



# Activity report 2016



Research Institute of Organic Agriculture – Switzerland, Germany and Austria

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Photo on cover by Matthias Klaiss, FiBL: Hansueli Dierauer, senior arable adviser at FiBL, displays mixed cropping. Foreground: lupine/oats. For more about the Organic Farming Day and further educational services see pages 22 and 23.

Photo on back cover by Laura Armengot, FiBL: Measuring soil moisture in the agroforestry system of the long-term trial in Bolivia. For more about FiBL’s activities around the world see pages 14 and 15.

# Closer together: The three FiBLs

Why duplicate or triplicate efforts if it is less costly and more effective to work together? The three FiBL research institutes in Germany, Austria and Switzerland joined forces more than ten years ago. It's been worth it.

The more than ten years of cooperation between FiBL Germany, Austria and Switzerland have paid off. An important example of the institutes' joint projects is the continuously updated online database used all across Europe which shows where and what type of organic seed is available. This transparency has facilitated continuous increases in seed propagation on organic holdings. The three institutes are also working on a joint system for the evaluation of farm inputs, as evidenced by the Organic Inputs Evaluation Network. At a technical level, the cooperation involves basic operations such as the joint websites, databases, annual reports, publications and a joint presence at the Biofach trade fair.

In 2016, FiBL Europe was established in Brussels with a view to intensifying the Europe-wide cooperation of the three FiBL institutes. FiBL Europe forms an umbrella over the existing institutes and the plan is for it to become a scientific/technical contact for the EU Commission. The FiBL institutes are already delivering many services to the EU and are working on EU research projects. FiBL Europe will consolidate these activities and will make them even more efficient.

FiBL fosters a holistic and comprehensive culture of innovation. This culture has a social, ecological and technological dimension. Social innovations, for example, include new types of operations and new models of cooperation between consumers and producers. FiBL already supports research and implementation projects in this area. At the 2015 Expo

Milano world fair, FiBL organized a symposium on the issues of "Urban Agriculture" and "Vertical Farming". Ecological innovations, such as the enhancement of soil fertility and biodiversity in crops, have been among FiBL's core topics for 42 years.

Technological innovations are continuously gaining importance in many areas, including organic farming; their benefits as well as their risks arouse controversy. An example of such discussions is the "Bio 3.0" discourse on the future of organic farming in which FiBL staff are taking part together with "IFOAM – Organics International", the international organic federation, and the national organic organizations of Germany, Austria and Switzerland.

All innovations harbour both opportunities and risks. This is true, for example, for novel packaging materials based on nanotechnology that are designed to keep foods fresh and flavourful for longer. Another example is intelligent agricultural equipment that radically alters day-to-day farm work through automation, satellite guidance and large amounts of data. "Big Data" presents an opportunity to swiftly analyse large datasets, but it also opens the door to the potential misuse of data. New molecular breeding methods that are not dissimilar to or even overlap with genetic engineering techniques are the subject of particularly fierce debate. As a matter of scientific freedom, FiBL openly looks at and considers all possible innovations and discusses these with reference to sustainability criteria and the principles of organic farming.



*Urs Niggli*  
Director FiBL Switzerland

*Robert Hermanowski*  
Managing Director FiBL Germany

*Andreas Kranzler*  
Managing Director FiBL Austria

# To safeguard global food supply

Organic crops require **19% less** energy per unit of yield compared to non-organic crops if fertilizer and pesticide production are included in the calculation.

Organic agriculture achieves 80% of conventional yield levels – and consistently so over a period of 35 years – while using 40% less nitrogen, 36% less phosphorus and 34% less potassium. This is a result of the long-term comparative DOK trial run by FiBL since 1978.

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Funding: Swiss Federal Office for Agriculture (FOAG)

Soils under organic management emit **lower levels of greenhouse gases** compared to soils under conventional management per unit area and yield. This is especially true for biodynamic production methods using composted manure, as was shown in a study conducted by FiBL.

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Funding: Swiss Federal Office for the Environment (FOEN) and FOAG

**Living microorganisms** such as fungi or rhizobacteria have the ability to support healthy growth, nutrient uptake and resilience of crop plants. FiBL was able to show that the use of commercially available microorganism preparations can positively affect the growth of maize in the field. At two sites in Switzerland, trials conducted by FiBL researchers showed an 8 to 15% higher plant density, a 10% increase in phosphorus uptake, and yield increases in the order of 5 to 14%.

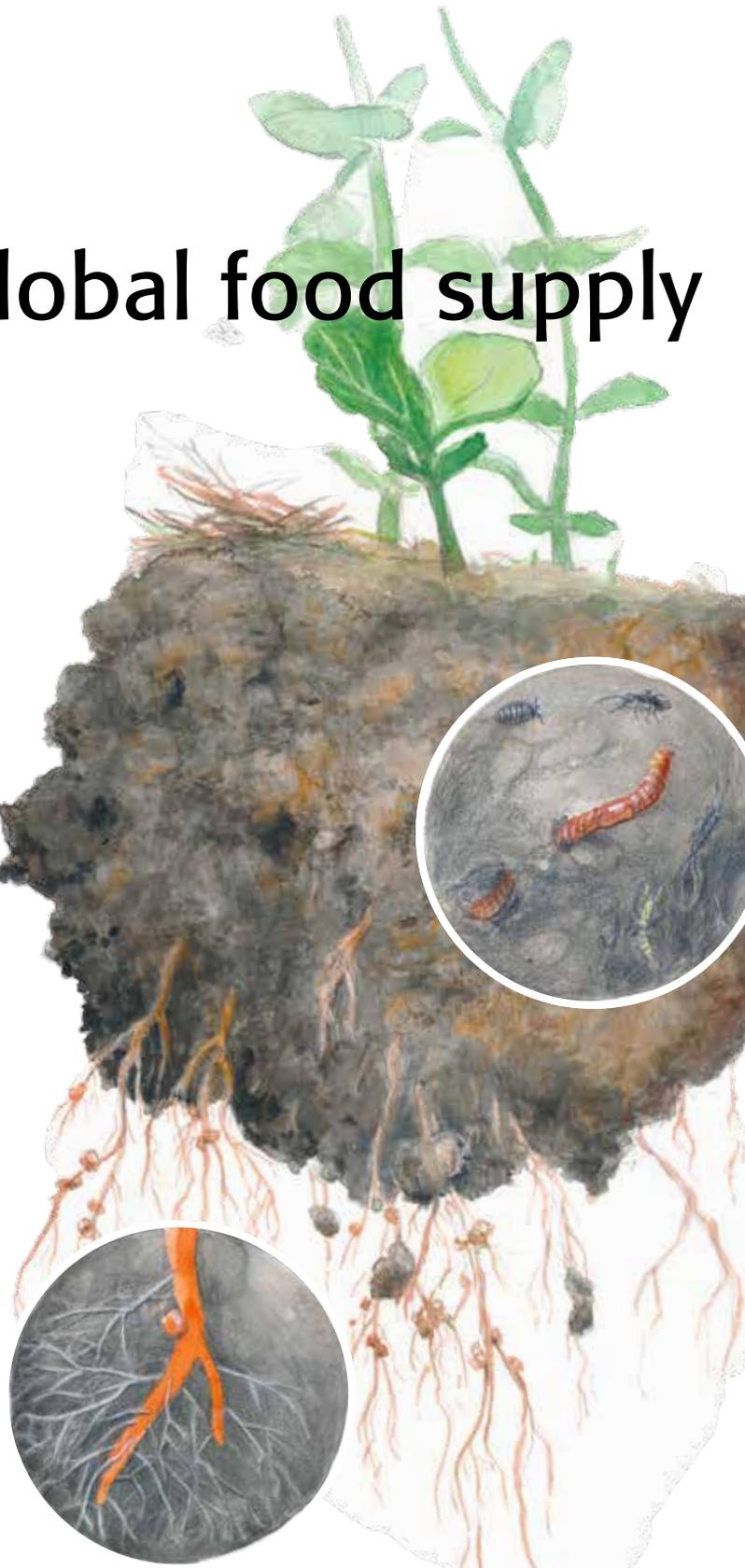
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Funding: European Union (EU): Biofactor

**Recycled phosphorus fertilizers** produced from organic waste or sewage sludge using various processing technologies are often more effective while also having less of an environmental impact than rock phosphate, FiBL was able to show.

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Funding: FOAG, Commission for Technology and Innovation (CTI), EU through CORE Organic II: Improve-P



**Rhizobacteria and fungi** are being used to develop and test an organic fertilizer with a view to improving the yields obtained by smallholder farmers in India. FiBL's initial results show that this organic fertilizer in combination with pigeon pea can increase finger millet yields by 16 to 48%. Moreover, Basel University demonstrated that thanks to the pigeon peas developing roots up to two metres deep, the finger millet plants were better supplied with water.

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Funding: Swiss Agency for Development and Cooperation (SDC), Indo-Swiss Collaboration in Biotechnology (ISCB), Biofertilizer and Bioirrigation Network (BIOFI)

# means to protect soils

**Reduced tillage** does result in greater weed pressure compared to ploughing. However, a multiannual comparative trial conducted by FiBL has shown an insignificant decline in average yields and yield increases in dry years. Moreover, reduced tillage resulted in increased soil humus, greater abundances of earthworms and mycorrhizal fungi as well as improved soil structure, while the levels of greenhouse gas emissions were similar.

In contrast to precision trials, field trials conducted on 18 commercial farms showed that reduced tillage resulted in a yield decrease of 8% while overall weed pressure increased. In addition to lower diesel consumption, the benefits of reduced tillage included higher biological soil activity as well as improved soil structure and capillarity, which can result in yield increases primarily in dry years.

Farmers participating in the trial share their experiences with other interested farmers during field visits, machinery demonstrations and through scientific publications and blogs.

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Funding: Coop, FOAG, Software AG Foundation, Stiftung zur Pflege von Mensch, Mitwelt und Erde

**How green manure, compost** and locally adapted tillage systems can improve soil fertility and yields has been shown as part of the Orm4Soil project in Africa, and FertilCrop and Tilman-Org projects in Europe.

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Funding Africa: SDC, Swiss National Science Foundation  
Funding Europe: FOAG, EU through CORE Organic Plus

**Urban garden soils** are often dug and receive fertilizer and pesticide applications. FiBL has shown that their humus rich topsoil layer tends to be less deep and of lower quality than in comparable sites where such disturbances are absent. FiBL is also investigating how such management impacts on below-ground biodiversity, such as the presence of earthworms.

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Funding: Swiss National Science Foundation (Sinergia)

We need our soils to meet the food needs of a growing world population. However, increased yields through intensive farming put soil fertility at risk. We need long-term solutions.

The major pressures exerted on soils worldwide include erosion, compaction, acidification, salination and the loss of soil organic matter. Therefore we must ask what kind of agricultural practices and systems are suited to improving soils and achieving long-term production increases. To this end, FiBL critically analyses practices such as organic agriculture, organic fertilizer applications, crop rotations and minimum tillage systems involving little or no ploughing. Moreover, we are testing applications of microorganisms with a view to yield increases and improved soil fertility.

Results of global literature reviews and our own experiments have shown that organic farming in conjunction with minimum tillage improves key indicators of soil fertility such as organic matter content, microbial biomass, and aggregate stability.

## Long-term yield increases

On average, organic agriculture produces lower yields. No-till farming similarly results in slightly diminished yields at a global level. However, there are strong variations in yield ratios for different crops and climatic regions. The cultivation of legumes and the recycling of crop residues with a view to increased yields are of outstanding significance in this context.

The use of modern biotechnology such as applications of microorganisms also allows for substantial yield increases as a result of more efficient fertilizer uptake. A recent meta-analysis has shown that the potential for yield increases from applications of microorganisms is particularly high in arid and tropical climatic regions. The combination of various improved agricultural practices would therefore appear to be a suitable means of increasing yields while maintaining the soil resource.

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# Farmers are revitalizing nature

Natural diversity is essential when it comes to cutting back on plant protection product use. For efficient and natural food production, it is just as important as fertile soil. The Mit Vielfalt punkten (Scoring with diversity) project is therefore promoting biodiversity on farms.

Agriculture plays a key role in the conservation of wild animal and plant species. The efficacy of agricultural policy measures has been less than adequate thus far. Reversing this trend will require additional effective instruments for extension agents and farmers.

In the scope of the Mit Vielfalt punkten – Bauern beleben die Natur (Scoring with diversity – Farmers revitalizing nature) project (2008 - 2016), FiBL and the Swiss ornithological society Schweizerische Vogelwarte jointly developed, among other things, an indicator species system with over 120 animal and plant species, a scoring system and a handbook.

## Scoring system for estimating biodiversity

Field studies on 133 farms show that the developed scoring system accurately reflects biodiversity performance. A given set of the biodiversity indicators (indicator species) sampled – such as plants, butterflies, grasshoppers and nesting birds – clearly correlates with the score per farm.

The industry associations of the labels reacted quickly: IP-Suisse adopted the scoring system and Bio Suisse improved

the promotion of biodiversity with a list of measures.

Although many farmers show interest in biodiversity, they do not know how to go about enhancing it effectively. The FiBL studies have shown that the willingness of many farmers to commit to biodiversity would be increased considerably through whole farm extension. Compared to farmers without advisory services, farmers who received advisory services establish not only more but also higher quality biodiversity-enhancing plots, feel more appreciated by the general population, and see less of a contradiction between food production and biodiversity enhancement.

## A practical handbook

Another milestone was the publication of the practical handbook *Biodiversität auf dem Landwirtschaftsbetrieb* (Biodiversity on the Farm) for farmers and extension agents. The internet platform [www.agri-biodiv.ch](http://www.agri-biodiv.ch) supplements it with current information and professional videos.

*Sibylle Stöckli and Lukas Pfiffner, agricultural ecologists at the Department of Crop Science FiBL*

*Biodiversity is fundamental for agriculture. Shown in the photo is *Boloria napaea*, an Alpine fritillary.*



# Production without collateral damage

“The spotted-wing drosophila is a new pest and is responsible for large yield losses. FiBL is therefore conducting research in many areas so that we will soon be able to recommend control strategies to farmers. We are testing and developing traps, baits, biological insecticides, repellent aromatics, and adapted production techniques. The collaboration with national and international partners in this project is very rewarding and exciting.”

*Claudia Daniel, FiBL entomologist and organic pest management specialist, on the “Prüfung verschiedener*



*biotauglicher Regulierungsmassnahmen gegen Drosophila suzukii” (Testing of different methods for controlling Drosophila suzukii that are suitable for organic production) project funded by the Swiss Federal Office for Agriculture (FOAG).*

“FiBL is conducting research on natural pest control in apple production. Even certain biological insecticides should be avoided in organic dessert fruit orchards. The emphasis of the ecological upgrading is on multifunctional flower strips, which substantially enhance beneficials



and pollinators. Advisory aids for growing and maintaining the strips and tools for monitoring pests and beneficials will also be developed.”

*Lukas Pfiffner, FiBL agricultural ecologist, on the “EcoOrchard” EU project funded by the EU and the FOAG. Ten other countries are involved in the project.*

“Copper use must decrease. FiBL and the University of Basel have therefore been testing more than 2100 plant and microbial extracts as potential replacements for copper. We have now developed the larch extract ‘laryxine’, as well as other products. A copper replacement should be ready for the market by 2022. But the main pillars of copper reduction will still be resistant cultivars, sustainable plant nutrition, and top-quality seed and plant material.”



