria in the four areas of action, namely corporate governance, supply chain management, environmental management and managerial responsibility towards employees. The numerous criteria therefore apply both in the products’ country of origin and in the country where the goods are further processed and marketed. Transport must be organised in a way that saves resources, and packaging must be equally environmentally friendly.

“With We Care certification, companies highlight that they approach sustainability from the ground up. They also see the standard as an opportunity to repeatedly put their internal processes to the test and advance them further,” Wirz explains. At the same time, however, he admits that “it is difficult to communicate the complex standard to consumers. Therefore, the We Care label is currently mainly used in communication within companies and less so with consumers.” Wirz is working to change this and sees the We Care label users as committed pioneers who document their honest actions. We Care is a guideline for highest quality standards and risk minimisation in the supply chain, a certification system that signifies comprehensive sustainability,” says Wirz.

Hella Hansen, FiBL Germany

We care: A first in comprehensive sustainability standards

Website: we-care-siegel.org

Contact: axel.wirz@fibl.org

Funding: license fees



We Care is a standard for companies that seek to ensure they are managing their businesses and creating value across their supply chains in a fair, sustainable and socially responsible way, and wish to prove this in a credible manner. Certified companies can use the We Care label on their products.

Service and extension

FiBL Switzerland

Seen, heard, read

Climate-friendly farming, for example: Scientists' fresh findings and farmers' innovations should not be gathering dust on a shelf somewhere. Instead, they should be made accessible to the general public. FiBL's technical communication team makes that happen. Here is a selection of the communication channels they employ.

 **FiBLFilm YouTube channel**
The climate targets of the umbrella organisation of Swiss organic agriculture

FiBL's "FiBLFilm" YouTube channel has 16 600 subscribers. In the video on Bio Suisse's climate targets, for example, organic farmers talk about the challenges they experience on their farms due to the climate crisis. On display are impressions from the Bio Suisse Climate Focus Day. Bio Suisse is the umbrella organisation of Swiss organic agriculture. The focus day in August 2021 bore fruit: In April 2022, Bio Suisse decided on the target of "Climate-neutral organic agriculture by 2040".

[youtube.com > FiBLFilm > playlist > English](https://youtube.com/FiBLFilm)



 **Downloads und Shop**
Climate impact of organic soil management

FiBL's online store offers carefully prepared information material. The main target audience are practitioners. The fact sheet on Soil and Climate, for example, sets out clearly how farming can exacerbate or indeed mitigate climate change.

[fibl.org > info center > downloads & shop](https://fibl.org/info-center/downloads-shop)




FiBL Focus podcast channel
Farming – climate killer or climate saviour?

With fortnightly new episodes on farming, animal welfare and environmental protection, the "FiBL Focus" podcast is "ears only". One of the contributors is FiBL researcher Markus Steffens. He can be heard, for example, in the episode entitled "Die Landwirtschaft – Klimakiller oder Klimaretter?" (Farming – climate killer or climate saviour?). He talks about how agriculture causes greenhouse gases which contribute to global warming, and how, in contrast, well-designed farming systems can even mitigate climate change.

[fibl.org > Infothek > Podcast \(in German only\)](https://fibl.org/infotek/podcast)



 **Organic Eprints online archive**
Carbon – out of the atmosphere, into the soil

In its Organic Eprints online archive, FiBL makes all its publications available. In addition to articles for the wider public, studies published in scientific journals can also be found here, for example on organic carbon sequestration in arable soils.

orgprints.org

Service and extension

Understandably conveying climate-friendly farming: now also via the FiBL podcast.

< FiBL experts up close and personal: Since the autumn of 2021 the FiBL Focus podcast has been serving up information on current organic sector topics.

Enhancing biodiversity – advising farms

Intensive agriculture, the introduction of non-native species, construction and habitat fragmentation, but also land abandonment in mountain regions are drivers of a sharp decline in biodiversity in Switzerland, as elsewhere.

Over the past two years, the conservation and promotion of biodiversity has been a focus of FiBL's advisory services. The team led by Véronique Chevillat and Theres Rutz advises farmers on how to specifically promote biodiversity on their farms. The team draws on a great deal of advisory experience and on the results of the FiBL project entitled "mit Vielfalt punkten" (scoring with diversity).

The advisory services focus on publications for a practitioner audience and information in agricultural media, field visits and whole-farm advisory. Consultations are conducted directly on the farm in order to gain an understanding of the farm situation and to be able to ensure that the recommendations take account of the interests of farm managers and family members as well as work processes and workloads.

