LIVESEED cross-visit to Germany and Switzerland

Status-quo of organic fruit, berry and vine production in Germany

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Agenda

• Welcome at Frankfurt am Main
• Organic farming in Germany: general overview and important actors
• Short introduction to FiBL and the history of organic research in Europe
• FiBL Germany: current research activities and services for organic farming
• Status-quo of organic fruit, berry and vine production in Germany
• Availability of organic planting material from fruit, berry and vine in the German organic seed database www.organicxseeds.de
Organic farming in Germany

- Green bar: Organic production area (in ha) certified according to organic regulation 834/2007 and 889/2008
- Blue bar: Organic production area (in ha) certified according to organic regulation 834/2007 and 889/2008 and additionally by private organic farming associations (e.g. Bioland, Naturland, Dementer, ...)

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Organic farming in Germany:
Important actors, public funding and research institutions

- Bioland, Naturland, Demeter are the largest organic farming associations in Germany [https://www.bioland.de/], [https://www.naturland.de/en/], [https://www.demeter.de/]
- BÖLW (Bund ökologische Lebensmittelwirtschaft) is the umbrella organisation of organic associations (including farmers, processors, traders, ...) [https://www.boelw.de/]
- BLE is the overall ministry of food and farming and BÖLN is the department on organic and sustainable farming [https://www.bundesprogramm.de/]
- There are 16 regions (Bundesländer) and regional authorities with different funding opportunities for organic farming.
- Public research institute on organic farming Thünen-Institut: [https://www.thuenen.de/en/ol/]
- Several private research institutes on organic farming, such as FiBL, SÖL, Demeter, ...
- Universities where you can study organic farming:
  - University Kassel-Witzenhausen [https://www.uni-kassel.de(fb11agrar/en/home.html]
  - University Giessen [https://www.uni-giessen.de/fbz/fb09/institute/pflbz2/oekolandbau?set_language=de]
  - University Hohenheim [https://www.uni-hohenheim.de/organic-agriculture-and-food-systems-master-studium]
  - University of Applied Sciences Weihenstephan-Triesdorf [https://www.hswt.de/en/studies/degree-programmes/lw/profile.html]
  - University of Applied Sciences Geisenheim [https://www.hs-geisenheim.de/en/studies/prospective-students/studying-in-geisenheim/]
  - University of Applied Sciences Bingen [https://www.th-bingen.de/en]
The Research Institute of Organic Agriculture (FiBL) is one of the world’s leading institutes in the field of organic agriculture. Its locations are situated in Switzerland, Germany, Austria, France and a representation in Brussels (Belgium) through FiBL Europe. FiBL’s strengths lie in its interdisciplinary research, innovations developed jointly with farmers and the food industry, solution-oriented development projects and rapid knowledge transfer from research into practice.
History of organic research

- Pioneers
  - 1920: Organic
  - 1950: Biodynamic Institutes
  - 1970: Private Research Institutes
  - 1980: University Chairs
  - 1990: EU projects
  - 2000: State Research Centers

- Louis Bolk Instituut (NL)
- L.Boltzmann-Institut (A)
- Elm Farm Research Centre (UK)
- FiBL (CH)
- Rodale Institute (USA)
- FiBL (DE)
- NORSØK (NO)

Quelle:
FiBL Germany

• FiBL DE was funded in the year 2000
• FiBL DE office is located at the “Öko-Haus” in Frankfurt
• FiBL Germany is organised as a registered non-profit association and offers scientific expertise on current issues in organic agriculture and food industry.
• FiBL DE employs about 50 people

• FiBL DE conducts interdisciplinary and practice-oriented research together with farmers and experts from science and industry.
• FiBL DE is well-known as networking point and has contacts to all stakeholders along the organic supply chain

(more information at www.fibl.org)
FiBL Germany activities

FiBL DE is offering:

• The organic seed database [www.organicxseeds.com](http://www.organicxseeds.com). OrganicXseeds is an interactive, real-time database tool which can be adapted to national conditions and is implemented as national seed database in: DE, CH, BE, LUX, UK, IRE, DK, SE

• FiBL DE is database manager of the national organic seed database in Germany

• FiBL DE is member of the two national seed expert groups chaired by the ministry of agriculture

• FiBL DE is member of the seed expert group of BÖLW

• FiBL DE is board member of ECO-PB ([www.eco-pb.org](http://www.eco-pb.org))

• FiBL DE offers advisory service to organic breeders
FiBL Germany activities

FiBL DE is offering:

- **Input List for Organic Production in Germany**: Experts check whether inputs meet all requirements for organic farming in Germany. Positively assessed commercial products are published in the Input List.

  Input list for organic agriculture: [https://www.betriebsmittelliste.de/en/home.html](https://www.betriebsmittelliste.de/en/home.html)

- **BioC Certification database**: organic certified entities are listed in this database. So you can check whether your organic supplier is complying with the organic certification requirements. [https://www.bioc.info/](https://www.bioc.info/)

![BioC logo](image-url)
FiBL Germany activities

• Animal Welfare: The current husbandry systems will be assessed together with practical farms and research institutions in application-oriented projects and concepts for improving animal welfare.