*Lucius Tamm, head of the FiBL Crop Science Department, on the copper reduction research project funded by the EU and the Coop Sustainability Fund.*

“Protecting plants from diseases and pests is a challenge. Simply replacing conventional plant protection products with natural ones does not work. FiBL is therefore searching for combinations of growing techniques, climate management, cultivar selection and plant protection treatments that may lead to a solution to the problem of key diseases such as leaf mould on tomato or downy mildew on onion and lamb’s lettuce.”



*Martin Koller, FiBL vegetable, herb and ornamental production specialist, on the “Praxisversuche Biogemüse” (Practical Experiments in Organic Vegetables) project, funded in part by Bio Suisse.*

# Legumes: Good and bad sides

As overseas imports for livestock feed, we need to take a critical look at legumes. However, peas, soybeans, lupines, etc. are worth their weight in gold in crop rotations and in human and animal nutrition. Hence numerous FiBL projects are dedicated to the pod-bearing field crops.

The legumes form a powerful family (Fabaceae or Leguminosae) with unique talents. Growing them makes the soil fertile. Certain legume species contribute as much as 150 kg nitrogen per hectare and per crop cycle to the soil. They accomplish this thanks to a symbiosis with nitrogen-fixing soil bacteria, a unique ability in the plant world.

Another positive feature is their seeds, which are veritable protein, carbohydrate, mineral and vitamin power packs. Legumes such as peas, beans, lentils and soybeans provide all of the essential amino acids that we need to live.

## Soybean excesses in livestock finishing

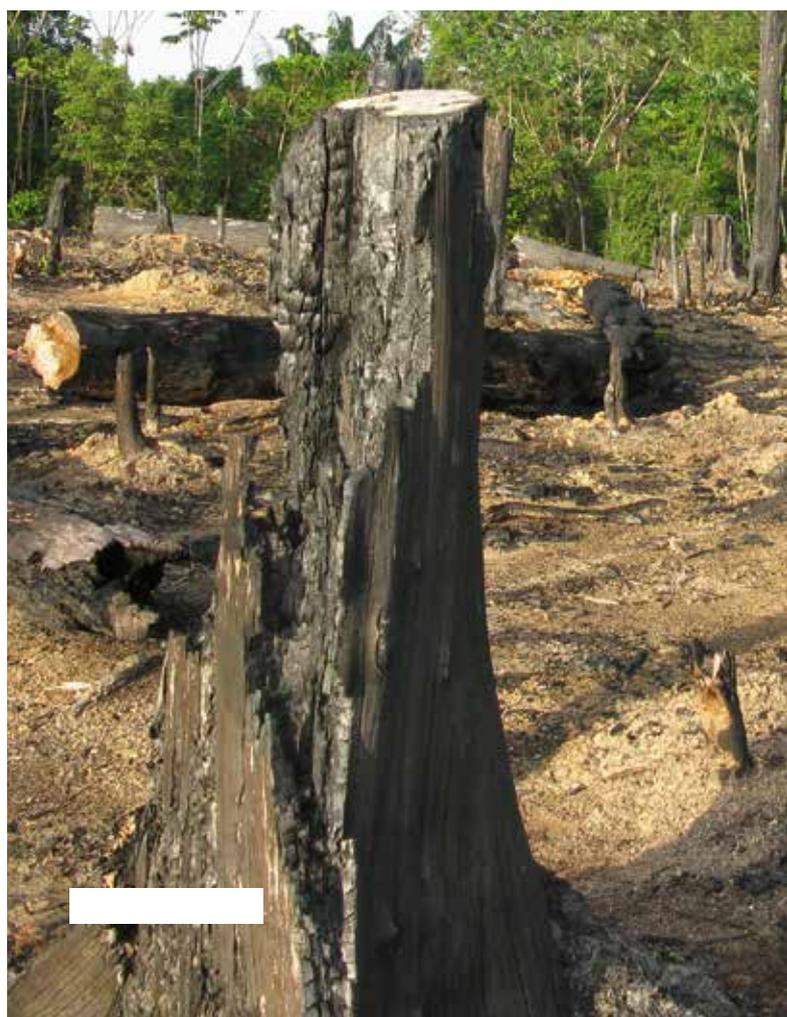
One scion of the legume family has come especially far: the soybean. Because it is the best option for providing high quality protein economically for the feed concentrate industry, its production has increased tremendously. However, genetically-modified cultivars are often grown with many chemical sprays and vast areas of virgin forest are being clear-cut for this purpose.

## Replacing imports with native proteins

Protein-containing feeds are required in pig, chicken, or fish nutrition. Soybeans therefore play a vital role, in Swiss organic feed rations as elsewhere. However, imports come exclusively from strictly-regulated operations meeting the Bio Suisse “Bud” (Knospe) standards. Additionally, Bio Suisse will only allow feed from Europe starting in 2019. FiBL is therefore promoting the production of native legumes through growing trials for improving mechanical weed control, cultivar trials, field days, or the Demonstrationsnetzwerk Erbse/Bohne (Demonstration Network for Peas and Beans). FiBL has also published the dossier entitled Biosoja aus Europa (Organic Soy from Europe) and is promoting soybean production in European countries with good growing conditions such as Hungary, Serbia and Ukraine.

## Innovations for native protein production

Because soybean production for feed is not very profitable in Switzerland, FiBL is searching for – and finding – native protein sources. A study shows that the finishing performance of cockerels remains the same if half of the soy cake is replaced with lucerne. Production techniques for growing seed legumes mixed with cereals are also being developed. For instance, field peas suppress weeds and release nutrients, and the cereal serves



as a trellis for the field peas. What many years of experiments with peas have proven is now being tested in experiments with sweet lupine, an excellent foodstuff and feedstuff. Furthermore, practical experiments are showing that mixed crops are very often more profitable for farmers than monocultures.

FiBL is also working with the maggots of the soldier fly *Hermetia illucens*, which can live on garbage, manure, or green compost and which are a potential source of high quality protein feed for omnivores such as pigs, chickens and fish – as soon as regulations allow.

Photo on left:  
guentermanaus/Fotolia



### Protein reduction in cattle feed

In contrast to omnivores, ruminants such as extensive cattle breeds make out very well without concentrate. Cattle are undemanding grazing animals by nature. In the “Feed no Food” project, FiBL has shown that concentrate consumption in cattle can even be reduced to zero without sacrificing animal health and productivity.

With the aid of feeding and rumination sensors, FiBL researchers are also tracking down the characteristics of efficient “roughage cows” so that they can work towards this

breeding goal. Bio Suisse farmers have already adopted a 10 % concentrate maximum in cattle raising. EU organic farms may feed 40 % and conventional farms as much as they want.

### Food for all? Cutting back meat consumption!

It is true that pen-raised cattle heavily fed with concentrate generate fewer harmful emissions per kilogram of meat than pastured cattle. According to a widely-held opinion, more concentrate feed should therefore be produced on fields. But this opinion fails to take problematic aspects regarding animal well-being and feed origin into account. In terms of the food security of the global population, a different picture emerges according to the FiBL model calculations commissioned by the Food and Agriculture Organization (FAO) of the United Nations.

The results, which were published in 2015 in *Interface* (the journal of the Royal Society), show that the reduction of concentrate can be a feasible alternative for feeding the world's population in an environmentally friendly manner. If only permanent grassland that is unsuitable for fields is used for livestock feed, considerably more plant-based food can be produced directly for humans. There will thus be more food for all with simultaneous reduction of greenhouse gases. But this only works if animal products in the human diet are reduced by 53 %. Meat, egg and dairy product consumption would therefore have to be cut by half.

### Regional legumes are getting a boost

If animal products are to be cut back, then there must be more beans, lentils, or peas on the menu. Such a trend is already in place; what is needed now are producers, processors and dealers. The FiBL project Bio Speisesoja Schweiz (Organic Edible Soybean Switzerland) sponsored by the Coop Sustainability Fund and Bio Suisse is addressing this. Soybean production, which does not require any fertilizer, has much potential in Switzerland. Switzerland's organic edible soybean sector – from breeding and extension services to product development – thus needs to be strengthened so that greater amounts of high quality organic products from locally grown soybeans end up on the dinner plate. This is also an opportunity for the maligned legume to show its best side.

*Franziska Hämmerli, Communication FiBL*

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[www.fibl.org](http://www.fibl.org) > Themen > Hülsenfrüchte

# The organic barometer

Trends in demand change continually. The organic barometer (Biobarometer) takes the pulse of consumers and shows what motivates them. This highlights areas in which wholesalers, retailers and organic associations should make improvements.

The organic barometer is a Switzerland-wide consumer study first conducted in 2015. Its aim is to show how trends in demand change over time, to find out who buys organic food and to identify the aspects motivating these consumers to buy organic foods, thus allowing the organic sector to react with targeted communication to ever-changing trends in demand.

Of the 608 consumers who participated in the study, 11 % already purchase organic products very frequently while 28 % do so frequently and 43 % only occasionally. Moreover, all groups indicated that they intend to buy more organic products in future. As the most significant purchasing motives for buying organic products the respondents indicated “Avoiding pesticide residues in foods”, “Contribution to environmental protection” as well as “Natural production /fewer additives and processing aids”. Overall, motives related to the common good, such as contributing to biodiversity and animal welfare as well as supporting producers, were named ahead of nutritional motives. Especially consumers who very frequently buy organic products have internalized the positive impacts of

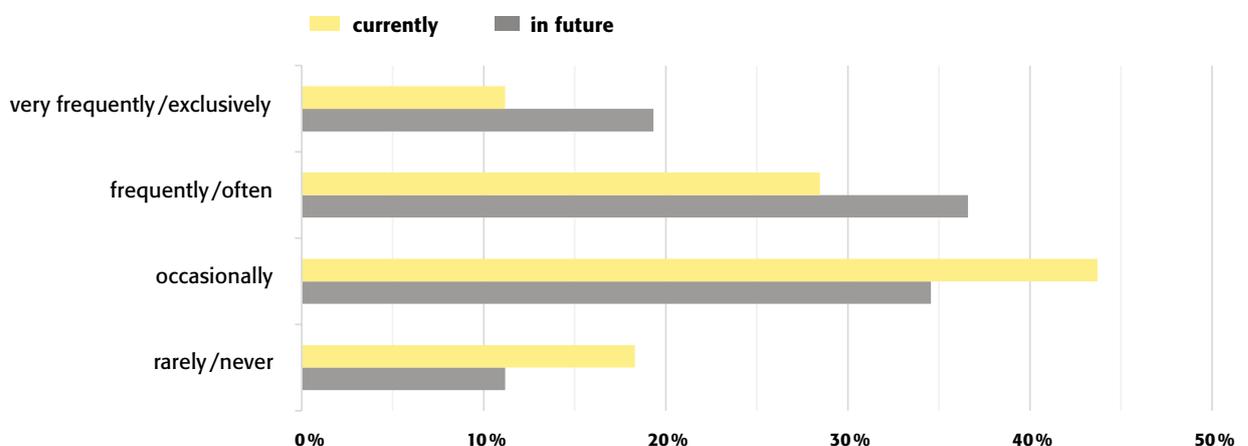
sustainable consumption. For the occasional organic consumers to become more aware of this issue, the products’ added value should be made more visible. This is an area where the wholesalers and associations need to step up and even more clearly communicate crucial aspects of organic agriculture.

*Hanna Stolz, Consumer Researcher FiBL*

## When do consumers in China trust organic food?

China has seen many food scandals. What do consumers in China put their trust in? As part of the “Food Integrity” project, the European Union commissioned FiBL to investigate this question. A study performed as part of the project, which also involved a purchasing experiment, has shown that a governmental organic logo in particular can contribute to improving consumer trust in food. This is particularly true for consumers who at least once had previously purchased fraudulent products.

## In your own estimation, how often do you purchase organic food?



All groups plan on buying more organic products in future. A total of 608 consumers were surveyed.

# Pro crop plant diversity

Over recent decades, the diversity of crop plant species and cultivars in cultivation has declined considerably. FiBL is conducting two European research projects aimed at bringing back this diversity to field and fork.

Crop plant diversity is slowly increasing again and is gradually reaching the markets, the catering sector and the retail trade thanks to consumer trends such as “regional origin”, “tradition” and “distinct flavour”.

But this cropland diversity would have largely been lost today if it had not been for conservation networks such as ProSpecieRara in Switzerland, Arche Noah in Austria, Rete Semi Rurali in Italy, Réseau Semences Paysannes in France and Red Andaluza de Semillas in Spain. These organizations not only maintained cropland diversity in gardens and on farms but also advanced it by way of selection based on horticultural and agricultural criteria. These networks are at the heart of the “Diversifood” project which is supported under the “Horizon 2020” EU programme. As part of the Diversifood programme, farmers in cooperation with researchers from all over Europe maintain and breed old species and cultivars. Additionally, breeding efforts are underway for new site-adapted cultivars of cereals, legumes and vegetables. At FiBL, the focus is on the development of a disease-resistant lupine variety. To this end, promising breeding lines are being identified and crossed. Moreover, Sativa-Rheinau AG is con-

ducting field tests of the suitability of open-pollinated, i.e. true-breeding broccoli varieties. Additionally, FiBL investigates what kind of strategies can be used to communicate this quality and diversity. A Europe-wide survey of different stakeholders has shown that the most important instruments in consumer communication at present are product labels, homepages and Facebook as well as field days and farm visits. In contrast, the potential of Twitter or communication at the place of sale, e.g. with flyers, are hardly being used.

*Bernadette Oehen, Project leader FiBL*

## There is now a market for new organically bred varieties

Newly bred varieties of rye, oats or spelt are not lost on consumers who place particular emphasis on dietary tolerance, environmentally friendly production and distinct flavour, as was shown by FiBL as part of the EU project on “HealthyMinorCereals” which assesses the market potential of new cereal varieties.

*“A steeper leaf position simplifies hoeing and protects the broccoli inflorescence.” At a FiBL cultivation trial with open-pollinated broccoli varieties, Fadi Kanso, organic breeder at Sativa Rheinau AG, explains breeding goals with Laura Cerri, horticulturalist at the Agrico cooperative.*



# We highly value animals and the

We must ensure the well-being of our animals and raise them in an environmentally sound manner. FiBL is working on an all-in-one approach to animal health, truly animal-appropriate husbandry and ecological sustainability.

Livestock raising must measure up to ethical and ecological benchmarks in a particular way. In this area, we have a great responsibility, to which organic agriculture is committed.

## Well-being and dignity for animals

In the sensory and psychological experience spectra of the vertebrates, we perceive a close kinship to our own inner workings and can therefore know what it means to limit animals in terms of their behavioural and experience options. From this flows the ethical obligation. We are therefore intensively researching topics pertaining to animal health, animal behaviour and species-appropriate husbandry and feeding systems. The avoidance of stress, the handling of animals that have to be slaughtered in an ethically responsible manner, and also the active creation of diverse positive experiences (for example in feeding or social behaviour) are ethical aspects on which we focus directly. Among other things, phytotherapy and the biological control of parasites are focal points in our animal health work.

## Solutions for ecological livestock farming

The ecological challenges arise from the high nutritional requirements of livestock, which even in organic agriculture far exceed the regional capacities in Switzerland and in Europe. We must therefore find solutions, not only for the sustainable regional production of feedstuffs, but also for the development of less demanding systems in livestock farming. This not only includes breeding efforts, but also the promotion of grassland-based production in the case of ruminants. The latter has considerable potential, especially in Switzerland. The Department of Livestock Sciences is dedicated to these tasks.