Véronique Chevillat and Theres Rutz know that when farmers ask for advice, they have often already looked into the issue of biodiversity, so they feed their own ideas and visions into the process. Sometimes, however, effective measures are not considered. The FiBL advisors' extra eyes on the process help to identify additional potential and drive action.

The individually tailored advice provides each farm with target-oriented suggestions for promoting biodiversity. This can involve the enhancement of existing elements such as meadows, where cutting regimes can be adapted. At the same time, new elements can be integrated, such as hedgerows or arable field margins. In order for the measures to be maintained over the long term and to exert a sustained effect, it is very important that they can be well integrated into the farm routine.

Small measures or adjustments to farm management can have a big impact on biodiversity. For example, the creation of small-scale structures such as strips of old grass or clearance cairns can create refuges, nesting and hibernation sites for insects, amphibians or reptiles. What may at first glance look untidy, on closer inspection creates space for biodiversity to flourish. In this respect, the two advisors need to encourage a rethink not only in farming.

Véronique Chevillat and Theres Rutz, FiBL Switzerland

Enhancing biodiversity – advising farms

Website: agrinatur.ch

Contact: cornelia.kupferschmid@fibl.org

Funding: Bio Suisse, IP-Suisse and additional partners

Project partners: Swiss Ornithological Institute, AGRIDEA



Small-scale structures such as piles of stones, small waterbodies and coves are valuable elements for small fauna, offering them opportunities for nesting, refuge and hibernation.



Working together for greater sustainability in the kitchen – cooking with apprentices in the "School of Food" educational project.

The good food concept

The "School of Food" ("Schule des Essens"), an educational project aimed at teaching sustainable nutrition, has a new target group. In addition to schoolchildren, apprentices now also learn about what constitutes sustainable food. They are taught in a scientifically sound and joyful way and also learn that, above all, sustainable food tastes great.

In the "Schule des Essens goes Lehrlinge" (School of food goes apprentices) project, apprentices look at the connections between nutrition and the environment. They discuss options for achieving sustainable nutrition in their private and professional environment and also reflect on their readiness for individual change. Moreover, they get to enjoy gastronomic delights as they cook and eat together, using ingredients produced and prepared in a climate-friendly way.

The one-day workshops, which have so far been conducted in conjunction with three cooperating companies, have covered sustainable meat consumption and

learning to appreciate the whole animal "from nose to tail" as well as climate-friendly food procurement in the company.

Three impulse videos, created together with the trainees, as well as accompanying materials, are available free of charge on a dedicated YouTube channel. They are intended to encourage other companies to take up the topic with the trainees and promote healthy and climate-friendly catering.

"School of food goes apprentices" has been taken up well by the young people. Moreover, the project received the Austrian SDG Award 2021. This gives further encouragement to the two project leaders Andrea Fičala and Theres Rathmanner to communicate sustainable nutrition and its contribution to the achievement of the Sustainable Development Goals to (young) people in a practical and joyful way.

Elisabeth Klingbacher, FiBL Austria

Schule des Essens goes Lehrlinge (School of food goes apprentices)

Contact: elisabeth.klingbacher@fibl.org

Funding: Austrian Federal Ministry of Social Affairs, Health, Care and Consumer Protection; Gesundheit Österreich GmbH

Project partners: Elektro Rauhofer GmbH & Co KG, Vienna Social Fund (Fonds Soziales Wien), DM Drogerie Markt GmbH

Videos: youtube.com > Schule des Essens goes Lehrlinge (in German)



Together with the apprentices, Andrea Fičala of the School of Food team sheds light on issues of sustainable meat consumption.

New from old: An alternative pig breed for Swiss organic farming

FiBL supports organic producers in breeding a new pig breed. This involves crossing different breeds that bring with them traits that have proven to be particularly useful for pig husbandry on organic farms. The project "Our Pig", which was initiated by producers, was able to make available the first animals in 2022. These represent an important basis for further breeding work.

A farmer-led breeding project

Intensive pig breeding and fattening geared towards maximum performance is not in line with the basic tenets of organic agriculture. It is for this reason that a number of farmers, in cooperation with Demeter, initiated the "Unser Hausschwein" breeding project. FiBL assisted with scientific advice and coordinated the practical work. The twenty or so breeders envisage pigs that are adapted to organic farming in Switzerland, are undemanding and robust, and have only a moderate reproductive output. Moreover, the animals should be particularly well suited for outdoor keeping.

