Briefing note

Organic agriculture

The background

A sustainable use of resources in connection with an intensification of production is a key requirement for an agriculture that is viable in the future. A production system that emphasises this combination is organic farming. It has been carried out in different forms for over 80 years. The use of synthetic nitrogen fertilizers and pesticides is prohibited in organic farming. Allowed are mineral potassium and phosphorus fertilizers, as well as lime, trace elements and copper and sulphur preparations. Genetically modified organisms are not allowed in the production chain.

Organic agriculture …

… is a 'production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and circuits adapted to local conditions rather than the use of inputs with adverse effects'.

IFOAM (International Federation of Organic Agriculture Movements)

There are numerous standards for organic agriculture. By now, 119 countries have set minimum legal requirements for organic production and processing, about half of these processes have been fully implemented.

This includes for example the EC Eco Basic Regulation of the European Union (EU), NOP (National Organic Program) in the US and JAS (Japan Organic Regulation) in Japan. In addition, there are 121 private standards worldwide.

The use of certified organic farming in the world is still not very common at all. On less than one percent of arable land certified products are grown from organic farming. However, their share has increased steadily in recent years. In the EU, for example, it amounts to almost five percent of the acreage, in Africa, by contrast, to only 0.1 percent. The absolute number of certified organic farmers is at the highest in India with more than 677,000, most of them are smallholders. Across Africa, there are 500,000 certified organic farmers.

In the period from 2000 to 2012, the aggregate worldwide turnover of organic farming has increased from 18 to nearly 64 billion US dollars. However, certified organic agriculture still remains a niche market whose customers live almost exclusively in developed countries. In the EU, the proportion of organic products in the food industry is just under two per cent, in Germany it is less than four percent. In addition to the food market, there are also growing markets for organic raw materials, such as cotton or raw materials for cosmetics. Likewise, in emerging markets a surge in demand is expected in the future.

In developing countries, local markets for certified organic products are usually underdeveloped or non-existent. At the same time, developing countries aspire to export organic products, in particular so-called 'cash crops'.

Besides certified organic agriculture, there are large areas, especially in developing countries, that are farmed traditionally, due to economic constraints,

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without synthetic fertilizers and pesticides. However, many of these farms do not comply with numerous other requirements of organic agriculture, for instance due to a lack of measures to maintain soil fertility.

The debate about the pros and cons of organic farming is often very emotional and ideological. Many organisations take a positive view on organic agriculture. For example, the European Commission considers that organic farming makes a major contribution to environmental protection. The German Council of Environmental Advisors demands therefore enhanced promotion of organic farming. And the German Farmers' Association calls for increased funding to ensure competitiveness, even if it does not believe that organic farming is more sustainable than conventional agriculture. The Food and Agriculture Organization (FAO) awards organic agriculture the optimization of plant, animal and human productivity. Many NGOs see in organic farming a way of increasing yields in financially weak smallholder systems with less use of external resources.

Criticism is especially expressed on the often lower yields which could have an impact on global food security if organic farming should expand. However, the question whether organic farming can feed the world as well as conventional agriculture is discussed controversially by science. Doubts have been raised regarding environmental sustainability because of the partly permitted use of copper and sulphur pesticides and partially further transport routes.

Other points of criticism are the high demands placed on the farmers' knowledge, the relatively high labour input and, in comparison with conventional products, small or not clearly proven health benefits to consumers.

In addition, especially in developing countries, the high cost of inspections and certification is criticised, and the accusation of resistance against technology and progress is often made by the industry.

Our position

In this context, GIZ takes the following positions:

1. **Organic agriculture is a viable long-term production system**

   Its strengths can be found especially in the sustainable use of resources and the environmental friendliness. Organic farming is an important step away from production systems that rely on external inputs, towards an agriculture that adopts an ecosystem approach with a mostly closed nutrient cycle. It promotes agricultural biodiversity and contributes to the preservation of soil and water as well as to climate and animal protection. Abandoning synthetic pesticides also eliminates the health risks that may arise from their use.

2. **Organic agriculture creates jobs and income**

   The promotion of certified organic farming makes sense where the climatic conditions are favourable for agriculture and adequate manpower is available. In addition, market access for high-quality products should be given. In many developing countries, organic agriculture already creates jobs and generates increased incomes and yields. Outlet opportunities will be improved by an increase in demand in the future. In areas with extremely low agricultural potential, however, sustainable extensive approaches are more suitable than organic farming, such as pasture or fallow land instead of arable land. Another possibility in this context is a constant build-up of soil fertility which could also be enhanced by the additional use of commercial fertilizers.