*Florian Leiber, Head of the Livestock Sciences Department FiBL  
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## Chickens with brothers

Cockerel chicks of hybrid layers are killed right after hatching at the present time. In finishing trials, FiBL has now been able to show that laying hybrid cockerels have good meat qualities. However, in comparison with broiler hybrids they require a longer finishing period and about three kilograms more feed per kilogram of dressed meat.

Sponsors: Fondation Sur-la-Croix, Mühle Rytz

## For healthy pigs

Improvement of Animal Health and Well-being in Organic Pig Production is a handbook for livestock farmers that FiBL published in 2015. It is a practice-oriented outcome of the international research project ProPig. The first edition of 2650 copies in four languages will be sold out shortly.

Sponsor: Swiss Federal Office for Agriculture (FOAG)

## Slaughterhouse: stress reduction

Unfamiliar noises and odours, and also strangers (cattle and human) are stress factors for cattle at the slaughterhouse. Measuring these factors and reducing them in collaboration with slaughterhouse personnel are the goals of this project.

Sponsor: Edith Maryon Stiftung

# environment



## Worms in sheep

FiBL has shown that by feeding sainfoin to sheep, stomach worm numbers can be reduced by ca. 25% and stomach worm oviposition by half. However, this entails considerable effort and expense. FiBL is therefore investigating rational ways of integrating sainfoin in sheep production.

Main sponsors: FOAG, Cantons of Graubünden, Valais and Fribourg

## Cow dentist

In research and in industry, hardly any attention has been given to dental problems in dairy cows thus far. In a pilot study, FiBL was able to show that dairy cows often experience dental problems. Further research shall be conducted on dental health in cows.

Sponsor: Stiftung Dreiklang

## Gourmet cows

FiBL has shown that if cows are fed hay separately, in addition to the total mixed ration, they eat for longer periods during the day and for shorter periods during the night and do so with less activity changing, in other words more calmly. Eating and ruminating times are longer with more mature than with less mature fodder. We are now studying how the animals adapt their behaviour to fodder and how this is correlated with health.

Sponsors: FOAG, Fondation Sur-la Croix, Bio Suisse

## On-pasture slaughtering

To avoid stress factors such as transport, unfamiliar environment, and strangers of their own kind at the slaughterhouse, FiBL and an innovative farmer have made it possible to slaughter cattle directly on the farm and process them in the slaughterhouse afterwards. FiBL has shown that the stress factors detectable in the blood are thus minimized.

Sponsor: Stiftung Vier Pfoten

## Less antibiotic

The Kometian association offers a 24-hour telephone advisory service on complementary medicine, on-farm advice and courses to livestock farmers. According to a FiBL study, farms were thus able to reduce the number of antibiotic treatments by a third in the first year.

Sponsors: BLW, Kometian, FiBL



*Not only organic chickens should be spared beak-clipping. The Centre of Excellence in Animal Welfare helps to achieve this.*

## New pathways towards greater animal welfare

The performance of painful procedures on livestock is frowned upon and is prohibited in organic farming. In order to support farmers, including conventional farmers, in their implementation of ethologically sound practices, the Landesbetrieb Landwirtschaft Hessen (LLH, a public sector vocational training and advisory body of the German state of Hesse) and FiBL have jointly established a Centre of Excellence in Animal Welfare.

Practices such as tail-docking in piglets or beak-clipping in chicks, which consumers were largely unaware of only a few years ago, are now the object of general criticism. These painful procedures are now illegal but are often still carried out under a derogation aimed at preventing feather-pecking, tail-biting or cannibalism. Under an initial voluntary agreement between the German Federal Ministry of Food and Agriculture (BMEL) and the farming community, the practice of beak-clipping is to be abandoned in Germany as of 1 January 2017.

Animal welfare has taken on increasingly greater significance in farming and is also being promoted in the policy arena. As part of the “Eine Frage der Haltung – neue Wege für mehr Tierwohl” initiative (A question of management – new pathways towards greater animal welfare), the BMEL charged FiBL Projekte GmbH and the LLH with the establishment of a Centre of Excellence in Animal Welfare (Tierschutz-Kompetenzzentrum). The centre of excellence supports a nationwide network of up to 120 pilot and demonstration farms, both organic and conventional, that implement innovative animal welfare measures.

The first twenty holdings as part of the pilot and demonstration project on animal welfare are dealing with beak-clipping and tail-docking. Other networks are working on “Minimiz-

ing feather-pecking in turkeys for fattening”, “Minimizing mutual suckling in calves” and “Group pens for female breeding rabbits”. The centre’s experts support the holdings in their introduction of optimized management measures and provide ongoing advisory support during the project term. The objective is to transfer scientific knowledge to practitioners with a view to improving animal welfare. The project commenced in 2014 and will run to the end of 2018.

### Tails and beaks are there to stay

Modern measures geared towards greater animal welfare are implemented in cooperation with farmers and advisers. The aim is to refrain from tail-docking and beak-clipping. To this end, measures are taken to improve the animals’ environment: On some holdings, for example, pigs can play with a waterjet or other materials such as balls. Environmental enrichment is provided for all other livestock categories, for example in the form of feed components such as lucerne chaff or roughage such as hay or straw. These measures mitigate boredom-induced behavioural disorders such as tail-biting.

Similar approaches can be taken in layer hen management so as to allow for hens to be kept with unclipped beaks. For example, automatic grain dispensers are used to provide dis-

Photos: Natascha Klinkel, BLE

traction in the poultry house; several times a day at fixed intervals, the dispensers spread cereal grains onto the bedding, giving the chickens the opportunity to exercise their natural scratching and pecking behaviour. Moreover, dust baths allow the chickens to clean their plumage.

The participating farmers have shown great creativity and motivation. “I have embraced the opportunity to participate in the animal welfare project in order to be able to co-design the process”, says a producer from Lower Saxony. Financial support is being provided to the farms, allowing them to implement measures, including capital-intensive measures.

### Talk to one another, learn from each other

In order to facilitate mutual exchange between farmers, they meet on their farms in rotation. The two-day meetings are used to disseminate both theoretical and practical knowledge on livestock management. Once they are back home, the farmers can try out their colleagues’ tips and tricks on their own holdings. For example, at such network meetings farmers practice examining the hens’ plumage with a view to discovering even minor injuries. The poultry farmers know well that only if they are fully aware of their flock’s condition will they be able to take action in crisis situations. There is no all-encompassing concept for remedying difficulties faced in poultry-keeping. Therefore the exchange of experiences is all the more important. Apart from the issue of non-curative procedures, innovative livestock housing measures are being implemented on the holdings. In the “Group pens for lactating sows” network, participants gain experience with this alternative housing system and the necessary associated changes in management. The participants then pass on their knowledge to colleagues.

Experiences generated and gained in the network are also being disseminated outside of the network through communication and knowledge transfer. For example, a pig fattener reported at one of the network meetings: “I now drive to my

weaner producer and take a look at the animals so that I know what I will get delivered”. During these visits with the supplier he also exchanges information about the animals’ feed or the materials provided for enrichment.

### Do good and spread the word

The farmers also pass on their experiences at multiplier events, so as to allow interested colleagues, advisers and veterinarians to assess the changes in housing conditions and, of course, to discuss the measures’ sustainability and their cost. The aim is to reach as many partners in the sector as possible with a view to making progress in animal welfare on as broad a front as possible.

*Natascha Klinkel, Tierschutz-Kompetenzzentrum*

Contact: [natascha.klinkel@lh.hessen.de](mailto:natascha.klinkel@lh.hessen.de)

Information: [www.mud-tierschutz.de](http://www.mud-tierschutz.de)

Under a resolution passed by the German Federal Parliament, the animal welfare pilot and demonstration projects are financially supported by the German Federal Ministry of Food and Agriculture (BMEL). The project-executing agency is the German Federal Office for Agriculture and Food (BLE).

### Why is FiBL involved with the centre of excellence in animal welfare even though the majority of holdings engaging with the centre are under non-organic management?

We make sure that the wide range of experience with animal welfare gained on organic holdings is also being passed on to the non-organic sector. Conversely, especially when it comes to technical issues, organic farms can benefit from their non-organic network partners.

*Robert Hermanowski, Managing Director FiBL Germany*

Layer hen expert Dr. Christiane Keppler shows how to assess a chicken’s plumage and gain insights into the flock’s condition.



Bite marks? Checking pigs’ tails is a routine part of modern management.



# Around the world: Income and

**1**  
**Revenues from agroforestry systems** in Bolivia are double those obtained from monocultures: by-crops such as bananas or plantains more than compensate for the 40% reduction in cocoa yields.

FiBL runs long-term field trials to compare conventional and organic farming systems on three continents: [www.systems-comparison.fibl.org](http://www.systems-comparison.fibl.org)  
 Funding: Swiss Agency for Development and Cooperation (SDC), Liechtenstein Development Service (LED), Coop Sustainability Fund, Biovision Foundation

**2**  
**Organically grown maize crops** in Kenya can achieve similar yields with a high input level as conventionally grown maize crops. Despite higher production costs, a switch to organic brings in higher prices and can thus quadruple profitability – but only in the fifth year after conversion.

**3**  
**Soil fertility** in India is doubled compared with conventional systems if cotton is grown organically or bio-dynamically. Despite lower crop yields, net profit is similar to that obtained in conventional farming.

**4**  
**Citrus fruits** have recently been threatened by a bacterial disease which reduces yields. FiBL is advising farmers in Mexico and Cuba on ways of producing quality organic citrus fruits using biochar and more biodiversity for successful disease management.

Funding: Coop Sustainability Fund

**5**  
**Productive, profitable and sustainable** – can this be said of organic farming in Africa? Yes it can, according to the extensive data collected by FiBL and its local partners on 2000 farms in Kenya, Ghana and Uganda.

[www.proecoafrika.net](http://www.proecoafrika.net)  
 Funding: Mercator Foundation Switzerland, Humanist Institute for Development Cooperation (Hivos), SDC

**6**  
**86% of Colombians** eat “Bocadillo Veleño”, a traditional sweet made from guava, every day. FiBL is assisting local producers to develop a designation of origin for the protection of this national speciality and to establish an industry association.

Funding: State Secretariat for Economic Affairs (SECO), Switzerland

**7**  
**Fly larvae** speed up the conversion of organic waste into valuable compost and are then processed into high-quality fish feed. With this project in Ghana, FiBL is helping to boost smallholder farmers’ incomes while reducing waste, increasing soil fertility and closing nutrient cycles.

Funding: Swiss National Science Foundation (SNF)

**8**  
**In mountain regions**, food security is particularly at risk. IFOAM, Helvetas and FiBL are supporting local service providers who are improving food production and nutrition in Peru and in mountain regions in Africa and Asia.

Funding: SDC



“Organic farming offers solutions for every climate zone. FiBL researchers are working closely with local partners to support high-yield, sustainable and equitable food production. They do so by combining modern technologies with traditional knowledge.”  
*Beate Huber, Head of the International Cooperation Department FiBL*

# food security

9

**Bees are flourishing** in Romania, Europe's honeypot. FiBL is supporting a Competence Centre for organic beekeeping, raising local consumers' awareness of organic honey and providing national and international marketing support.

[www.organicbeekeeping.info](http://www.organicbeekeeping.info)

Funding: Swiss-Romanian Cooperation Programme

10

**Local producers** in Ukraine are receiving support from FiBL to produce high-quality organic foods for the local and international market. The organic sector here offers great potential, especially in regions with fertile black soils.

[www.ukraine.fibl.org](http://www.ukraine.fibl.org)

Funding: SECO

11

**Promoting organic farming** in Chinese regions and organic research in China is the focus of FiBL's cooperation with an institute of the Chinese Academy of Sciences (CAS).

[www.fibl.org/cn](http://www.fibl.org/cn)

12

**Food security** is a major challenge for North Korea, partly because of its long, dry winters. FiBL is supporting the country's people by providing training for a local team to become experts in organic farming and developing a Competence Centre for organic and sustainable farming.

Academy for Agricultural Sciences (AAS) of the Democratic People's Republic of Korea, European Commission, SDC

13

**Sandy and barren soil**, problems with conventional agriculture, and farmers' desire to produce healthy food for their families and communities have sparked great interest in organic agriculture in Abu Dhabi. FiBL is working with local partners to set up a centre for organic agriculture. It also supports the conversion of 100 farms to organic farming and the implementation of marketing strategies.

Funding: Abu Dhabi Farmers' Services Centre (ADFSC)

14

**Nuts and dried fruits** are Turkey's main organic export products – so sustainable quality assurance counts. FiBL is providing quality training for agricultural extension workers and inspectors and building the capacities of the umbrella association, the Ecological Agricultural Organization (ETO), to continue the work after the project ends.

[www.fibl-project-turkey.net](http://www.fibl-project-turkey.net)

Funding: German Federal Ministry of Food and Agriculture (BMEL)



*In the fishbowl method, a small group of participants holds a discussion in the inner circle (the goldfish bowl). The outer circle observes the discussion. Those who so desire can put themselves in the goldfish bowl for a while. A graphic artist reproduces the results in concrete form as a «Graphic Recording».*

## New paths to more knowledge

One of the core skills of FiBL lies in preparing technical information on organic agriculture in a target group-appropriate manner: in seminars, fact sheets, or on web pages. New methods are currently being tried and proven ones are being assessed for efficacy in the scope of a joint project.

The researcher loves details and considers all possibilities, whereas the farmer needs concrete, practice-oriented information. How can the two be combined? Directly through: contact at field days, seminars and conferences, for example, but also indirectly via platforms such as bioaktuell.ch or oekolandbau.de. Research results are often written in technical language and therefore must be “translated”: into the language of journalists in the form of press releases, or into the language of practitioners in the form of fact sheets, guidelines and theme websites.

“Knowledge transfer is often defined as transmission by ‘the informed’ to ‘the uninformed’, for example by experts to laypersons,” Boris Liebl of FiBL Germany realizes. In the project *Auf Augenhöhe: Wissenstransfer zwischen Forschung und Praxis der ökologischen und nachhaltigen Land- und Lebensmittelwirtschaft* (At eye level: Knowledge transfer between research and practice in the organic and sustainable agro-food industry), FiBL is planning to put everything traditional to the test. “We are trying new event formats,” Liebl explains.

An example is a conference for multipliers from the food industry, at which many contemporary formats and methods have

been tried. For instance, graphic artists drew workshop results and the courses of discussions “live” during the event. Formats such as e-learning and videos were discussed in small groups, and the plenary session was enlivened with a fishbowl discussion. The goal is to incorporate the knowledge of the participants: knowledge transfer becomes knowledge communication. “There is usually just as much if not more knowledge in the auditorium as on the stage,” Boris Liebl argues. “Those who keep this in mind change their attitudes,” he goes on to explain. “Participants in the auditorium are not just spoon-fed, and players on the stage no longer see themselves only as teachers.” The traditional lecture situation certainly still has its merits. But other formats such as world café, fishbowl discussion, or open space should also be given a chance. They create situations in which the participants automatically become more involved.

### Precise definition of the target group

FiBL Germany is collaborating with the German Federation of the Organic Food Industry (BÖLW), which coordinates around 300 events a year, in order to make new knowledge

available to farmers, processors and dealers. Such events have to be tailored to the target group. Liebl and his team therefore want to analyse precisely which target groups are in the knowledge field of organic agriculture. Is it enough to address the practitioners, the advisors and the consumers? Or is further differentiation within the target groups required (for example according to the type of the operation, education, or size of the operation in the case of farmers)? A survey of the information need and the information habits of the respective target group should make it more clear exactly what is needed and in which form.