Targeted cross-breeding

In 2017, at the start of the project, breeds were selected that already displayed some of the desired characteristics. These include the more intensive Edelschwein and Duroc breeds and the more extensive Turopolje pig and Swabian-Hall swine breeds. For the project, eight Swabian-Hall breeding animals were imported from Germany in 2018, as this breed had not previously been available in Switzerland. These breeds are crossbred in such a way that a four-breed cross results after just two generations. The first of these animals were born in August 2022. The piglets' fattening performance, health status and meat quality as well as other criteria relevant for breeding are now documented and animals are selected for further breeding.

To ensure that breeding work can continue after the end of the project, the alternative pig breeding association for Switzerland, "Verein Alternative Schweinezucht Schweiz (ASZS)" was established in the spring of 2022.



They have arrived at last: The first final crosses of the "Our pig" project.

Outdoor keeping – discussing the challenges

Managing the pigs in outdoor systems is a demanding task and solutions must be individually tailored to each farm. Animal husbandry, processing and sales are discussed at regular themed meetings. This promotes exchange between farmers. The latest findings from FiBL's breeding work are also presented at these meetings. By 2028, the project leaders expect to have established breeding traits that may result in a new breed.

Anna Jenni and Barbara Früh, FiBL Switzerland

Our pig (Development of an alternative pig breed)

Website: [fibl.org > themes/projects > project database > our pig](https://fibl.org/themes/projects/project-database/our-pig)

Contact: anna.jenni@fibl.org

Funding: Fondation Sur La Croix, Edith Maryon Foundation, Bio Suisse, Demeter



Farm managers are supported in the implementation of outdoor livestock systems.



The piglets already enjoy outdoor access during the suckling period.



< Who will become a breeder? The final crosses showing desirable traits are selected for further breeding at approx. sixty kilogram of weight.

Service and extension

ÖMKi, FiBL Europe, FiBL Switzerland

Supporting agroecology transition across Europe

How do we prepare for the decreasing availability or the deterioration of natural resources? How can we mitigate the loss of biodiversity and combat the impact of climate change within the agricultural system? With agroecology lies the potential to address these challenges and contribute to the transition toward more sustainable agri-food systems in Europe.

The European Commission, which underpins the European Partnership on Agroecology provisionally entitled “Accelerating farming systems transition: agroecology living labs and research infrastructures”, believes that open innovation arrangements, in particular living labs and research infrastructures, are tools which can make a significant contribution to boosting agroecology in Europe. Building on this, the ALL-Ready (Agricultural Living Labs Ready) project aims to prepare the framework for a future European network of agro-ecological living labs and research infrastructure that will enable the transition to agroecology across Europe relying on participatory, real-life experimentation, paving the way for agroecological transition throughout Europe.

Organisations joining the network are committed to the following objectives: 1. promoting knowledge and innovation 2. promoting resilience, sustainability

and diversity 3. strengthening climate change mitigation and adaptation 4. recognising synergies between ecosystem functions 5. promotion of efficient and responsible use of natural resources 6. development of circular and solidarity economies; a form of exchange of goods and/or money that aims to promote social interests more strongly.