3. **Credible and affordable control systems promote dissemination**

   For the further extension of certified organic agriculture, credible and affordable control systems are essential. They should be based on national legislation and ensure certification by independent third parties. Local standard and certification organisations are especially worthy of support. However, the harmonisation of standards should be encouraged thus reducing trade barriers. The currently high number of standards is confusing for consumers on the one hand and restricts market access for producers on the other hand.

4. **Organic agriculture can be more efficient than conventional agriculture**

   Efficiency is determined by several factors: increased revenues through price premium, cost savings in the means of production, additional costs of labour force and certification as well as possibly lower yields. In addition, country-specific subsidies still need to be taken into account. An economic risk arises when price premiums are eliminated by the emergence of a mass market. Even without access to markets for certified products, the adoption of organic production techniques may be more economical as they often have a more favourable input-output ratio than traditional or conventional methods.

5. **Organic agriculture can contribute to food security**

   Most studies show that yields of organic farming in temperate zones are lower than in conventional agriculture. In developing countries, however, yields may rise significantly when converting a traditional farming system into organic agriculture. Because as a rule, the initial level is lower, so that increases in yield can be achieved through any type of intensification, combined with training and advice. Training and advisory services are crucial to the yield level in all production systems. Another point is that organic farming adapts well to marginal production sites.

   Crop diversification and the use of locally adapted varieties reduce the production risk and improve yield stability and resilience, for example, to weather fluctuations. Diversification also increases food variety, which in turn has a positive effect on food security. Due to the lower cost of external inputs, organic farming is also more adapted to the economic situation of smallholders who are oftentimes less willing to take risks and can also lead to permanent increases in yield in the area of subsistence agriculture.

6. **The innovation potential of organic agriculture is underestimated**

   Both in crop production and in livestock husbandry, research spending is much lower for organic farming than for conventional farming. This suggests that in organic farming, there is still great potential for increases in productivity and efficiency as well as for an increase in sustainability.

Our recommended actions

Especially in developing countries, the potential of organic farming is far from being exhausted. Thanks to the cooperation between various standard systems, synergy effects can be used, a more intensive training of farmers and advisors contributes to production increases. However, new markets and sales channels need to be developed so that organic farmers can be economically successful in the long term. International cooperation can support the partners in the intensification of organic agriculture.

According to GIZ, these are the most important recommended actions:

1. **Strengthening cooperation between standard systems**

   There is a great need for efficient and cost-effective control systems. Participatory Guarantee Systems (PGS) and other forms of group certification with individually developed and well-managed internal control systems provide smallholders with the opportunity to obtain market access either by associating with a producer group or through contract farming for exporters; it should therefore be further enhanced. Synergies between different standard systems should be better utilized, for instance, the cooperation of fair trade with the organic sector. This reduces the number of inspections and may also be useful in terms of market strategy.

2. **Developing new regional markets**

   Existing markets need to expand and new regional markets have to be created for products from organic agriculture. For this purpose, support at the political and institutional level is required, especially in terms of guidelines and controls. Through intensive consumer education in cooperation with the retail market, producers and distributors are supported in the development of marketing channels.

3. **Intensifying training of farmers and advisors**

   To date, organic production methods manuals are underrepresented in most curricula and counselling manuals in developing and emerging countries. Since organic agriculture is knowledge-intensive, there is a great need to catch up with regards to the training of farmers and extension services - particularly in developing countries. Understanding ecosystems and thinking in terms of nutrient cycles are important aspects of this training.


4. Further improving the sustainability of organic agriculture

Agricultural sustainability must be improved in general, also with regards to organic farming. The prevention of environmental degradation must be promoted by the government in order to make organic production methods more competitive. Organic farming is all about reducing dependence on fossil fuels and striving for carbon neutrality. At the same time, the use of copper and sulphur must be decreased. Likewise, the consumption of mineral phosphorus and potassium needs to be minimised in the long term.

5. Promoting research on organic agriculture

More research is required in order to further improve organic production. The focus should be on income and efficiency gains, for instance with regards to labour or nutrient use. This applies in particular to the tropics and subtropics. The targeted use of technological progress in agricultural engineering, breeding and the recycling of nutrients is conducive to this aim.

6. Promoting value chains and private sector integration

The promotion of value chains for organic products can contribute to income growth, job creation, the sustainable management of natural resources, local value added as well as higher food security and quality. Other impacts can be achieved in terms of gender or health (nutrition). In line with the sustainable improvement of productivity, smallholding linkages to local, regional and international agricultural markets must be ensured. Here, the design of cooperation formats with the private sector and the focus on areas downstream the value chain play a key role.

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Published by:
Deutsche Gesellschaft für
Internationale Zusammenarbeit (GIZ) GmbH

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Division Rural Development and Agriculture / June 2015