It is also important to be familiar with the different learning styles. “Learners” achieve various rates of success depending upon the way the information is conveyed, other learning conditions being the same. For instance, a great many people are best able to absorb new things through practical experience. Others prefer theoretical models. An analysis of the respective learning style shows what works best for whom.

### Learning to handle knowledge

Sharing knowledge and progressing together: although that sounds very nice, it is often not the case in actual practice. “Experts” are afraid that they will hurt themselves by sharing their knowledge with the “competition”. This is true for individuals as well as organizations. However, key stakeholders can do more to advance organic agriculture by working together. “We support people in organizations who wish to optimize the way knowledge is handled within their ranks,” Boris Liebl explains.

From October 2016 to June 2017, future knowledge managers meet at six workshops, where they discuss challenges, solution-finding approaches and experiences and receive complementary input from experienced trainers. Strengthening the learners is the goal: The participants themselves develop the solutions that fit their respective organization;

the know-how is created in the organization, where it is available for further developments. The many educational activities of FiBL Germany shall be more consolidated in the future: in the form of the Organic Academy (Bio-Akademie). An even greater number of tailored advanced trainings shall be offered jointly with partners from the agro-food industry to the many different target groups.

*Hella Hansen, Communication FiBL*

*Contact: boris.liebl@fibl.org*

### FiBL Germany: Knowledge transfer projects

- Events for extension agents on farm management topics ranging from crop production to animal husbandry
- Workshops on advisory methods
- Qualification measures for artisanal and industrial food production
- Events for farmers on species-appropriate animal husbandry and animal protection
- Animal welfare skill centre (see page 12)
- Pea/bean demonstration network: 75 demo farms throughout Germany show how these two crops can be successfully grown and processed and how this pays off economically ([www.demoneterbo.agrarpraxisforschung.de](http://www.demoneterbo.agrarpraxisforschung.de)).
- Practice days for vocational students on demonstration farms
- “Children’s gardens” in kindergarten: a network of 200 kindergartens throughout Germany that are designing their grounds naturally, with the aim of making the children and the general public more aware of nature and species conservation ([www.kinder-garten.de](http://www.kinder-garten.de)).



*Informal discussions in small groups serve for reflection on what was heard.*



*In small groups, the participants can delve into a topic in more detail and ask experts.*

# FiBL's wide range of services

## FiBL-Shop

More than 400 publications on technical topics related to organic agriculture are available online in the FiBL shop. Most of the documents can be downloaded as PDFs free of charge; printed versions can be ordered for a fee. The publications offered in the FiBL shop provide information on topical issues in organic agriculture, processing and trade. They cover the most recent developments in research and practice and provide information in easily understandable form in up to 13 languages.



[www.shop.fibl.org](http://www.shop.fibl.org)

## Organic seed bureau

Anyone wanting to buy organic seeds or planting material should definitely first take a look at the organicXseeds website. Sellers of organic propagation material in Switzerland and abroad can use this website to publish their currently available stock. Only material not listed there is considered to be unavailable, and this non-availability is a necessary precondition for an application to be filed through this website for the use of undressed non-organic seeds or planting material. This system was developed by FiBL and is also



used in the United Kingdom, Luxembourg, Belgium and Germany; recently it has also come into use in Sweden and Ireland, and additional countries have shown interest. For certain crops, an incentive levy is charged at purchase which equates to the price differential between the non-organic propagation material and its more expensive organic counterpart. In cooperation with actors in the organic sector, the levy is used to fund the advancement of the range of organic seeds and planting material on offer, e.g. through varietal trials. This principle is unique in the world.

[www.organicXseeds.com](http://www.organicXseeds.com)

## Roughage analysis

The quality of grass, hay and other roughage varies from year to year. Especially under conditions of minimized concentrate feeding it is important to be aware of the nutrient contents of stored or fresh roughage feed components. Since the autumn of 2016, FiBL has therefore been offering roughage analyses.



The cost is 50 Swiss Francs per analysis. Interested farmers are advised to get in touch by e-mail so that they can be sent the documents needed for the analysis.

[christophe.notz@fibl.org](mailto:christophe.notz@fibl.org)

## Livestock sciences laboratory

The laboratory team's main responsibilities include parasitological diagnostics and the performance of laboratory tests. The diagnostic spectrum comprises more than twenty established methods for the detection, quantification and characterization of eggs, larvae and adult stages of gastro-intestinal worms and lung worms, liver fluke and coccidia. Moreover, the team carries out laboratory trials for FiBL research projects and processes milk, urine and blood samples.

For the parasite monitoring programme run by the Swiss small ruminant advisory and health service (Schweizerischer Beratungs- und Gesundheitsdienst für Kleinwiederkäuer, BGK), we examine approximately 7000 faecal samples from sheep, goats, deer and South American camelids annually. We further assess the parasite burden of cattle, chickens and horses on behalf of livestock owners and veterinarians.

Additionally, we have developed a variety of testing procedures for the assessment of alternative strategies for controlling internal and external parasites. These methods are used to assess, for example, the effect of plant-based compounds on the development of gastro-intestinal worms or on poultry mites.



[erika.perler@fibl.org](mailto:erika.perler@fibl.org)

## FiBL spin-offs

### Application laboratory

Our laboratory gives us the opportunity to evaluate the effectiveness of biological plant protection products. It allows us to test products such as fungicides or resistance inducers under controlled and standardized conditions



for systems such as grapes/downy mildew, apples/scab, apples/Marssonina-induced leaf drop as well as tomato blight and foliage or tuber blight in potatoes.

For each test, six seedlings are treated either in an automated spray booth, or manually where product quantity is limited. The seedlings are subsequently inoculated with the pathogen and assessed 6 to 21 days later. The laboratory can also test products for rainfastness and UV resistance.

*[hans-jakob.schaerer@fibl.org](mailto:hans-jakob.schaerer@fibl.org)*

### Input lists for Switzerland, Germany and the Netherlands

Organic producers are only allowed to use natural substances. This is true for fertilizers, substrates, products to combat parasites as well as plant protection products, disinfectants, livestock feeds and silage additives.

FiBL publishes “input lists” that list permitted commercial products. The assessment of such products requires a great deal of technical expertise and is therefore conducted by specialized teams at FiBL. For the assessment, manufacturers must submit complete product information to FiBL.

The first input list for Switzerland was published by FiBL



in 1992. Additional lists were added over time: The FiBL list for Germany, the lists for Naturland, Gäa, Demeter Germany and Demeter International as well

as the list for organic processing. The latest ‘family member’ is the list for the Netherlands, which was first published in late 2016.

*[www.betriebsmittelliste.ch](http://www.betriebsmittelliste.ch)*

*[www.betriebsmittelliste.de](http://www.betriebsmittelliste.de)*

*[www.dutchinputlist.fibl.org](http://www.dutchinputlist.fibl.org)*

Turning ground-breaking discoveries into market-ready products – that’s what FiBL spin-offs are working on.

## INVERTEC

### InverTEC GmbH

Insects can be used to turn food waste arising in food production and processing into high-quality biomass. This valuable biomass can be put to a range of agricultural and industrial uses. To this end, InverTec drives forward the development and marketing of knowledge, technologies and processes.

*[christoph.sandrock@fibl.org](mailto:christoph.sandrock@fibl.org)*

## sfs Sustainable Food Systems

### SFS GmbH – Sustainable Food Systems

How sustainable is my operation? Using the FiBL spin-off SFS’s SMART method, sustainability can be assessed and communicated efficiently. The method is suited to agricultural holdings, manufacturing and trade operations as well as to clients in the scientific community and in development cooperation.

*[moritz.teriete@sustainable-food.com](mailto:moritz.teriete@sustainable-food.com)*

*[www.sustainable-food-systems.com](http://www.sustainable-food-systems.com)*

## SUBSTAINTEC

☉ targeted solutions

### SubstainTec GmbH

The scientific results obtained from FiBL’s research are aimed at helping practitioners to solve urgent problems. It is the FiBL spin-off company SubstainTec’s mission to turn promising results of scientific studies into useful and accessible products for practitioners.

*[veronika.maurer@fibl.org](mailto:veronika.maurer@fibl.org)*

# Knowledge transfer via all channels

## FiBL on-screen

Since 2011, FiBL has produced around 200 films, mainly in the form of short videos on topics relating to our organic research and extension services. They can be viewed on our YouTube channel “FiBLFilm”, which has more than 2500 subscribers. With almost 300,000 views, our short documentary about on-farm slaughter, produced for Bioaktuell, is currently our most popular video.

[www.youtube.com](http://www.youtube.com) > *FiBLFilm*



FiBL’s most popular video: “Weideschlachtung – Eine tiergerechte und stressfreie Schlachtmethode” (On-farm slaughter – a stress-free method for animal welfare).



Our most popular video in English is “Mechanical Weed Control in Vegetable Production”.



Our most popular video in French is “Comment détruire un engrais vert?”

## The industry magazine

Bioaktuell is our magazine for the organic production sector – farmers, extension workers, the processing industry and retail. With around 10,000 hits a week, the bioaktuell.ch website completes the package and includes an organic marketplace, an events diary and a wealth of information on all matters organic.

Bioaktuell is issued 10 times a year in German, French (Bioactualités) and Italian (Bioattualità) and has around 8000 subscribers. It is published by FiBL Switzerland and Bio Suisse, the federation of Swiss organic farmers, and celebrated its 25<sup>th</sup> anniversary in 2016.

Subscriptions: [www.bioaktuell.ch](http://www.bioaktuell.ch) > Zeitschrift > Abonnement



## The consumer magazine

The quarterly “Bio-Fibel magazine on organic farming knowledge” produced by FiBL Austria offers a host of information on the organic world, including research, ecology and social policy, and reaches 10,000 readers.

Free subscriptions: [office@freiland.or.at](mailto:office@freiland.or.at)



### Leaflets, factsheets and reports

FiBL's practical and handy advice is in demand: there were at least 80,000 downloads from the online FiBL Shop in 2016. According to the download figures, the most popular publications are the FiBL Inputs List (see page 19), and, currently, the Wild Bees Factsheet.

[www.shop.fibl.org](http://www.shop.fibl.org)



### The organic world in numbers

“The World of Organic Agriculture – Statistics & Emerging Trends” – a yearbook of worldwide organic agricultural statistics – is the Institute’s publication most frequently cited in national and international literature. It is compiled by FiBL and the International Federation of Organic Agriculture Movements “IFOAM – Organics International” and has been published every February since 2000. It provides organic farming statistics from more than 180 countries. The book and associated website track the latest developments in global organic farming. More than 200 professionals across all continents support the collection of the data, which cover topics such as number of farms, land area in organic production (total and by crop), and the volume of international and retail trade in organic products.

The publication is a standard reference work for policy-makers and development organizations worldwide. The Food and Agriculture Organization (FAO), for example, has been utilizing FiBL data for many years for its organic farming database. Many intergovernmental institutions, including the European Parliament and the European Commission, refer to FiBL data in their annual reports and other publications.

[www.organic-world.net](http://www.organic-world.net)

### The experts' magazine

Ökologie & Landbau (Ecology & Agriculture) has around 15,000 readers and appears four times a year. It is aimed at researchers, extension service workers, farmers, policy-makers and food industry professionals. The magazine is produced by the Foundation Ecology & Agriculture (Stiftung Ökologie & Landbau – SÖL) in Germany and published by Oekom Verlag. The partnership with FiBL began in 1997, and every issue includes articles by FiBL authors. Online and print versions are available.

Subscriptions: [www.fibl.org](http://www.fibl.org) > FiBL Schweiz > Beratung, Bildung und Kommunikation > Kommunikation > Zeitschriften



# Extension services and education

## Organic Farming Day and Eco Field Days

In order to support the work of organic farmers and encourage new entrants to the profession, FiBL is involved in the organization of the annual Swiss Organic Farming Day (Bioackerbautag) and the Eco Field Days (Öko-Feldtage) in Germany. In Switzerland, FiBL and its project partners, Bio Suisse and Sativa AG, recently organized the Organic Farming Day for the fifth time; the Strickhof Competence Centre for Food and Agriculture was also intensively involved in 2016. The programme included field visits, with advisors and farmers sharing their expertise on various organic crops, new varieties, mixed cropping, and the latest weed control technology. There was even a solar-powered agricultural weeding robot on show. With its numerous presentations and well-designed framework programme, the event attracted around 1500 visitors, including many from neighbouring countries. It is clearly raising the profile of organic farming: in Switzerland, around 300 farms have registered for conversion to organic in 2017 – including many large-scale operations.

Germany is Europe's largest organic market. In order to give existing and would-be organic farmers a central meeting and information point, FiBL Projekte GmbH hosted Germany's first Eco Field Days in June 2017. The event took place at the Hessische Staatsdomäne Frankenhäusen, the University of Kassel's teaching and test centre. The Eco Field Days were initiated by the Foundation Ecology & Agriculture (Stiftung Ökologie & Landbau – SÖL) and co-organized by the Hesse Ministry of Agriculture. The German Federation of the Organic Food Industry (BÖLW) is patron.

[www.bioackerbautag.ch](http://www.bioackerbautag.ch)  
[www.oeko-feldtage.de](http://www.oeko-feldtage.de)



Photo: Marion Nitsch

## From farmer to farmer: Provieh

Any farmer wishing to expand his or her knowledge of topics such as animal health and welfare, ways of reducing antibiotic use, site-appropriate husbandry or feeding regimes need look no further than Provieh.

To date, more than 60 farm visits have taken place, attracting more than 1500 participants, and 16 working groups have been set up. The project facilitates knowledge sharing on equal terms among farmers and builds links between extension services, researchers and farmers.

Provieh is funded and coordinated by Bio Suisse. FiBL contributes its expertise and advice in partnership with cantonal organic extension services and Bio Suisse regional groups. The latest events can be viewed online.

[www.bio-suisse.ch/de/provieh](http://www.bio-suisse.ch/de/provieh)  
[www.agenda.bioaktuell.ch](http://www.agenda.bioaktuell.ch)



### Online archive for researchers and farmers

Organic Eprints is an international Internet-based archive of electronic documents related to research in organic farming. The archive is open access which means that the full texts are freely available on the Internet. As well as providing access to scientific publications and journal articles, Organic Eprints offers information on projects and programmes in the context of organic farming research. Authors who wish to submit their documents in Organic Eprints are required to create an account. This can be done free of charge. Organic Eprints was set up in 2002 and is operated by the International Centre for Research in Organic Food Systems (ICROFS) in Denmark. FiBL has been involved in the further development of the archive since 2003. In order to facilitate farmers' user-friendly access to practical information around the world, FiBL and its European partners set up the website [www.farmknowledge.org](http://www.farmknowledge.org) in 2016, which utilizes the Organic Eprints database.

*[www.orgprints.org](http://www.orgprints.org)  
<http://farmknowledge.org>*

### FiBL events: A surge in growth

FiBL Switzerland organizes an annual programme of seminars, field visits and conferences on organic farming and sustainability. The programme for 2015/2016 listed 24 events over the year; however, this year's programme (2016/2017) offers a staggering 37 courses. More events will be developed and advertised as the year goes on. Many of these specialised events are run at FiBL Switzerland's site in Frick. In 2015, 25 events took place, each attracting up to 120 participants. These high visitor numbers are stretching the capacities of the conference room, the restaurant and the car park to the limit. But according to our regular visitor surveys, participants don't seem to mind: 49 per cent say they are very satisfied, 50 per cent are satisfied and 1 per cent moderately satisfied with the FiBL courses overall. What's more, over a third say that they are satisfied, and more than 65 per cent are very satisfied, with the quality of event management and speakers.