Making the results more robust with a Pilot Network

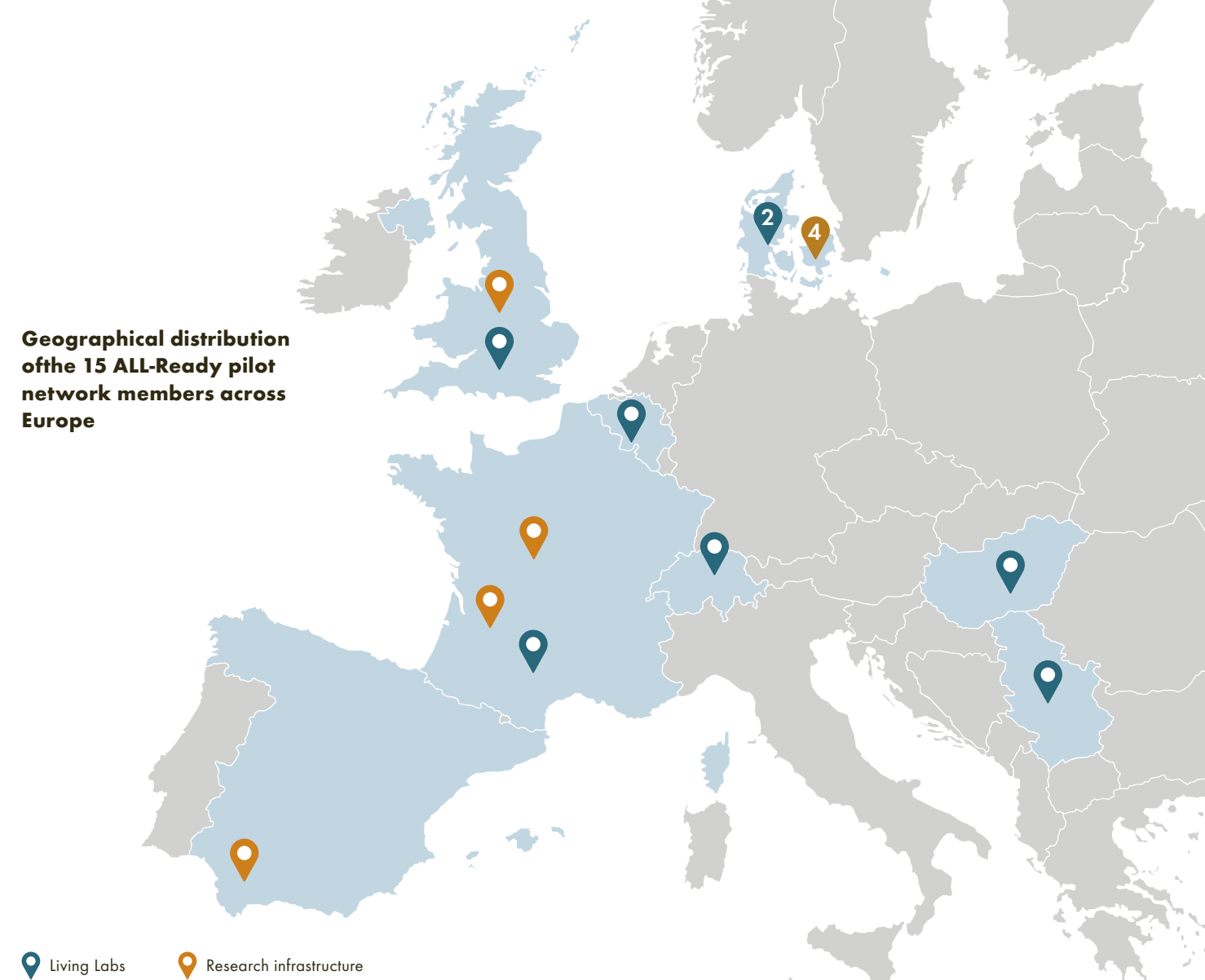
The main activities of the ALL-Ready project include the establishment and maintenance of a small-scale pilot network (led by ÖMKi), including agroecology living labs, research infrastructures, and other new innovations from Europe. The pilot network acts as a testbed to experiment and to gather feedback on the tools, concepts and recommendations for action developed within the project. At the same time, cooperation between the different living labs and research infrastructures is strengthened through joint activities.

Despite its young age, the participatory work in the pilot network already resulted in a set of validated expectations and needs for the network, with co-created cooperative themes and an action plan based on their agroecological interests and activities.



Pilot network co-creation workshop held in Ghent, Belgium in July 2022.

Geographical distribution of the 15 ALL-Ready pilot network members across Europe



Conclusion

The project has passed its first half and is well on its way to achieving its goals. The main focus for the remainder of the project, apart from real-life experimentation, is the development of an implementation strategy for future partnerships. This includes the planning of activities, recommendations for an extension to the whole EU area, making policy recommendations as well as highlighting the benefits of membership.

Korinna Varga, ÖMKi

ALL-Ready – Agricultural Living Labs Ready

Website: [fibl.org > themes/projects > project database > ALL-Ready](https://fibl.org/themes/projects/project-database/all-ready)

Contact: korinna.varga@biokutatas.hu (ÖMKi), heather.mckhann@inrae.fr (INRAE)

Funding: EU Horizon 2020

Project partners: [all-ready-project.eu > about > consortium & structure](https://all-ready-project.eu)

International cooperation

Tackling climate change in the tropics and subtropics by means of agroforestry and climate-smart crop rotations in organic agriculture.

International cooperation

FiBL Switzerland

With organic farming against climate change in the global south

The SysCom program has been continuously assessing the performance of organic vs. conventional agricultural production systems in Kenya, India and Bolivia since its establishment in 2007. The findings of these long-term field experiments and accompanying participatory on-farm research with farmers offer some clear messages to climate change adaptation and mitigation.

Organic farming systems have a considerable mitigation potential

The FiBL long-term trials in Kenya and India have shown that organic crop rotation systems are accumulating organic carbon in the soil, reversing decade long trends in soil depletion and “locking in” carbon within healthy soils. Organic cocoa agroforestry systems do not only store considerably more carbon in the living biomass of plants than cocoa monoculture systems, but also have drastically reduced environmental impacts due to the considerable reduction of fossil energy-based fuels, fertilizers and pesticides compared to conventionally managed cocoa agroforestry systems.

