Research strategy for the development of the organic farming and food sector in Germany

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WORLD: ORGANIC FARMLAND 2015

- **World**: 50.9 Mio ha
- **Australia**: 22.7 Mio ha
- **1% of the world’s farmland is organic**: +360% since 1999

In Oceania there were 22.8 Mio ha, in Europe 12.7 Mio ha, and in Latin America 6.7 Mio ha.

The ten countries with the largest organic agricultural areas represent 74% of the world’s organic agricultural land.

11 countries have 10% or more of their agricultural land under organic management.

In 2015, almost 6.5 million hectares more were reported compared with 2014.

**Distribution of organic agricultural land by region 2015**

- **Australia**
- **Argentina**
- **US**
- **Spain**
- **China**

**Growth of the organic agricultural land 1999-2015**

**Top 5 countries**, where more than 10 percent of the farmland is organic 2015

Source: FiBL survey 2017 www.organic-world.net
The largest single market is the USA followed by the EU (27.1 billion €) and China. By region, North America has the lead (38.5 billion €), followed by Europe (29.8 billion €) and Asia.

The countries with the largest market for organic food are the United States (35.8 billion €), followed by Germany (8.6 billion €), France (5.5 billion €) and China (4.7 billion €).

Switzerland has the highest per capita consumption worldwide, followed by Denmark and Sweden.

The highest shares the organic market of the total market is in Denmark, followed by Switzerland, Luxembourg, Sweden, and Austria.

Source: FiBL survey 2017 www.organic-world.net
Development of the organic retail sales 1999-2015

Source: FiBL surveys 2002-2017
Please note that for the years prior to 2005 data may not be complete.
Germany: Growth of retail sales in Germany 2000-2015

Germany: Growth of organic food and beverages retail sales 2000-2015

Source: FiBL-AMI surveys 2000-2017

Source: FiBL survey 2017 www.organic-world.net
Comparing SDGs to what organic agriculture delivers

- Foster learning and cooperation of farmers
- Foster farmer-owned knowledge instead of external inputs & knowledge
- Strongly reduce negative environmental externalities
- Increase agronomic and ecological resilience
- Use ecosystem functions for productivity increase
- Increase productivity of subsistence & small holder farms
- Create value addition in food chains
- Reduce poverty of farm families
- Stabilize and secure yields of cash crops (and staple foods?)
- Increase global food production by ~ 50 %.

Literature to be found:
Annual spendings for organic research

290 million = 0.6% of total research funding

Innovation in agriculture

Social innovation

Ecological innovation

Technological innovation

Farming systems:

- Organic
- Conventional/IPM

«The most important resource is the human brain, a resource which is pleasantly reproducible»

Johann Norberg, 2016
Goals of the strategy

- Support of the goal of the Federal Government of Germany to expand organic farming up to 20% of the agricultural area by

  - improving the performance and competitiveness of organic food and farming;

  - while increasing the sustainability in terms of the 4 principles of organic farming (health, environment, fairness, care) of the international umbrella organization of the organic world (IFOAM Organics International).
Three approaches to success

- (1) Focusing of research on the most important themes with a high leverage effect;
- (2) the establishment of efficient structures for research and funding;
- (3) more funding for research on organic farming.
Fields of priority for research

- Plant breeding tailored to the need of organic agriculture.

Monika Messmer, FiBL
Fields of priority for research

- autonomous field micro-robots,
- alternative control of fungal diseases and
- management of nutrients and soil fertility.
Fields of priority for research

- In organic livestock production, the most important topics are to meet competing goals in production systems (future production systems—a focus on pigs);
- to ensure optimum supply of essential amino acids in poultry,
- And to foster successful animal production by implementing research-practice networks.
Strengthening the characteristics of organic food systems—processing, retailing, and certification;
gentle processing technologies;
transfer of trustworthiness features (e.g. indicator-based certification, personalized value chains);
research on societal expectations and consumer behaviour.

Fields of priority for research
Funding structures

- Funding structures which are no longer strictly time limited;
- research-practice network offering co-learning between farmers, advisors, and researchers;
- real transdisciplinary funding instruments;
- funding for model regions to facilitate transfer of advancement of research and knowledge;
- federal and state co-funded university chairs.
Lessons learned

- Two year process with many stakeholder involvements;
- Potential is relevant for setting the research agenda and influencing the priority setting:
- A strategy is a paper. Intensive dissemination and conviction work is needed.