*Course programme: [www.agenda.bioaktuell.ch](http://www.agenda.bioaktuell.ch)*

### Research project websites

In addition to its own website ([www.fibl.org](http://www.fibl.org)) and the Internet platform for Swiss organic farmers ([www.bioaktuell.ch](http://www.bioaktuell.ch)), FiBL develops a range of websites about its various projects, always with the aim of sharing knowledge in an informative, appealing and user-friendly way.

FiBL is able to deal with every step in the work process: from conceptual development, programming and technical implementation to content management, editing and design.

FiBL-hosted websites:

[www.agri-biodiv.ch](http://www.agri-biodiv.ch)  
[www.bio-wissen.org](http://www.bio-wissen.org)  
[www.eco-ab.org](http://www.eco-ab.org)  
[www.organicdatanetwork.net](http://www.organicdatanetwork.net)  
[www.proecoafrika.net](http://www.proecoafrika.net)  
[www.systems-comparison.fibl.org](http://www.systems-comparison.fibl.org)  
[www.tilman-org.net](http://www.tilman-org.net)



# The experience of what organics really means

The organic sector is growing and becoming ever more “colourful”. That’s a good thing. At the same time, consumers increasingly feel like they are losing track. The “Bio 3.0 – Neue Wege zu mehr Bio” (Organic 3.0 – New Pathways Towards More Organics) project now provides sound knowledge on the organic sector, without resorting to advertising imagery or clichés.

To promote an understanding of organic practice, to mainstream consumer knowledge on the benefits of organic farming, and to adopt innovative approaches to cooperating with consumers – this is what the “Organic 3.0 – New Pathways Towards More Organics” market development project is all about. Its focus is on comprehensive information, communication and knowledge exchange, all of which contribute to a heightened awareness of the benefits of organic agriculture.

Commissioned by the Austrian organic livestock producer association Freiland-Verband, FiBL Austria’s consumer information team is working on the implementation of several sub-projects, three of which will be detailed below, i.e. the tasting fora for conveying organic flavours, promotion of systemic consumption, and the “Culinary School”.

## The taste of Organic 3.0

FiBL Austria conceived and now offers degustation events, called “Tasting\_foren” (tasting fora), an ideal setting for letting consumers experience the diversity, taste and enjoyment of organic food.

These events are not about determining a ranking of individual products or varieties but focus on experiencing the incredible diversity of scents, aromas, colours and shapes of organic foods. Specially prepared “knowledge nibbles” provide technical input while expert food producers offer authentic insights into organic production and processing. In a very casual manner, the “tasting fora” meet a consumer need identified by consumer

trend research, i.e. the connection of “science” with “romance”. Moreover, the degustation events help to network very diverse target groups, from consumers to journalists to practitioners and scientists.

## System(at)ic approach towards more organics

Despite the fact that organic food has been shown to enjoy a high level of societal acceptance, there is still a major gap between consumers’ intentions to purchase organic food and their actual purchasing behaviour. While all good arguments are in favour of organic food, at the instance of making a purchasing decision they appear to get discarded. In a new study, Lothar Greger of FiBL Austria addresses the question as to how and what we must learn in order to overcome this dilemma.

He believes one of the fundamental problems to be the fact that consumers mostly attach singular benefits to organic foods such as lower levels of pollutants or ethologically sound livestock management. However, the unique added value of organic foods, which is comprised of the sum of all benefits, appears to be somewhat elusive. Many characteristics produced by a system cannot be portrayed as part of the systems’ individual components. Rather, they are based on the interactions within the whole. Therefore the “System(at)isch zu mehr Bio” (System(at)ically Towards More Organics) project is rooted in the hypothesis that systemic thinking is one of the key competences of future organic consumers. As active consumers who are able to think systemically they assume responsibility, and call on the policy

*Schoolchildren are getting first-hand experience of organic farming.*





*Lothar Greger of FiBL Austria instils an enthusiasm for systemic consumption in young people.*

arena and the business world to follow suit, to establish a momentum of sustainable consumption. “Together with schoolchildren we want to develop communication tools to foster systemic thinking, using the example of organic foods”, Lothar Greger explains. The aim, he says, is to instil an enthusiasm for holistic thinking in the young generation which will motivate them to be reflective in their purchasing decisions and hopefully turn them into responsible and critical consumers and citizens.

### **Catching on at school: Bio 3.0**

Food and nutrition have been hot topics for years. Nevertheless, there has been little activity on this front in Austrian schools. These issues are being addressed almost exclusively through the lens of health; this is good and important but doesn't go far enough. It would be desirable for the engagement to reach the level of sustainable nutrition incorporating the dimensions of environment, economy and society. The enjoyment and sensuousness of good food is also being ignored far too often. This is where the “Schule des Essens” (Culinary School) comes in.



*The “Tasting\_foren” degustations: more than tomato diversity.*

“Most children do not have a meaningful relationship with food and as a result lack appreciation for it. Our aim is to instil in young people an enthusiasm for food and sustainable nutrition by letting them experiment with food, experience tastes and develop a fascination for good food”, says nutritional scientist and project manager Theres Rathmanner. The primary aim is not to make the children's diet more healthy – that should be an automatic by-product. The aim is to get the pupils to cook, taste and enjoy food together. We want to teach them how, when and where foods grow, what is different about organic food, what signifies quality and how to recognize it, and we want them to learn to cook as a form of culinary heritage.

Following an extensive research phase, the “Culinary School” will now be tested in the field. At a variety of different secondary-level schools, the pupils will work and cook their way towards a holistic and sensuous approach to food. Relevant staff development training will be available to teachers.

*Elisabeth Klingbacher, Communication FiBL  
elisabeth.klingbacher@fibl.org*



# Greater value for regional products

Be it vegetables, meat or fruit – regionality of food products ranks high among consumers, both in the organic and non-organic marketplace. But what exactly does “regional” mean? The “Mehrwert für die Region” (added value for the region) model aims to answer that question.



While “organic” is clearly defined by the EU organic regulation and while the calendar defines seasonality, the term “regionality” is a rather fuzzy one. In contrast to “organic”, there is as yet no common understanding of what exactly constitutes a “regional” product. But despite the fact that there are no unified standards or certified labels, consumer preference for regional foods is stronger than that for organic foods.

## Comprehensive assessment of regional added value

FiBL Austria’s sustainability team developed the model “Mehrwert für die Region” (added value for the region), a scientific model for calculating added value. This is an innovative method for the analysis and assessment of the potential socio-economic added value of foods for a region, from the food’s production to its marketing. “Our model is the first one to analyse food products labelled as being ‘regional’ along the entire value chain”, explain Isabella Gusenbauer and Ruth Bartel-Kratochvil of FiBL Austria.

Moreover, the aim of the model is to demonstrate that a regional product value chain can help to initiate collaborations and generate knowledge beyond the region’s borders and contribute to sustainable development in the region. FiBL’s calculation model was developed in a multistep process; it is a complex model comprising 28 indicators. In its pilot phase, the model was tested using two product groups, i.e. bread and milk. It was discussed and advanced together with experts from all sectors along the value chain as well as with practitioners and scientists. The development of the model was commissioned by “Prüf Nach!” and the Austrian Hofer KG retail chain with a view to providing an environmental sustainability assessment of the “Zurück zum Ursprung” (Back to the source) premium organic label and to comprehensively modelling the potential socio-economic added value of regional food production.

## “Greater added value” can now be used in advertising

FiBL Austria’s sustainability team has now assessed as many as 300 “Zurück zum Ursprung” products. Since mid-2015, the organic products’ calculated added value has been shown on the products’ labels. The packaging of a “Bioheumilch” (organic milk from pasture-based cows fed hay in winter) for example already shows the following slogan: “Fresh Pinzgau mountain farm organic milk from hay-fed cows: 80 % greater added value for the region compared to conventional milk”. A similar slogan appears on organic pumpkins: “Organic pumpkin from the Weinviertel region: 35 % greater added value for the region compared to conventional pumpkin.” The “added value for the region” model can thus contribute to transparently reflecting consumer expectations with respect to foods labelled as being “from the region”.

*Elisabeth Klingbacher, Communication FiBL*

*Contact: [ruth.bartel-kratochvil@fibl.org](mailto:ruth.bartel-kratochvil@fibl.org)*

*Ruth Bartel-Kratochvil, co-developer of FiBL’s “Mehrwert für die Region” model*

# “Not sick” is not healthy enough!

Among the main concerns in organic livestock farming are healthy animals that do not rely on pharmaceuticals. But the concept of “health” is a complex one. It means more than just the absence of illness. FiBL Austria is working on viable solutions for comprehensive animal welfare.



*Gwendolyn Rudolph, FiBL project manager, works together with organic farmers like Martin Ertl on a definition of cattle forage that is suited to the organic sector, the aim being healthy animals thriving on an organic and species-appropriate diet.*

A healthy animal is more than just “not sick”. Health comprises both physical and social well-being. In organic livestock farming, the priority focus is on ensuring animal welfare in accordance with this comprehensive definition. For organic farmers, this is indeed a challenge. Not only does it require great knowledge, but the successful practical implementation of livestock health management in practice is also very demanding.

## Technical support for producers

In the summer of 2015, FiBL Austria was commissioned by the Austrian “Ja! Natürlich” organic brand to develop practice-oriented and innovative solutions for comprehensive animal welfare. Together with Elisabeth Stöger, a veterinarian specialized on organic livestock farming, the FiBL team worked on measures designed to provide technical support to “Ja! Natürlich” farmers. They developed workable checklists as well as a brochure on organic dairy cow health and made these available to the farmers.

## Species-appropriate feeding of cattle

In another component of this project, Reinhard Gessl and Gwendolyn Rudolph, FiBL Austria’s project managers, ad-

ressed the issue of species-appropriate ruminant diets, in light of the fact that cattle feeding has been intensified significantly in recent decades. Fibre-rich forage from permanent grassland has often been replaced by concentrate feeds and maize silage, a trend that should be critically questioned. Therefore, the FiBL team has now developed a concrete proposal for a definition of forage that is suited to the organic sector, including options for responsible utilization of maize silage.

## Domestically grown feed for organic livestock

This project also deals with another challenge that must be addressed by the Austrian organic farming sector: How can we reduce imports of organic protein feeds from abroad and guarantee a sufficient supply of domestically grown organic feed for livestock?

While several different issues need to be addressed as part of the “Ja! Natürlich” project, the project’s intention is clear: Its objective is to safeguard the basic tenets of organic farming and to advance the quality of their implementation and the resultant requirements.

*Elisabeth Klingbacher, Communication FiBL*

*Contact: [gwendolyn.rudolph@fibl.org](mailto:gwendolyn.rudolph@fibl.org)*

# Research and extension in ever greater demand

In 2014 through to 2016, FiBL Switzerland worked on roughly 220 projects per year. Project briefs can be found on our homepage at [www.fibl.org](http://www.fibl.org) under “Projects”.

We were able to raise funding to the amount of CHF 22.3 million in 2014 and CHF 23.5 million in 2015 for these projects. Thanks to the motion tabled by Stefan Müller-Altmetzger in the Swiss Federal Assembly, as of 2014 there has been a significant increase of CHF 2 million to the federal contribution.

FiBL now employs some 180 experts in 140 full-time positions. The employees bring with them a broad range of expertise and include agronomists, veterinarians, environmental scientists, economists, biologists, geographers, physicists, laboratory technicians and a range of practical professions. The institute is also highly sought after as a training facility. Well over one hundred young people work on internships, Bachelor, Master or PhD theses or undertake vocational training at FiBL. The collaboration with numerous colleges and universities is a blessing for FiBL, feeding into our work the latest methods used in environmental sciences, life sciences, medicine and social sciences. The proportion of young scientists and advisers at FiBL is very high and perfectly complements the expertise

held by our long-serving staff, thus creating a good balance of consistency and renewal. For a private, non-profit research institute, the cost of scientific infrastructure such as laboratories, greenhouses, experimental farms and research facilities at commercial farms weighs heavily on the balance sheet. Therefore, over the last fifteen years the proportion of outside capital in the form of mortgages has been high despite the fact that significant amounts are being paid back every year. Following an evaluation by Wüest Partner consultants, the business properties were moderately upvalued, resulting in a one-off creation of equity capital in the 2014 business year.

More than 250 different donors and clients enable FiBL's activities. This can be challenging, as all FiBL employees are called upon to develop new ideas, cast these into good projects, and prove their worth to donors and clients over and over again. However, at the same time, the diversity of institutions, companies and people who finance projects contribute to the stability of work and commitment at FiBL. Therefore, we would like to express our deep gratitude to all our business partners and many individuals who support our work.

*Urs Niggli, Director of FiBL Switzerland*

## Income and expenditure of FiBL Switzerland in 2015 and 2014

in Swiss Francs

	2015	2014
<b>Income</b>		
Research	8'358'083	7'059'028
Federal contribution	6'720'000	6'720'000
Extension, training and communication	2'138'386	2'611'350
International cooperation	4'798'547	4'717'246
Research farm	273'359	44'000
Restaurant, internal services	581'539	583'995
Donations, miscellaneous income	588'811	589'335
<b>Total Income</b>	<b>23'458'725</b>	<b>22'324'954</b>
<b>Expenditure</b>		
Expenditure on personnel	14'167'243	13'271'452
Operational costs		
Materials for trials, consumable laboratory, analytics, project costs	6'640'550	6'674'038
Expenditure on premises, office supplies, other administrative and IT expenditure, advertising	1'573'359	1'626'982
Financial expenses	325'173	261'011
Depreciation	850'653	938'762
<b>Total Expenditure</b>	<b>23'556'978</b>	<b>22'772'245</b>
<b>Extraordinary revenue</b>	<b>125'761</b>	<b>1'320'518</b>
<b>Surplus for the year</b>	<b>27'508</b>	<b>873'227</b>

# Significant events at FiBL Switzerland

## 2016

### December

#### **FiBL office in Brussels**

Many technical and scientific issues related to the regulations governing the organic sector must be addressed at the European level. FiBL experts are already sought after in Brussels and will continue to be at the forefront.

#### **Canton of Aargau supports FiBL with CHF 11 million**

The Executive Council of the Canton of Aargau approves CHF 11 million of Swiss lottery funding for FiBL with a view to strengthening the international competitiveness. FiBL is planning a new CHF 24.5 million campus.

### October

#### **Organics works in the tropics**

A long-term study conducted by FiBL together with local partners in Kenya shows that maize yields in organic production systems are comparable to those of non-organic systems. Moreover, the organic systems are more cost-effective as organic maize attracts higher prices.



### September

#### **“Grüner Faden” organic & fair trade cotton: A “green thread” from seed to T-shirt**

At the “1001 Gemüse & Co” market in Rheinau, which attracts 10,000 visitors, FiBL presents impressive facts on cotton production as well as on cotton growing and FiBL’s cotton seed projects.

### July

#### **Collaboration with the Chinese Academy of Sciences (CAS)**

FiBL has been conducting procurement and advisory projects in China for the past twenty years. A new development is the support for organic farming in Shanghai and other regions in collaboration with the CAS.

### June



#### **5000 visitors at FiBL’s Open Day in Frick**

Visitors to the Open Day can engage all their senses in the spaces around the farm buildings, the winepress and the research centre and experience how FiBL conducts its research for the benefit of healthy and environmentally-friendly food production.