Resilient organic cropping systems are a suitable tool for climate change adaptation

The trials in Bolivia show that organic cocoa agroforestry systems are better able to regulate microclimate, buffer strong rainfall events and reduce erosion, resulting in more stable water cycles and better soil health. Organic crop rotation systems allow for flexible adaptation to changes in weather patterns and pest incidence, while benefitting from a multitude of agroecological interactions (such as pest and weed control, nitrogen fixation, increase of soil organic carbon). Some of these effects have only been visible after nearly ten years of consequent organic management practice, though.

Upcoming topics FiBL is working on in close cooperation and participatory research with farmers are multiple use structural elements such as hedgerows accompanying the organic systems to function as predator habitat, trap crops for pests and physical barriers mitigating erosion and nutrient loss and supporting rainwater harvesting strategies.

< Experimental plots in Bolivia with a variety of cocoa cropping systems: Various agroforestry systems (left) and organic monoculture (right).

Kishore Khede stands in his wheat field. He produces organic cotton and participates in participatory field trials.

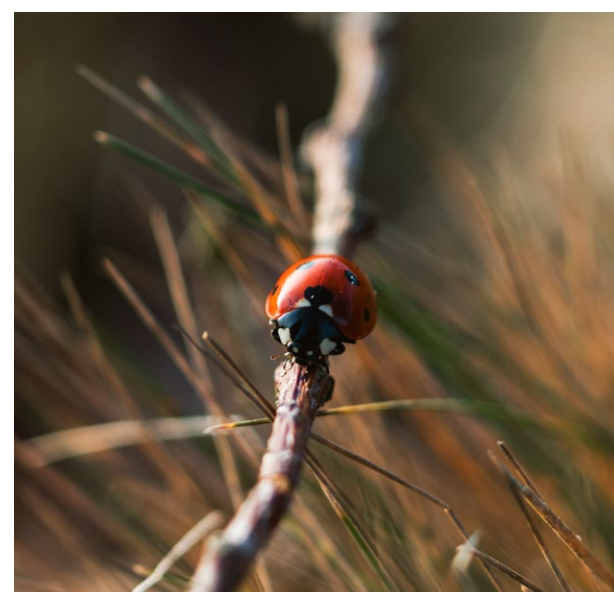




Women's work plays an important role, especially when it comes to sowing and harvesting cotton by hand.



Maize in the Kenyan long-term trial plots. The maize is grown under both organic and conventional regimes and at two different levels of intensity.



By refraining from the use of chemical pesticides, organic agriculture also promotes beneficial organisms in the tropics.

Conclusions

- Organic farming offers effective tools for climate change mitigation and adaptation in the tropics and subtropics.
- Adaptation of organic production systems to the changing local climate is pivotal to safeguard farmers livelihoods.

Marc Cotter, Beate Huber and Laura Armengot, FiBL Switzerland

SysCom – Long-term farming systems comparisons in the tropics

Website: systems-comparison.fibl.org

Contact: beate.huber@fibl.org, marc.cotter@fibl.org, laura.armengot@fibl.org

Funding: Swiss Agency for Development and Cooperation SDC, LED Liechtenstein Development Service, Biovision, Coop Sustainability Fund

Project partners: systems-comparison.fibl.org > about > partner

International cooperation

FiBL Switzerland

Your food choices of today impact those of the next generations

Climate change is increasingly threatening worldwide food security. In the global South, FiBL collaborates with international and local partners to help smallholder farmers implement agroecological practices within more diverse production systems that better cope with climatic variations while contributing to a more balanced, healthy diet.

Agrobiodiversity for improved food security and nutrition

Global warming and unpredictable precipitation patterns have burdened the peasants, who lack the capacity and resources to adapt to such climatic variations. Thereby, the most important strategy to cope with such uncertain climatic factors is to diversify production, involving not only a wider range of crops but also livestock for optimal nutrient cycling. Yet, over the last 50 years, agrobiodiversity has declined rapidly, negatively

affecting the resilience of agricultural production, long-term soil fertility, and locally available food diversity.

The project CROPS4HD (Consumption of Resilient Orphan Crops & Products for Healthier Diets) is working in Tanzania, Tchad, Niger, and India to improve nutrition security by helping smallholder farmers diversify their production by introducing so-called 'neglected' or 'underutilized' species. These are crops that have excellent nutritional properties but were somehow abandoned for the lack of market demand or a better understanding about their health attributes and their valuable use in local dishes. In India, for instance, as part of a participatory process involving farmers, processors, retailers and nutritionists, different millet varieties were prioritized, helping to substitute especially rice that is much less nutritious. In Niger and Tchad, market actors are working together to promote the production and use of Bambara peanuts and Moringa, both containing high levels of protein.