• FiBL Academy: The training and further education of junior staff, advisory and control personnel, and practitioners in the organic food industry is realized through the FiBL Academy.
FiBL Germany activities

• The Organic Field Days are a new platform on which farmers can network and obtain comprehensive information about innovations in organic farming. The trade fair offers new products, machine demonstrations, and a lecture and cultural programme.

• 11,000 visitors came to the Öko-Feldtage 2019 and experienced the grand range of services offered by organic farming. A third of the visiting farmers are working in the conventional sector.

• In 2021 the third Öko-Feldtage will take place in Villmar, where the Hessian State Domain Gladbacher Hof is located, the teaching and testing facility of the University of Giessen. For more information, please visit www.oeko-feldtage.de.
FiBL Germany activities

• Rural Areas and Value Chains: projects and services relating to the topic of "developing regional value chains" - from market analyses, networking of stakeholders and the conceptual design of marketing strategies to the active establishment of regional value chains.

• FiBL DE and its partner institutes are offering many more projects and services: check the website www.fibl.org
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<thead>
<tr>
<th>Fruit Type</th>
<th>Area (in hectares)</th>
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<tr>
<td>from total berries: red and white...</td>
<td>107</td>
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<tr>
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<td>257</td>
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<tr>
<td>from total berries: black currants</td>
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<td>from total berries: Aronia berries</td>
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<tr>
<td>Stonefruit others</td>
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<tr>
<td>Plum</td>
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<tr>
<td>Pear</td>
<td>318</td>
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<tr>
<td>Cherry</td>
<td>470</td>
</tr>
<tr>
<td>Apple</td>
<td>6092</td>
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Organic stone fruit production in Germany

Organic stone fruit trees require an investment, which is usually made over a period of at least 15 years. Appropriate care should therefore be taken when planning. The following points should be noted:

• Choice of the variety-rootstock combination
• Determination of the planting distance
• Ordering the tree material: Only an early order in an organic tree nursery guarantees the purchase of well-branched, strong young trees.
• Location selection: The limited possibilities to intervene regulation through plant protection and fertilization give this point a greater importance than in the other fruit growing.
• Soil preparation: A good growth of the trees can only be guaranteed in soil with a good structure. Careful soil preparation with deep loosening and subsequent sowing of green manure, as well as the application of well-rotted composts, make sense depending on the location.
• Choice of support structure: There are now various systems (concrete, galvanized steel, wood with and without impregnation).
• Considerations about the possibilities of promoting beneficial organisms and ecological compensation elements (hedges, flower strips).

https://www.oekolandbau.de/landwirtschaft/pflanze/spezieller-pflanzenbau/obstbau/grundlagen-kern-und-steinobst/
Organic apple production in Germany

- Of all types of fruit, the apple has the greatest importance in terms of area and economy in organic farming. It is mainly marketed through wholesalers, to a lesser extent directly from the farm. Food retailing is becoming increasingly important for marketing, although it requires special structures (cooperatives, producer groups) to ensure continuous delivery.

- Growing on weakly growing substrates (M9) is standard when producing table apples. Various soil cultivation devices are available for the effective weed regulation in the tree strip.

- For fertilization more organic commercial fertilizers are available. In addition to the supply of nutrients, the supply of soil with organic matter plays a very important role. For example, composts from organic manure and green waste are used here.

- One of the most important preventive plant protection measures is the selection of resistant varieties. It is also important to create favorable living conditions for beneficial organisms through flower strips, hedges, nesting aids etc.

- The scab is one of the economically most important diseases. Significant damage can also be caused by the fire blight and in rainy areas the bedside diseases and cause the rain spot disease. Depending on the variety and location, preventive treatments using approved plant treatment products (e.g. copper, network sulfur, lime sulfur, mycosine) are necessary.

- https://www.oekolandbau.de/landwirtschaft/pflanze/spezieller-pflanzenbau/obstbau/aepfel/
Organic apple production in Germany

• The common standard varieties are still "Elstar" and "Jonagold" with their different mutants. Other important varieties are in the south of Germany "Idared", "Boskoop" and the early variety "Piros". In Northern Germany, the "Ingrid Marie" and "Holsteiner Cox" varieties are also successfully grown in organic orchards. Braeburn and Gala have been grown with high importance in recent years. The reason for this lies exclusively in the high demand on the market, since both varieties are hardly suitable for organic cultivation due to their high susceptibility to various pests (scab, cancer, fire blight, spider mites).

• Scab resistant varieties, such as the "Topaz" variety, are becoming increasingly important. Because of its favorable cultivation properties and because it is popular with consumers, this variety has been widely used. Interesting but less well known are the scab resistant early variety "Nela" and the storage variety "Goldrush". The scab resistance of some varieties such as Ariana and Galant could not be maintained, so there is a focus on the breeding and distribution of varieties with multiple resistance genes (polygenetic resistance) such as Admiral.