#### **This is how biodiversity works!**

A practical handbook on biodiversity on the farm is published by FiBL and the Sempach Bird Observatory. It shows how the food-producing farming sector can support birds, butterflies and wildflowers. A second edition will be published as early as the autumn of 2016.

#### **Fifth Swiss organic tillage farming day**

The event, which is organized by Bio Suisse, FiBL, Sativa AG and Strickhof, attracts approximately 1500 visitors.



### May

#### **Science Day in China**

The first “TIPI Science Day” is successfully held in Shanghai as part of the “Biofach China 2016” trade fair. The event is organized by FiBL and TIPI, IFOAM - Organics International’s Technology Innovation Platform.

**March**

**Discussion of new genetic engineering techniques**

FiBL Director Urs Niggli gets the discussion going on new GM breeding techniques, testifying to their potential. However, given that such techniques are out of the question for the organic sector, he urgently recommends that investment into classical breeding work be multiplied.

**February**

**Pushing forward with organic research and innovation at the international level – thanks to TIPI**

The fourth Science Day of TIPI takes place at the Biofach trade fair in Nuremberg, Germany. TIPI is the Technology Innovation Platform of the International Federation of Organic Agriculture Movements “IFOAM – Organics International”. FiBL provides considerable support to the establishment of TIPI.

**Evidence of significant differences between organic and non-organic products**

Both organic milk and meat contain around 50% more beneficial omega-3 fatty acids than conventionally produced products. These and other differences are found as part of a review of 263 studies by a team of experts led by Newcastle University with participation from FiBL.



**January**

**First of its kind: Publication of Yearbook containing comprehensive data on sustainability labels**

The Yearbook entitled “The State of Sustainable Markets: Statistics and Emerging Trends 2015” is the first to highlight the significance of various agricultural commodities produced under fourteen major sustainability labels.



**Expanding FiBL’s Romandy offshoot**

The French-speaking part of Switzerland benefits from a strong increase in personnel in Lausanne at the “FiBL Antenne romande”.

**Partnership with the School of Agricultural, Forest and Food Sciences (HAFL)**

Tailor-made sustainability solutions under one roof – this is the aim of the strategic partnership between HAFL, FiBL and the FiBL subsidiary Sustainable Food Systems GmbH (SFS).

**2015**

**December**



**Reduced concentrate feeding**

The non-use of arable land for the production of livestock feed would secure food availability and at the same time lower greenhouse gas emissions and nitrogen surpluses. This is shown in a study conducted by FiBL on behalf of the Food and Agriculture Organization of the United Nations (FAO).

**Increased contribution**

The Swiss Federal Assembly authorizes a CHF 3 million increase to the FiBL service mandate of as of 2016.

**November****First meeting of the national organic research forum at FiBL**

The new national organic research forum (Nationales Bioforschungsforum, NBFF) was established with a view to identifying organic practitioners' research needs and to establish priorities for organic research. The forum is maintained by FiBL, Bio Suisse and Agroscope.

**Increased collaboration with Agroscope**

Successful organic farming requires knowledge from research and practice. It is for this reason that FiBL and Agroscope signed a Memorandum of Understanding on increased collaboration.

**Closed meeting of the three FiBLs in Munich**

Following a twelve-year break, the three FiBLs held their second ever closed meeting, adopting numerous decisions on substantive reorientations and a joint organizational structure.

**October****European Agriculture Ministers and Federal Councillor Johann N. Schneider-Ammann at FiBL**

The Agriculture Ministers are in agreement: Agricultural soils are a non-renewable resource and should not become targets of speculation. Soils are safeguards of our food supply and must be afforded greater protection.

**More organics for the Jura Mountains**

With a view to advancing the development of organic farming, the Foundation for Inter-Jurassic Agriculture, Fondation Rurale Interjurassienne (FRI), signed a partnership agreement with FiBL.

**September****Organic 3.0 – Towards modern sustainable agriculture with organic farming as the leading model**

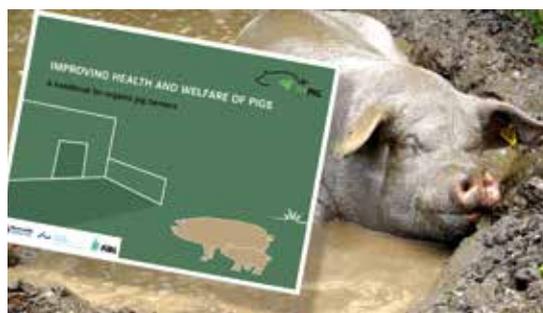
The second draft of the strategy paper on the further development of organic agriculture was published. The group of authors included FiBL Director Urs Niggli, Bio Suisse President Urs Brändli, Bio Suisse CEO Daniel Bärtschi, and the leaders of the Austrian and German organic associations.

**New revised edition: "Why choose organic?"**

Organic agriculture offers many advantages. These have been compiled and backed up with evidence in the completely revised edition of the popular publication entitled "100 Argumente für den Biolandbau" (100 arguments for organic agriculture).

**August****A new aid(e) for organic pig producers**

"Improving health and welfare of pigs" is a practical handbook that helps to address the main problems experienced in organic production.

**The work programme for 2016 to 2019 sets out new thematic fields**

The thematic fields to be addressed as part of the work programme for 2016 to 2019 are the result of strategic considerations. They have been incorporated into FiBL's contract with the Federal Office for Agriculture (FOAG). Projects will be assigned to thematic fields.

**July****FiBL at the Expo Milano: A sustainability award, an exhibition and a symposium**

Together with partners from Western Africa, FiBL was awarded the Expo Milano BSDP Award (Best Sustainable Development Practices on Food Security). FiBL and the city of Basel jointly held a symposium and an exhibition on feeding cities sustainably.

# “What is your aim at FiBL?” Foundation Council



“To use the holistic innovative power of organic farming in order to address burning questions such as how to produce food without causing environmental damage, the issue of food waste or the worldwide destruction of regional farming economies.”

*Martin Ott*  
President of the FiBL Foundation Council, bio-dynamic farmer, Fintan Foundation



“Organic farming is the future. That is why I support FiBL’s international research efforts and their presentation of solutions for the farming sector here in Europe as well as in developing and emerging countries.”

*Dr. Claudia Friedl*  
Vice-President of the FiBL Foundation Council, Member of the National Council, environmental scientist



“My aim is to use my technical expertise and experience to support the FiBL team and also to challenge it through critique so as to ensure that FiBL continues to spearhead organic agriculture.”

*Erol Bilecen*  
CSR Management, Raiffeisen Switzerland



“Organic farming is on a successful course, and deservedly so. Self-critical reflection is important during such phases. Therefore I will ask uncomfortable questions and challenge dogmas in order to ensure that Organic 3.0 becomes more than a catchy title and actually triggers a boost in the sector’s development.”

*Manfred Bötsch*  
Head of QM/Sustainability, Migros-Genossenschafts-Bund



“Many of FiBL’s findings and many of the methods developed by FiBL for the organic sector are now being applied in the farming sector as a whole. Pioneer work continues to be important and Bio Suisse and its members actively support these endeavours!”

*Urs Brändli*  
President of Bio Suisse



“As a farmer and as managing director of the Aargau farmers’ association I will do my utmost to strengthen the facilities at Frick so as to have a modern infrastructure at hand with which to proactively meet future challenges.”

*Ralf Bucher*  
Managing Director Bauernverband Aargau, Member of the Aargau cantonal parliament



“FiBL demonstrably offers intelligent solutions for regenerative agriculture and sustainable food systems. The aim is to ensure that in future more people are aware of this and as a result actively support FiBL.”

*Dr. Peter Felser*  
Lecturer on brand management, adviser, entrepreneur



“The advancement of organic agriculture around the globe is a necessity to which FiBL makes a substantial contribution. One of my key objectives in this regard is to integrate the current and future needs of consumers into these developments.”

*Roland Frefel*  
Head of Coop Category Management Fresh Produce, Member of Board of Directors

# members of FiBL Switzerland reply



"The Foundation Council shapes FiBL's research strategy and ensures that FiBL not 'only' conducts research but also finds, invents, develops and implements solutions."

*Urs Gantner  
President of Bioterra*



"During the final phase of my Foundation Council membership I will work towards FiBL's effective complementarity in the context of Agroscope and advocate – in as far as necessary and feasible – financial support for FiBL from the Canton of Zurich."

*Rolf Gerber  
Head of the Office of Landscape, Agriculture and Environment of the Canton of Zurich*



"To protect, manage and foster diversity in agriculture, be that by way of advice, research or communication."

*Dr. Rolf Gerling  
President of the Gerling Foundation*



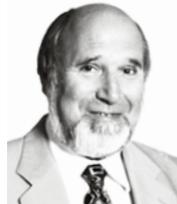
"Organic and integrated production have similar needs when it comes to, for example, resource efficiency or reductions in auxiliary inputs. This is why I work towards the utilization of synergies between the different research institutes."

*Markus Hausammann  
Farmer, President of the Thurgovian Agriculture Association, Member of the National Council*



"If the EU has competent discussion partners in the research community it will provide long-term support for organic agriculture. FiBL Europe is therefore indispensable for the European farming sector."

*Susanna Küffer Heer  
Board member of the Swiss Demeter Association and the Biodynamic Association, Board member of Demeter International e.V., Member of the Agricultural Research Council*



"Of special concern to me are the dissemination of knowledge on organic agriculture and awareness-raising in the population on the necessity of this wholly environmentally-friendly and soil-protecting production method."

*Hans Rudolf Locher  
Journalist, nutritionist*



"My aim is to make FiBL the leading centre of excellence for organic agriculture – credible, scientific and independent."

*Dr. Ulrich Siegrist  
Former Canton of Aargau State Councillor, former National Councillor*

## The team of FiBL Switzerland

### Direction and administration



From left: Christian Wilda, Beat Droll, Urs Niggli (Director), Anne Merz, Erkut Agac, Dominique Michel, Stefanie Leu, Karin Finsterwald, Malgorzata Conder, Erika Bayer, Qiyang Wang-Müller. Missing: Bénédicte Reding and Stefan Williner.

### IT, restaurant and conference centre



Beat Rickenbacher, Erika Bircher-Herzog, Thomas Amsler, Anita Ackermann, Firas Khirallah, Celia Salinas Hohl, Trudi Hunziker-Krebs, Naomi Waziri, Ivanka Stocker, Sibylle Finsterwald, Fritz Kuhn, Immacolata Cafaro, Rolf Rohrer, Iris Hummel. Missing: Roman Friedrich and Ahmo Hajdarpasic.

### Experimental farms



Philip Gallati, Andreas Tuchs Schmid, Christina Ramel, Alfred Schädeli, Bronya Dehlinger, Benjamin Gisin, Vincent Stoll.

### Department of Soil Sciences



Cécile Thonar, Sarah Symanczik, Andreas Fliessbach, Anton Kuhn, Adolphe Munyangabe, Mathimaran Natarajan, Simon Tresch, Else Bünemann-König, Moritz Sauter, Dominica Kundel, Maïke Krauss, Frédéric Perrochet, Hans-Martin Krause, Michael Scheifele, Martina Lori, Paul Mäder. Missing: Andreas Gättinger, Colin Skinner and Fernando Sousa.

### Department of Crop Sciences



Dominique Léville, Shakira Fataar, Henryk Luka, Guendalina Barloggio, Jacques Fuchs, Sibylle Stöckli, Ursina Rathgeb, Hans-Jakob Schärer, Anna Gallmeister, Chloé Raderschall, Beatrice Steinemann, Serge Braun, Fabian Cahenzli, Michael Friedli, Claudia Daniel, Lucius Tamm, Mirjam Bänninger, Bernhard Speiser, Barbara Thürig, Lukas Pfiffner, Joelle Herforth-Rahmé, Mathias Ludwig, Martin Roggli, Thomas Oberhänsli. Missing: Christine Arncken-Karutz, Pierre Hohmann, Monika Messmer and Peter Rey.

## Department of Livestock Sciences



*Johanna Probst, Anet Spengler Neff, Jens Wohlfahrt, Erika Perler, Florian Leiber, Ulrike Biegel, Michael Walkenhorst, Hannah Ayrle, Uwe Krug, Julia Rell, Livia Baumgartner, Steffen Werne, Veronika Maurer, Markus Leubin, Anna Bieber, Daniel Oggier, Stefanie Ammer, Christoph Sandrock. Missing: Zivile Amsler-Kepalaite, Ophélie Christen, Alexandra Kapp Bitter, Ariane Maeschli, Timo Stadtlander and Susann Thüer.*

## Department of Socio-Economic Sciences



*Simon Moakes, Lukas Baumgart, Sylvain Quédeville, Jan Landert, Bennan Tong, Bernadette Oehen, Matthias Meier, Robert Home, Regula Bickel, Vanessa Gabel, Emilia Schmitt, Nadja El Benni, Anja Heidenreich, Johan Blockeel, Adele Ferrari, Matthias Stolze, Lin Bautze. Missing: Judith Hecht, Ingrid Jahrl, Olivia Lewis, Silvia Marton, Heidrun Moschitz, Adrian Müller, Klavdija Ramšak-Noemi, Christian Schader, Otto Schmid, Brian Ssebunya and Hanna Stolz.*

## Department of Extension, Training and Communication



*Matthias Klais, Andreas Häseli, Hansueli Dierauer, Véronique Chevillat, Theresa Rebholz, Kathrin Huber, Christophe Notz, Hélène Bougouin, Jo-Anne Perret, Eric Meili, Robert Obrist, Franz Josef Steiner, Christian Hirschi, Richard Bircher, Kurt Riedi, Gilles Weidmann, Marion Schild, Claudia Schneider, Bernhard Schlatter, Helga Willer, Simone Bissig, Patrick Stefani, Julia Lernoud, Franziska Hämmerli, Andreas Basler, Stefan Schürmann, Res Schmutz. Missing: Thomas Alfvöldi, Daniel Böhler, Raphaël Charles, Maurice Clerc, Barbara Früh, Felix Heckendorn, Martin Koller and Brigitta Maurer.*

## Department of International Cooperation



*Salvador Garibay, David Bautze, Tetiana Sigg, Thomas Bernet, Monika Schneider, Tobias Eisenring, Beate Huber, Noah Adamtey, Gurbir Bhullar, Laura Armengot Martínez, Paul van der Berge, Amritbir Riar, Irene Kadzere, Toralf Richter, Gian Nicolay, Judith Riedel. Missing: Christian Andres and Jiří Urban.*