A Swissaid representative and farmer evaluating together coconut quality under banana- coconut and maize cultivation.





Improved and traditional cultivars of Bambara bean are under testing in an on-station experiment for their climate adaptation and nutritional profiling.

Creating demand, promoting supply and influencing relevant policies

Crops4HD works on both the demand and the supply side. To create demand, it works especially with nutritionists, chefs, processors, and retailers to make especially urban consumers aware of the nutritional benefits involved in each of the prioritized 'neglected' crops. In rural contexts, cooking classes as part of a broader 'nutrition education' have proven most effective for stimulating interest for these crops among rural consumers. On the supply side, the project works with farmer groups and local extension staff to introduce the different prioritized crops into smallholders' production systems. Here, the involvement of women is critical, as they are often in charge to grow minor crops, especially those involving less acreage and often used for self-consumption. To make sure that only the most promising varieties are cultivated by farmers, cultivation trials are implemented together with local research and extension organizations and on-farm, which at the same time serve as 'participatory learning plots'. At a higher level, the project lobbies for appropriate policies in favour of equitable seed and food markets, respecting the sovereignty of farmers about their cultivars.



Tanzanian farmers evaluating the effect of different agroecological practices in a demo plot.

Conclusions

- **Demand:** Nutrition benefits must be well communicated and understood to create tangible demand for the project's prioritized 'neglected' crops.
- **Supply:** Accessibility of adapted seeds and the successful use of agroecological practices are both critical to achieve good crop yields while promoting long-term soil fertility.
- **Policy:** Legal framework conditions must ensure farmers' rights to propagate, exchange and sell their seeds.

Amritbir Riar and Thomas Bernet, FiBL Switzerland

CROPS4HD – Consumption of Resilient Orphan Crops & Products for Healthier Diets

Website: fibl.org > themes/projects > project database > CROPS4HD

Contact: amritbir.riar@fibl.org

Funding: Swiss Agency for Development and Cooperation SDC, Liechtensteinischer Entwicklungsdienst (LED)

Project partners: SWISSAID, Alliance for Food Sovereignty in Africa (AFSA), Alliance of Bioversity International and the International Center for Tropical Agriculture (CIAT), World Vegetable Centre (WVC), Association for Plant Breeding for the Benefit of Society (APBREBES), GRAIN



Farmers comparing the diversity of their stored bambara bean cultivars in Chad.



A FiBL seed and biodiversity expert training local researchers in on-farm cultivar evaluation.

Shrubs for food security: improving agriculture and animal husbandry in the Sahel

In the West African Sahel, land degradation and unpredictable precipitation severely affect local agriculture and livelihoods. Systematic integration of crops, shrubs and livestock together with organic and conservation agriculture practices, have significant potential to improve soils and yields and build resilience. The FiBL coordinated Horizon 2020 project, SustainSahel, investigates redesign typologies in close collaboration with farmers to validate existing practices and enable novel practices to emerge.

Dryland regions, such as the Sahel, face many existing and emerging challenges, increasing due to climate change. A major limiting factor for farmers and pastoralists in West Africa is the low precipitation use efficiency caused by poor soil quality. Challenges like water losses from runoff and evaporation, among others, can be combatted through water conservation and harvesting techniques including shrub integration and reduced tillage.

Sustainable intensification with a transdisciplinary, participatory approach

The aims of the project are to boost the resilience and sustainable intensification potential of agricultural production systems in the Sahel. Furthermore, fruitful cooperation, both regionally and between African and European institutions, is to be promoted. SustainSahel uses transdisciplinary, participatory approaches to realise integrated systems for crops, shrubs, livestock and people. The project is working in close partnership with farmer organisations, advisory services and farming communities to identify the most promising practices for sustainable intensification.

A cascading knowledge-sharing approach

The project works in seven focus areas in Senegal, Burkina Faso, and Mali. The local actors involved with milk, meat, cereals, cotton, and other regional value chains are closely involved via 'Innovation Platforms' where challenges are identified and solutions discussed while building the capacities of farmers and strengthening farmer organisations.



A farmer in Ouarkhokh (Senegal) shows one of the *Guiera senegalensis* bushes in his field. Abundant in all of the project's sites, *Guiera* is a good source of mulch to protect the soil and preserve humidity during drier periods of the growing season.



On-station research trials at IPR/IFRA - Rural Polytechnic Institute near Koulikoro, Mali.