• The choice of variety is significantly influenced by the marketing route: While a larger variety of varieties is possible in direct marketing companies, one has to limit oneself to the usual market types depending on the wholesale trade.

https://www.oekolandbau.de/landwirtschaft/pflanze/spezieller-pflanzenbau/obstbau/aepfel/
Organic strawberry production in Germany

• Due to the relatively large production risk and the heavy workload, the production costs for organic strawberries are comparatively high. Organic strawberries can also be sold at correspondingly high prices.

• Because of the extraordinary peak work at harvest time, it is important to plan new plantings carefully. The areas should not be too large to begin with. Direct marketing, also with self-picking systems, plays an important role in strawberries. For delivery to wholesalers, early contact with potential customers is crucial.

• Green plants (fresh seedlings) and frigo plants are particularly widespread in organic farming. The latter are young strawberry plants that are not cleared in August, but only in November or December and then stored in a warehouse at minus 1.5 degrees until the planting date. One advantage of frigo plants is that the time of planting can be handled relatively flexibly. Green plants are expensive compared to frigo plants, but less susceptible to harmful organisms.

• Strawberries need well drained soils. Plots with compaction (e.g. plowsoles) or waterlogging are unsuitable for strawberry cultivation.

• Regions in cold valeys should be avoided, however, because late frosts during flowering can lead to major failures. The nutritional needs of strawberries are low compared to field crops. Compared to other types of berries, strawberries have a higher potassium requirement.

• In organic strawberry cultivation is both the annual and the two-year culture spread.

https://www.oekolandbau.de/landwirtschaft/pflanze/spezieller-pflanzenbau/obstbau/erdbeeren/
Organic shrub berry production in Germany

- Organic shrub berries are in demand on the market. Common shrub berries are raspberries, gooseberries and currants, and increasingly cultivated blueberries. The production risk for shrub berries is high, but so is the potential added value.
- Raspberries and blackberries in particular cannot be stored for long. Sluggish sales quickly spoil the goods, which affects the profitability of the crops.
- Setting up a shrub berry plant is labor intensive and involves high costs. Good planning is therefore necessary.
- Newcomers should ask themselves three questions:
  1. **Do shrub berries fit the farm?**
     - Berry cultivation requires a lot of specialist knowledge. The company must have suitable locations for the profitable production of quality berries. Can the peaks be mastered?
  2. **Is there a demand for shrub berries?**
     - Before planting, there should be clarity about marketing opportunities. Is direct marketing or cultivation possible for wholesale?
  3. **Which degree of intensity should be aimed for?**
     - The internal and external quality of table berries are subject to ever increasing demands. This is why professional berry cultivation is becoming more and more expensive, and the pressure to regularly achieve high yields is increasing. Extensively produced berries can also be used for direct marketing or processing.

https://www.oekolandbau.de/landwirtschaft/pflanze/spezieller-pflanzenbau/obstbau/strauchbeeren/
Organic wine production in Germany

- In organic cultivation, the quality of the wine is paramount. By deliberately foregoing maximum yields, the winemaker promotes a self-regulating ecosystem that does not require chemical pesticides and easily soluble nitrogen fertilizers. Compared to conventional viticulture, this involves an increased amount of work, which is reflected in higher product prices.

- After long years of growth, organic wine-growing areas remained at a stable 8,000 hectares in 2016. Organic farming thus accounts for eight percent of the total area under vines.

- The organic area has almost doubled since 2008. According to the organic wine experts Randolf Kauer and Beate Fader, the rapid increase in the organic wine-growing area can essentially be attributed to two factors. On the other hand, there is an increasing demand from the food trade and even the discounters.

- The German organic winegrowers mostly market their wines directly from the winery. There is also a collaboration with specialist retailers and the catering trade. Cooperatives have also entered the organic wine market since the 1990s, and marketing initiatives have also been established. Because the increasing demand of the food retail trade can often not be served by individuals.

- The organic winegrower selects the grape variety primarily based on marketing options, quality aspects and microclimate. There are now also varieties that are very resistant to major fungal diseases. The soil also influences the choice of variety and shapes the wine in a special way.

- Ecovin.de is the organic viticulture association in Germany

https://www.oekolandbau.de/landwirtschaft/pflanze/spezieller-pflanzenbau/weinbau/
Availability of organic planting material of apples in the national seed database www.organicxseeds.de

Apple (spring 2020)
21 different offers (directly available)
19 offers for advance ordering,
382 conservation varieties and small quantities
8 rootstocks

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<th>Anzahl</th>
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Availability of organic planting material of pears in the national seed database www.organicxseeds.de

Pear (spring 2020)
4 different offers (directly available)
0 offers for advance ordering,
187 conservation varieties and small quantities
1 rootstock
Availability of organic planting material of strawberries in the national seed database www.organicxseeds.de

Strawberries (spring 2020)

44 different offers

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Thank you for your attention

Freya Schäfer; freya.Schaefer@fibl.org; FiBL Germany