## FiBL Switzerland's clients and financial backers in 2014/2015

Aarhus Universitet, DK-Aarhus	und Veterinärwesen BLV, Bern	Goetheanum, Dornach
Aberystwyth University, UK-Aberystwyth	Bundesamt für Umwelt (BAFU), Bern	Gut Rheinau, Rheinau
Abu Dhabi Farmers Services Centre, AE-Abu Dhabi	Bundeskasse, DE-Halle	Gut und Gut GmbH, Zurich
Administration des services techniques de l'agriculture (ASTAT), LU-Luxembourg	Bundesministerium, AT-Vienna	GVZ Rossat AG, Otelfingen
Agency for Plant, BG-Sofia	Camvet.ch, Fehraltorf	Hochschule für Agrar-, Forst- und Lebensmittelwirtschaft HAFL, Zollikofen
Arbeitsgruppe naturgemässe Imkerei (AGNI), Schaffhausen	Canton de Vaud, Morges	Hamsail Stiftung, Zurich
Agribiodrôme, FR-Crest	Centre de Recherche, Belvaux	Hauert AG, Grossaffoltern
Agriclean Sarl, FR-Seynod	Centro Inderdipartimentale, IT-Pisa	Hilfswerk der Evangelischen Kirchen Schweiz (HEKS), Zurich
Agriidea, Lausanne	Centre de Formation Professionnelle et de Promotion Agricoles (CFPPA), FR-Rouffach	Helmholtzzentrum, DE-Neuherberg
Agroscope, Bern	Chambre d'agriculture, FR-Saint-Baldoph	Hepia, Geneva
Agroscope, Conthey	Chambre Régionale d'agriculture, FR-Besançon	Herbonis, Augst
Agroscope, Zurich	Chenevard Ph., Meinier	Hiscia, Verein für Krebsforschung, Arlesheim
Agrovision Burgrain AG, Alberswil	Chocolats Halba, Wallisellen	HIVOS, NL-Den Haag
Alnatura, DE-Bickenbach	Coop Genossenschaft, Basel	Hofgut Schönthal, Rheinau
Ammann Werner, Gontenschwil	Coop Fonds für Nachhaltigkeit, Basel	IAK Agrar Consulting GmbH, DE-Leipzig
Amt für Landwirtschaft, Chur	Corporacion Educativa, CR-Fecosa	ICROFS – International Centre for Organic Food Systems, Denmark
Amt für Landwirtschaft, Givisiez	Demeter Bayern, DE-Zolling	IFOAM – Organics International, DE-Bonn
Amt für Landwirtschaft, Pfäffikon	Departement Volkswirtschaft und Inneres, Aarau	Imhofbio, Schwerzenbach
Amt für Landwirtschaft, Solothurn	Desbiolles P. & Ph., Meinier	Industrielle Werke, Basel
Amt für Umwelt und Energie, Basel	Dienststelle für Landwirtschaft, Sion	Inforama Rütli, Zollikofen
Andermatt Biocontrol AG, Grosse Dietwil	Direktion für Entwicklung und Zusammenarbeit (DEZA), Bern	INRA, FR-Paris
ARGE FiBL Türkei, DE-Frankfurt	EcoBois SA, Vétroz	Institut de Biologie, Neuchâtel
Ariza B.V, NL-Helmond	Ecoland Latvia, LV-Rujienas	Institute for Agricultural and Fisheries Research (ILVO), BE-Merelbeke
Asociatia Melikoleg, RO-Sibiu	Edition-LMZ, Zollikofen	Isara, FR-Lyon
Balsinger M., Riggisberg	Ei AG, Sursee	Iscador AG, Arlesheim
Bärner Bio Bure, Burgistein	Eickermühle, DE-Lemgo	Indo-Swiss Collaboration in Biotechnology (ISCB), Lausanne
Barry Callebaut, BE-Lebbeke	Eidgenössisches Institut für Geistiges Eigentum (IGE), Bern	International Trade Centre (ITC), Geneva
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Bildungs- und Beratungszentrum Arenenberg (BBZ), Salenstein	École polytechnique fédérale de Lausanne (EPFL), Lausanne	Käserei im Jurapark, Herznach
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Bundesamt für Energie, Bern		
Bundesamt für Landwirtschaft (BLW), Bern		
Bundesamt für Lebensmittelsicherheit		

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 Stiftung Dreiklang, Basel  
 Stiftung Edith Maryon, Basel

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 Stiftung für eidgenössische Zusammen-  
 arbeit, Solothurn  
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 Behinderung, Stein  
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 Stiftung Sampo, Dornach  
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 Stiftung Temperatio, Kilchberg  
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 und Erde, Münsingen  
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 verband (SZV), Niederönz  
 Schweizerischer Ziegenzucht  
 verband (SZZV), Zollikofen  
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 The Food and Environment Research,  
 UK-Sand Hutton  
 The Progressive Farming Trust,  
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 Vier Pfoten, AT-Vienna  
 Vier Pfoten, Zurich  
 Verband Schweizer Gemüseproduzenten

(VSGP), Bern  
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 und Landschaft (WSL), Birmensdorf  
 World Wide Fund for Nature (WWF), Bern  
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 Wissenschaften (ZHAW), Wädenswil  
 Ziegenzuchtverband, Bern  
 Zürcher Tierschutz, Zurich

## FiBL Switzerland's donors from CHF 500

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**Numerous other donors made  
contributions in support of FiBL.**

## Recruiting fresh minds for organic innovation

From 2014 to 2016, FiBL Switzerland served as a springboard into the future for 55 Bachelor, Master or PhD students, 70 interns and numerous student guests, trainees and visiting scientists.

### Visiting scientists

Iqbal Toufiq  
James Emily  
Meszaros Dora  
Sipos Balaks  
Wille Lukas

### Student guests

Cina Luana  
Dickenmann Jürg  
Ferrari Adele  
Frehner Marco  
Heider Siegfried  
Janssen Ruben  
Klarer Sabine  
Martin Sabrina  
Pereira Pilar

### Trainees

Ramel Christina  
Waziri Naomi

### Internships

Arsonneau Florence  
Bänninger Mirjam  
Barbieri Pietro  
Basler Andreas

Bautze Lin, 27  
Internship,  
International Cooperation

**"What does climate change mean for Africa? I sift the data for answers."**



Benz Martin  
Bischofberger Lea  
Blarer Pascal  
Braun Serge  
Brodmann Nicole  
Brodmann Petra  
Conder Malgorzata  
Dartois Sylvie  
De Goff Ulysse

Destailleur Virginie  
Dubach Felix  
Egger Florian  
Fahrlaender Eva  
Farges Julián  
Fedeli Marius  
Ferrari Gabriele  
Fischer Lena  
Frick Rebekka  
Fritschi Reto  
Grubelnik Stefan  
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Heidenreich Anja  
Henzmann Reto  
Hernández Pico Ana María  
Horvat Andreja  
Hübscher Noëmi  
Hudelist Philipp  
Jenni Elias

Jud Aurelia, 25  
Internship,  
Livestock Sciences

**"I find out what bugs the livestock."**



Jungblut Benjamin  
Kaiser Sandra  
Kaptijn Gerdine  
Käser Markus  
Kiefer Loïc  
Kiener Bettina  
Knaebel Karl  
Kranz Lucia  
Kundel Dominica  
Lèbre Amélie  
Leist Sabrina  
Leutwiler Andy  
Mair Lisa  
Millner Dominik  
Munz Marisa  
Patthey Rachel  
Peppler Carolin

Quander Nele

Raderschall Chloé, 29  
Internship, Crop Sciences



**"I seek the fragrance that repels the blossom beetle."**

Radzikowski Pawel  
Ragazzo Olga-Milena  
Rathgeb Ursina  
Rentsch Deborah  
Schild Marion  
Siegenthaler Maja  
Siegrist Franziska  
Stefani Patrick

Stehle Bernhard, 26  
Internship, Soil Sciences

**"Earthworms do the digging for us, so I give them a close look."**



Strack Timo

Struth Anna, 26  
Internship, Crop Sciences



**"I take templates to the fruit trees, so they only carry what they can bear."**

Willer Jule  
Winzeler Anika  
Wullschleger Valens  
Wunderlin Lena

**Students producing diploma theses**

Bausch Friederike  
Behrenth Gerlinde  
Blattert Simon  
Blockeel Johan  
Brunner Kevin

Danner Hannah, 26  
Master thesis, Socio-Economic Sciences



Engers Christian  
Epple Rolf

Forlin Lukas, 26  
Master thesis, Livestock Sciences



Förster Svenja  
Frick Rebekka  
Gähler Sarina  
Geissler Manon  
Girard Perrine  
Gisler Michelle  
Gonnet Hélène  
Gütlin Ayaka  
Hedrich Tino  
Heider Catrina  
Herzog Michael  
Heubeck Carolyn  
Juretschke Michael  
Kinoshita Shoko  
Kistler Lars

Kundel Dominica, 31  
Master thesis, Soil Sciences

**"I find out how soil bacteria can improve maize growth."**



Leschenne Virginie  
Lewis Olivia  
Lipp Carina  
Lövenich Peter  
Meier Jennifer  
Menold Julia  
Neuser Hanna  
Pärli Rea  
Pluschke Helen  
Posch Julia  
Quander Nele  
Ramseier Livia

Reinacher Kai, 26  
Master thesis, Soil Sciences



Rodriguez Luzia  
Runge Rebecca  
Schenk Isabel  
Schnüriger Marisa  
Sousa Sabrina  
Strack Timo  
Strauss Kristin  
Szuskiewicz Roderick  
Vögtli Irina

von Arb Cäcilia, 26  
Master thesis, Soil Sciences



Walter Christina  
Weiner Yumiko  
Wille Lukas  
Winter Eva  
Wirth Julian  
Wolf Christina  
Zierock Myrtha

**Community services**

Brand Jeremias

Model Jan, 19  
Community service, Crop Sciences



Paonessa Claudio



*FiBL Germany's team in Frankfurt's green belt, in front of the Sondermann statue of the illustrator Bernd Pfarr. From left: Jochen Leopold, Beatrice Tobisch, Hille Gräber, Kerstin Fügner, Ann-Sofie Henryson, Kerstin Spory, Rolf Mäder, Gundula Jahn, Natalie Kleine-Herzbruch, Hella Hansen, Vera Bruder, Robert Hermanowski, Isabell Kreß, Nicole Nezfger, Rainer Ladmann, Susanne Hermanowski, Aida Riera Arrufat, Nadja Kasperczyk, Anila Ahmad, Axel Wirz. Missing: Lukas Baumgart, Lin Bautze, Magdalena Buchwieser, Anja Erhart, Gerd Eymann, Andreas Gattinger, Xenia Gatzert, Boris Liebl, Andreas Möstl, Julia Meier, Marion Röther, Freya Schäfer, Birgit Schreiter, Jasmin Snigula, Lukas Tiedemann, Elena Tzortzaki, Biljana Varzic, Carsten Veller, Simone Windhagen, Frank Wörner, Caroline Zapf.*

## Relaunch at FiBL Germany

Repositioning bears fruit. And note the date for 2017: organic field days!

2016 was a year of change and transition for FiBL Germany. We had to respond to an altered setting in terms of public grants, and to delays in the commencement of major projects. Our internal structures also came under review: Are we set up well to handle upcoming challenges? How can processes be organised more effectively and become even less error-prone? Are we communicating well, both internally and externally? Do we rely on the right networks? And, of course, a key issue: are we setting the right priorities in our work?

The consolidation strategy developed with input from the entire team has already borne the first fruit. Projections for the 2016 operating result are positive, following slight deficits in the association's result for 2014 and 2015. Projected capacity utilisation for 2017 is already high.

The upshot: Through a range of structural measures, we are once again on a robust financial footing. We will concentrate in 2017 on substantive repositioning in order to make ourselves sustainably fit for the future. It will need to be kept in mind in all these activities that we receive no basic funding and that commissions must therefore cover not only personnel expenses but the fixed costs as well.

2016 was marked not only by our repositioning activities but also by two lighthouse projects. For one, the animal welfare centre of competence took up its work. This will put 120 operations in a position to communicate animal welfare measures as pilot farms (see page 12). The second pioneering project is the establishment of the first nationwide organic field days. This will serve to showcase new avenues and innovations in organic agriculture. Exhibitors and organizers present cropping innovations and state-of-the-art livestock husbandry, give machinery presentations, convene technical forums and exhibit novel products and services. Practitioners, extensionists, students, researchers and politicians – in short, everyone with an interest in organic farming – are cordially invited to come to the Hessische Staatsdomäne Frankenhäusen to the organic field days on 21 and 22 June 2017!

*Robert Hermanowski, Director FiBL Germany*

## Income and expenditure of FiBL Germany in 2014 and 2015 (FiBL Deutschland e.V. and FiBL Projekte GmbH)

in Euros

	FiBL Deutschland e.V.		FiBL Projekte GmbH	
	2014	2015	2014	2015
<b>Income</b>				
Research and development	1'196'939	1'395'218		
Other	32'000	2'953	1'797'175	2'083'560
<b>Total income</b>	<b>1'228'939</b>	<b>1'398'171</b>	<b>1'797'175</b>	<b>2'083'560</b>
<b>Expenditure</b>				
Personnel expenses	847'919	873'566	407'266	552'459
Material expenses	384'279	483'225	1'219'753	1'383'884
Project cost				
Premises, offices supplies, other administration expenses, IT and advertising	77'687	65'566	131'224	123'512
Depreciation	5'667	2'161	3'315	5'321
<b>Total expenditure</b>	<b>1'315'552</b>	<b>1'424'518</b>	<b>1'761'558</b>	<b>2'065'176</b>
<b>Operating result</b>	<b>-86'613</b>	<b>-26'347</b>	<b>35'617</b>	<b>18'384</b>

\* FiBL Deutschland e.V. is a non-profit association, FiBL Projekte GmbH takes over the economic activities.

## Clients and financial backers of FiBL Deutschland e.V. in 2015/2016

ARGE FiBL Türkei, Frankfurt am Main	und Verbraucherschutz, Wiesbaden
Bio mit Gesicht GmbH, Frankfurt am Main	International Federation of Organic Agriculture Movements EU
bioC GmbH, Frankfurt am Main	Group, Brussels
Biokreis e.V., Verband für ökologischen Landbau und gesunde Ernährung, Passau	Kompetenzzentrum für Ernährung, Kulmbach
Bioland Beratung GmbH, Mainz	Landwirtschaftskammer Nordrhein-Westfalen, Münster
Bioland e.V., Mainz	Landwirtschaftliche Rentenbank, Frankfurt am Main
Biopark e.V., Güstrow	m&p: public relations GmbH, Bonn
Bund Ökologische Lebensmittelwirtschaft e.V., Berlin	Marktgemeinschaft der Naturland Bauern AG, Hohenkammer
Bundesamt für Naturschutz, Bonn	MGH Gutes aus Hessen GmbH, Friedberg
Bundesanstalt für Landwirtschaft und Ernährung, Bonn	Naturland - Verband für ökologischen Landbau e.V., Gräfelfing
Bundesministerium für Ernährung und Landwirtschaft, Bonn	N-Komm, Agentur für Nachhaltigkeitskommunikation UG, Frankfurt am Main
Bundesministerium für Umwelt, Naturschutz, Bau und Reaktorsicherheit, Berlin	Öko-BeratungsGesellschaft mbH, Hohenkammer
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Deutsche Bundesstiftung Umwelt, Osnabrück	Software AG-Stiftung, Darmstadt
Ecoland e.V., Wolpertshausen	Stiftung Attl Einrichtung für behinderte Menschen, Wasserburg am Inn
ECOVIN Bundesverband Ökologischer Weinbau e.V., Oppenheim	Stiftung Haus Lindenhof, Schwäbisch Gmünd
Europäische Kommission, Brussels	Stiftung Liebenau, Meckenbeuren
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Gesellschaft für Ressourcenschutz mbH, Göttingen	Verbund Ökohöfe e.V., Stadt Wanzenleben-Börde
Hessisches Ministerium für Umwelt, Klimaschutz, Landwirtschaft	Zukunftsstiftung Landwirtschaft, Bochum

# Significant events at FiBL Germany

## 2016

December

### Strategy for 2017 to 2021

The team, board and members discuss and adopts the strategy for 2017 to 2021.

October

### A visit from the Federal Government

At FiBL's invitation, Verena Bentele, Federal Government Commissioner for Matters Relating to Disabled Persons visits the Antoniushof social farm in Fulda.



August

### Professorship

After fifteen years as senior research associate at FiBL Germany, Klaus-Peter Wilbois accepts the Professorship in Organic Plant Production at the Weihenstephan-Triesdorf University of Applied Sciences.