The Sahelian rangelands dry season causes most of the plants to completely dry out, leaving only some trees and bushes as greenery in the landscape. Ouarkhokh, Senegal.

SustainSahel's participatory approach gives farmers a voice and involves them in the implementation and evaluation of field and on-farm trials. The close exchange between stakeholders is expected to increase the chances of adopting and promoting novel approaches shared later in the project.

Lauren Dietemann, Harun Cicek and Fernando Sousa, FiBL Switzerland

SustainSahel – Synergistic use and protection of natural resources for rural livelihoods through systematic integration of crops, shrubs and livestock in the Sahel

Website: [fibl.org > themes/projects > project database > SustainSahel](https://fibl.org/themes/projects/project-database/sustain-sahel)

Contact: harun.cicek@fibl.org

Funding: EU Horizon 2020

Project partners: [fibl.org > themes/projects > project database > SustainSahel](https://fibl.org/themes/projects/project-database/sustain-sahel)

Link: [youtube.com > SustainSahel project video](https://youtube.com/SustainSahel)

Baobab trees with harvested millet crop stubbles stocked up for later use as forage in the dry season. Focus area Niakhar, Senegal.



**FiBL has proven resilient
in challenging times:
Both the number of
employees and revenue
increased in the last
two years despite the
Covid-19 pandemic.**

FiBL Switzerland

Interdisciplinarity and the recursive transfer of knowledge between research, extension and practice are the strengths of FiBL Switzerland. Its competencies are also in demand in numerous international projects. In addition to offices and laboratories, FiBL Switzerland's site at Frick includes a farm holding, an orchard, a vineyard with its own wine press and a restaurant, all of which are run organically. In 2016 the Suisse Romande department, based in Lausanne, was established to strengthen FiBL's presence in French-speaking Switzerland.



Foundation Council: Urs Brändli, Roland Frefel, Anne Challandes, Bernard Lehmann (president), Claudia Friedl, Peter Felser, Sofia de Meyer, Ralf Bucher, Rolf Bernhard, Markus Hausammann.



Team 2022

- 265** employees
- 94** students, PhD students, interns, guest scientists, guest assistants and conscientious objectors doing alternative service

Profit and loss account

	2020 in CHF	2021 in CHF
Income		
Research	12 987 758	10 825 956
Federal contribution	9 850 700	12 350 700
Extension, training and communication	1 006 693	1 546 294
International cooperation	4 862 264	6 108 155
Research farms	211 287	265 090
Restaurant, internal services	358 447	296 491
Donations, misc. income	644 162	692 425
Total income	29 921 311	32 085 112
Expenditure		
Expenditure on personnel	18 145 806	19 918 216
Material expenditure		
- Materials for trials, laboratory consumables, analytics, project costs	7 736 483	7 265 287
- Cost of office, office supplies, workshop space, other exp. for administration, IT, advertising	2 384 774	2 420 126
Financial expenses	179 682	317 331
Depreciation	943 725	1 595 631
Total expenditure	29 390 470	31 516 591
Extraordinary revenue	-226 252	-199 371
Surplus for the year	304 589	369 150



FiBL Europe

FiBL Europe is the common institution of the FiBL group providing services and support to its researchers. Based in Brussels it represents the national FiBL institutes at European level, being the "transmission chain" of the FiBL Research toward European stakeholders, and acting as a single access point for the competencies of the national FiBL institutes. FiBL Europe also offers project coordination, advocacy, consultancy, and training services.



Current board: Dóra Drexler, Florence Arsonneau, Beate Huber, Andreas Kranzler, Robert Hermanowski, Jörn Sanders (president).



Team 2022

- 7** employees
- 2** interns

Profit and loss account

	2020 in EUR	2021 in EUR
Income		
Internal revenue	451 000	340 670
External project income	81 209	163 423
Total income	532 209	504 093
Expenditure		
Expenditure on personnel	453 382	400 193
Misc. expenditure	96 017	74 301
Project related costs	1640	27 825
Total expenditure	551 040	502 319
Operating result	-20 609	992



FiBL Germany

FiBL Germany offers scientific and practice-oriented expertise on current issues in organic agriculture and food production at its sites in Frankfurt am Main and Witzhausen. Current work priorities include the inputs list, animal welfare, the FiBL Academy, the "Öko-Feldtage" (organic field days), rural areas and value chains.



Current board: Gerold Rahmann, Steffen Reese, Robert Hermanowski, Knut Schmidtke, Wolfgang Gutberlet, Bernhard Wagner, Jürgen Hess (chairman of the board), Felix Prinz zu Löwenstein, Jan Plagge, Jörg Grosse-Lochtman, Beate Huber, Uli Zerger.