June



### Award for kindergartens

Federal Environment Minister Barbara Hendricks awards the "Kinder-Garten im Kindergarten" (Children's garden at the kindergarten) network the title of "Flagship project of the United Nations Decade on Biodiversity".

April

### Project on regionally sourced livestock feed

Commencement of "Regionalisation of feedingstuff" with the University of Kassel and the Thünen Institute.

February

### Trainee programme on organic agriculture

Award of contract for the coordination and implementation of the trainee programme on organic agriculture.

January

### Network for peas and beans

The "Demonstration network Peas/Beans", abbreviated as DemoNetErBo after its German title, commences in collaboration with associations, research institutions and regional states (Länder).

## 2015

August

### At eye level: Knowledge transfer between research and practice

As part of a project on knowledge transfer led by the German Federation of the Organic Food Industry (BÖLW), we are tasked with the assessment of new methods and formats for the conveyance of knowledge and with reviewing those of long standing as to their effectiveness. For more detailed information see p. 16 and 17.

April

### Carbon dioxide reduction in canteens in Hesse

Commencement of the "CO<sub>2</sub>OK: CO<sub>2</sub>-optimierte GrossKüchen in Hessen" project.

March

### Scientific Conference on Organic Agriculture

FiBL supports the organizers of the event in running the scientific conference in Eberswalde.

January

### Establishment of a service company under the slogan of "Organic + Regional = Optimal"

With partners, FiBL establishes the Regio.Marketing GmbH service company "Bio + Regional = Optimal".

## Obituary

† Hans Hohenester, President of the Board of Naturland, Board Member of BÖLW and Board Member of FiBL Germany left this life on 8 January 2017. We mourn Hans and will forever be grateful for his deep commitment.



# "I am on the Board of FiBL Germany ...



... because close cooperation in research and extension yields major synergies."

*Prof. Dr. Urs Niggli, Director of FiBL Switzerland, Chairman of the Board*



... because this is where the cycle of practice, science and added value can best be supported and closed. The organic farming sector needs this internal cycle for its own advancement and to remain viable into the future."

*Jörg Große-Lochtmann, Managing Director Marktgesellschaft der Naturland Bauern AG*



... because I am sold on the idea of a free organic agriculture institute as a network catalyst for applied research and development."

*Dr. Alexander Gerber, CEO of Demeter e.V.*



... because I value highly the interconnectedness of practice, extension and research. It advances the work on organic agricultural development and thus pilots pathways out of the externalization society."

*Prof. Dr. Jürgen Heß, Head of Department of Organic Farming and Cropping systems at the University of Kassel (Faculty of Organic Agricultural Sciences)*



... because organics is the only quality that attempts to capture that which makes up life, because it begins with agriculture and the remit of agricultural research must extend to the impact exerted on human beings. This is what I work for."

*Wolfgang Gutberlet, Chair of the Supervisory Board of W-E-G Stiftung & Co. KG*



... because FiBL is the first port of call for service mandates and research questions. Moreover, this Board is composed of a bunch of really interesting people and it's great fun to be working with them!"

*Dr. Felix Prinz zu Löwenstein, Chairman of the Board of the German Organic Food Industry Federation, BÖLW*



... because I believe that organic farming needs the impetus brought by independent and inconvenient voices at an unrestricted organic agriculture institute."

*Dr. Robert Hermanowski, Director of FiBL Germany*



... because I'm convinced that organic farming research needs a dedicated strong institute within Germany. There are still many unanswered questions and challenges with regard to the value chain that need to be answered by practitioners, consultants and researchers working together."

*Jan Plagge, President of Bioland*



... because I've been here from the beginning and I'm delighted to see how the institute is thriving and growing and overcoming difficulties. It gives me great pleasure to accompany these developments."

*Beate Huber, Head of Department of International Cooperation, FiBL Switzerland*



... because I have (almost) nothing better or more important to do, which is to say that I am very busy but that to work on the Board (people, functions, processes) is so important to me that I don't mind putting other things aside."

*Prof. Dr. Gerold Rahmann, Director of the Institute for Organic Farming at the Thünen Institute, President of ISOFAR, member of the World Board of IFOAM*



... because new ideas spring from the collaboration with FiBL Germany, ideas that advance the organic farming sector."

*Dr. Uli Zerger, Executive Director of the Foundation Ecology & Agriculture*



*The FiBL Austria Team: Thomas Lindenthal, Rainer Weissheidinger, Isabella Gusenbauer, Andreas Surböck, Elisabeth Klingbacher, Thomas Drapela, Andreas Kranzler, Peter Meindl, Lothar Greger, Ruth Bartel-Kratochvil, Richard Petrasek, Birgit Pelikan, Stefan Hörtenhuber, Gwendolyn Rudolph. Missing: Ferdinand Altnöder, Reinhard Geßl, Theresia Markut, Sieglinde Pollan, Theres Rathmanner, Michaela Theurl.*

## Two successful years at FiBL Austria

As a non-profit organization, FiBL Austria is financed exclusively by the projects and services it provides. 2014 and 2015 were economically positive years.

In the two years of 2014 and 2015, FiBL Austria's turnover for the first time breached the € 1 million mark, with small annual surpluses in both years.

The Austrian Ministry for Agriculture, Forestry, Environment and Water Management has been financing projects in the areas of innovation, research and education since 2005. In the areas of education and on-farm research, the governments of the federal states of Lower Austria and Upper Austria and the Lower Austrian Chamber of Agriculture supported the implementation and advancement of crop production methods as well as research into aspects of organic livestock feeding. Sustainability analyses of foods were made possible by private clients while the public sector financed work on biodiversity and flowering strips for beneficials in organic agriculture. A further private client allowed for the development of a sustainability standard for the ornamental horticulture sector.

We would like to express our gratitude to our clients in the public sector at the federal and Länder levels, in the food retail sector, the private sector, the Chambers of Agriculture and in the organic associations. Our sincere thanks also go to our Swiss and German colleagues for their active support of FiBL Austria.

The following two-page spread shows the organization's accounts and the list of clients and donors.

*Andreas Kranzler, Director FiBL Austria*



*The Biokompetenzzentrum Schlägl centre of excellence for organic farming has been supporting applied research since 2011. FiBL staff members Magdalena Breuer and Christian Stöbich oversee this research work.*

[www.biokompetenzzentrum.at](http://www.biokompetenzzentrum.at)

Photo: Biokompetenzzentrum Schlägl

## Significant events at FiBL Austria

### 2016

**August**

#### **300 products assessed**

Approximately 300 products under the Zurück zum Ursprung ("Back to the source") label are assessed using FiBL's Mehrwert für die Region ("added value for the region") model. See p. 26 for further information.

**July**

#### **Final report on sustainability analysis of agricultural holdings**

Organic agricultural holdings are analysed using the SMART sustainability assessment method. This also results in new opportunities for the sustainable development of these holdings. Moreover, the survey allows for initial comparisons to be made between holdings in the organic tillage farming sector in Austria.

**June**

#### **Launch of the field trip series on "Flower-rich plots – ecological background, establishment and management"**

As part of the field trip series, tillage farmers gain knowledge on the importance of flower-rich plots for biodiversity, nature, and agriculture, they can see different wildflower mixes in practice and are given tips for their cultivation and management.



**January**



#### **Project on graduated grassland farming commences**

Yield-oriented and more extensively managed meadows can sustainably coexist side-by-side by means of "graduated grassland farming". The aim of the three-year project is to test and establish a tiered system of management intensity in grassland farming on pilot farms in Upper Austria. The project will conclude with the production of a manual for the practical implementation of this concept which will be made available to agricultural advisers and interested farm holdings.

### 2015

**September**

#### **Completion of the "The Good Idea" bellaflora sustainability standard for horticulture**

The sustainability standard for the production of ornamental plants and fruit trees and shrubs in Austria is developed in a participatory manner together with producers and experts. At the start of the process, and in order to provide a baseline for the standard, the SMART sustainability assessment method is used to comprehensively analyse the producer operations with a view to all aspects of sustainability.

**August**

#### **Cooperative project with the "Ja! Natürlich!" organic brand commences**

The contribution entitled "'Not sick' is not healthy enough!" on p. 27 describes the project.

**July**

#### **"Organic 3.0 – New Pathways Towards More Organics" market development project commences**

The contribution entitled "The experience of what organics really means" on p. 24 describes the project.

**June**

#### **Launch of the "Bio-Wissensmarkt" (organic knowledge market) event series**

The «Bio-Wissensmarkt» (organic knowledge marketplace) brings together innovative objects signifying the state of scientific research, agricultural production, nutrition trends and cuisine. The aim of this playful exchange of experiences is to enter into a dialogue, obtain first-hand information, elicit knowledge from experts and secrets from organic items and thus to illuminate a wide range of aspects of organic agriculture. At each of the events, about 180 visitors relish the hustle and bustle of this "marketplace".



**March**

#### **EU project OK-Net Arable commences**

A total of 17 partners from 13 European countries collaborate on the three-year "Organic Knowledge Network Arable (OK-Net Arable)" project. The aim of the project is to improve the exchange of innovative and traditional knowledge between farmers, agricultural advisers and researchers within the EU and to foster the activity and quality of organic tillage farming in Europe. FiBL Switzerland and FiBL Germany are project coordinators too.

# “What is your goal as a member of the Board of



“The reasons for FiBL’s success include the fact that we pick up on questions we have articulated together with farmers, jointly work on these questions and implement interactive models of knowledge transfer. In addition, intensive discourse with societal groups outside of the farming sector amplifies the impact FiBL is able to exert for the benefit of organic agriculture. I want to support FiBL’s many different activities in participative knowledge transfer.”

*Prof. Dr. Werner Zollitsch, Chairman of the Board of FiBL Austria, Head of the Division of Livestock Sciences at the University of Natural Resources and Life Sciences, Vienna*



“I want to ensure that organic farming research yields practical solutions and is available to organic farms at home and abroad. Personally I am concerned with the advancement of innovative ideas related to the social component of organic farming.”

*Eva Hieret, Organic farmer*



“My aim at FiBL Austria is to contribute to greater understanding of and knowledge on all aspects of organically produced foods as a foundation both for interested consumers and for farmers to guide their resource-conserving management.”

*Mag. Andreas Kranzler, Director of FiBL Austria*



“I want to continue the long-standing tradition of close cooperation between Austria and Switzerland with regard to eco-social agriculture.”

*Prof. Dr. Urs Niggli, Director of FiBL Switzerland*

## Income and expenditure of FiBL Austria in 2014 and 2015

in Euros

	2014	2015
<b>Income</b>		
Research and innovation	626'455	621'940
Education	319'238	321'280
Other	124'981	130'762
<b>Total income</b>	<b>1'070'674</b>	<b>1'073'982</b>
<b>Expenditure</b>		
Personnel cost	718'624	764'588
Misc. expenditure	38'278	38'178
Project material cost	248'243	202'491
Office expenditure	55'981	59'662
<b>Total expenditure</b>	<b>1'061'126</b>	<b>1'064'919</b>
<b>Result</b>	<b>9'548</b>	<b>9'063</b>

# FiBL Austria?"



"FiBL does valuable work in the area of organic research and quality assurance. I see my own contribution in solid networking with the public agriculture sector. It is of particular importance to me to advance organic agriculture not only in isolation but also in cooperation with conventional farming and to build bridges between the two."

*Martin Preineder, Federal Councillor*



"FiBL's collective knowledge is a treasure trove for all farmers, food producers and consumers alike. I want to contribute to sharing this treasure which serves both the advancement of organic agriculture and the way in which the sector is perceived by traders and consumers."

*Dipl. Ing. Alexandra Pohl, Quality manager at the Landgarten company*



"Organic agriculture is evolving. We need research input in order to find and implement good solutions for practitioners. My aim is to pass back and forth knowledge, questions and experiences at this interface between research and practice."

*Dr. Elisabeth Stöger, Veterinarian*



"To network between the organic farmers' research interests and a professional research facility is a cause that is close to my heart. Through my activities I hope to build stronger connections between practice and research. The establishment of a Styrian regional office of FiBL is one of my long-term objectives."

*Mag. Josef Renner, Director of Bio Ernte Steiermark, the Styrian organic farmers' association*



"Organic agriculture is of major significance to a future in which our grandchildren find a liveable world. I am particularly committed to conveying an understanding of the complex interrelationships between organic farming, processing and trade, and to giving children, adolescents and adults an appreciation of organic food."

*Gerhard Zoubek, Organic farmer*

## FiBL Austria's clients and financial backers

Agrarmarkt Austria Marketing GesmbH, Vienna  
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 Association for Animal Welfare Education (Tierschutz macht Schule), Vienna  
 Austrian Institute for Advanced Rural Training (Ländliches Fortbildungsinstitut Österreich), Vienna  
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 Federal Ministry of Science, Research and Economy, Vienna  
 FiBL Germany, Frankfurt

FiBL Switzerland, Frick  
 Freiland-Verband, Vienna  
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 Ja! Natürlich Naturprodukte Ges. m. b. H., Wiener Neudorf  
 Lower Austrian Chamber of Agriculture, St. Pölten  
 Lower Austrian State Government Offices, St. Pölten  
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 Pädagogische Hochschulen (teacher training colleges) in Vienna and Upper Austria  
 PUR Bioprodukte VertriebsgmbH, Waidhofen/Thaya  
 REWE International Lager & Transport Ges. m. b. H., Wiener Neudorf  
 Team Stronach Akademie, Vienna  
 University of Natural Resources and Life Sciences, Vienna  
 Upper Austrian State Government Offices, Linz  
 Vienna Institute for Economic Development (Wirtschaftsförderungsinstitut, WIFI), Vienna  
 Werner Lampert Beratungsges. m. b. H., Vienna

## Imprint

**Editorial committee:** Franziska Hämmerli, Hella Hansen, Elisabeth Klingbacher

**Copy edited:** Markus Bär, ediFORM

**Translation:** Christopher Hay, Seeheim, Germany

**Layout, illustrations:** Simone Bissig

**Photo credits** FiBL, unless otherwise credited

**Printed by:** Binkert AG, Laufenburg;

on FSC-certified paper; carbon-neutral

**Available from:** Print or PDF available at [www.shop.fibl.org](http://www.shop.fibl.org), order number of English version is 1444

**Languages available:** German, French, English

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### FiBL



FiBL news, project database, vacancies and much more at [www.fibl.org](http://www.fibl.org)

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Videos on research and practice in organic agriculture can be found on the FiBL YouTube channel. [www.youtube.com](http://www.youtube.com) > FiBLFilm



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# Many thanks to all of FiBL's sponsors and patrons!

We are hugely grateful to everyone who makes a donation in support of FiBL. We use your donations and legacies to finance innovative research and extension projects for which funding sources have not yet been found. These finances are also important in providing FiBL with the freedom and independence to address vital issues of major relevance to society.

FiBL has used donor support in recent years to conduct the following projects, among others:

- High-grade proteins for animal feeding are being developed, using organic waste as feedstock material and employing insect larvae in the process.
- A natural preparation for parasite control in sheep and goats has been developed that is entirely safe for the animals and the environment. The preparation will soon be ready for use in the field.
- Especially in order to meet the great demand for alternative veterinary methods in France, Antenne FiBL France has been established.

Donations and legacies to FiBL Switzerland and FiBL Germany are tax deductible. A receipt for donations can be issued on request. If you have any questions, the directors of FiBL Switzerland, Germany and Austria will be pleased to help. Their contact details are on this page and can also be found via our homepage:

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