Not present: Miriam Athmann, Andreas Gattinger, Alexander Gerber, Peter Röhrig.



Team 2022

65 employees

5 students, PhD students and interns

Profit and loss account

	e.V. 2020 in EUR	e.V. 2021 in EUR	GmbH 2020 in EUR	GmbH 2021 in EUR
Income				
Research & Development	1 756 052	1 708 174	0	0
Other	64 223	135 241	2 849 833	3 048 625
Total income	1 820 275	1 843 415	2 849 833	3 048 625
Expenditure				
Expenditure on personnel	875 652	916 067	1 392 392	1 586 631
Material expenditure/ Project costs	876 001	825 728	1 016 980	997 904
Cost of office, administration	31 091	65 555	337 915	337 709
Depreciation	122	122	5 670	22 412
Total expenditure	1 782 866	1 807 472	2 752 957	2 944 656
Operating result	37 409	35 943	96 876	103 969



FiBL Austria

To establish connectivity between practice, research and extension and to provide consumers with sound organic knowledge are among FiBL Austria's key objectives and fields of work. With practice-oriented research and market development projects, FiBL Austria plays an active role in comprehensive knowledge exchange and in networking between all actors involved along the organic food production chain – from producers right through to consumers.



Current board: Gerhard Zoubek, Werner Zollitsch, Eva Hieret, Andreas Kranzler, Urs Niggli (chairman), Alexandra Pohl, Martin Preinerder.

4th and 5th from left: Directorate FiBL Switzerland on visit: Knut Schmidtke, Beate Huber.



Team 2022

36 employees

Profit and loss account

	2020 in EUR	2021 in EUR
Income		
Research & Innovation	430 000	520 000
Training & Education	340 000	360 000
Other	220 000	220 000
Total income	990 000	1 100 000
Expenditure		
Expenditure on personnel	755 000	812 000
Misc. expenditure	33 000	43 000
Project material cost	150 000	176 000
Office expenditure	50 000	63 000
Total expenditure	988 000	1 094 000
Surplus	2000	6000



FiBL France

FiBL France is headquartered in the south-east of the country where it conducts laboratory and field trials in collaboration with a network of farmers and other partners. Research topics emerge in response to evolving needs and currently revolve around agroforestry, small ruminant and pig health, and soil and plant health.



Current board: Felix Heckendorn (president), Raphaël Charles, Lucius Tamm, Veronika Maurer, Frédéric Rey.

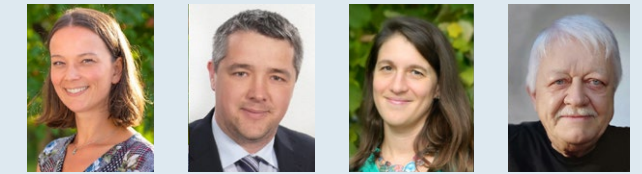


Team 2022
7 employees
2 students



ÖMKi

The Hungarian Research Institute of Organic Agriculture ÖMKi works on research-innovation tasks leading to practically implementable results, thus guaranteeing the sustainable development of agriculture and food production in Hungary. To this end the organisation develops professional networks in cooperation with farmers, Hungarian and international research institutes covering the fields of horticulture, arable cropping, viticulture, animal husbandry and precision farming technologies. In 2020 ÖMKi was admitted to the European Network of Living Laboratories (ENoLL).



Current board: Dóra Drexler, Árpád Nagy, Zsófia Hock, Ferenc Frühwald (chairman).



Team 2022
22 employees
5 students and interns



Profit and loss account

	2020 in EUR	2021 in EUR
Income		
Research	225 302.13	287 898.89
Services, training	21 557.00	25 986.18
Extraordinary revenue	15 488.24	16 892.59
Total income	262 347.37	330 777.66
Expenditure		
Expenditure on personnel	31 920.73	41 063.43
Project costs	170 979.86	203 696.53
Operational costs	44 250.68	60 937.04
Depreciation	15 667.47	15 922.85
Total expenditure	262 818.74	321 619.85
Operating result	-471.37	9157.81

Profit and loss account

	2021 in EUR
Income	
Research	611 253
Others	664 482
Total income	1 275 735
Expenditure	
Expenditure on personnel	545 369
Material costs	305 091
Other costs	64 735
Total expenditure	915 195
Operating result	360 540

Acknowledgement

FiBL's clients, donors and supporters

2021/2022

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Staatssekretariat für Wirtschaft (SECO), Bern
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Stiftung Dreiklang, Basel
Stiftung Edith Maryon, Basel
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