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Organic agriculture and certification in Eastern Africa

A theoretical analysis with special reference to food
security issues in Tanzania



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Organic agriculture and certification in Eastern Africa

A theoretical analysis with special reference to food security issues in Tanzania

From **Christoph Rosinger**

Organic agriculture is an upcoming sector and at any continent you may consider, the numbers of organic farmers and the area under organic cultivation are rising notably. In almost all European countries, organic farming has been rapidly developing since the beginning of the 1990s (cp. WILLER 2009). In the period from 2000 to 2008, the total area under organic production including the in-conversion areas increased from 4.3 to an estimated 7.6 mio ha, which equals an increase of 7.4% per year (cp. EC 2010).

Whilst certification plays a major role in the Western organic farming system, one must bear in mind that organic agriculture is not just limited to certified organic farms and products but includes all agricultural production systems that use natural processes rather than external inputs to enhance agricultural productivity (cp. MBIHA et al. 2008). This consideration is of special importance when one is dealing with organic farming practices in developing countries. In the rural regions of countries of the Southern hemisphere, organic agriculture „by default“ is still the most wide-spread agricultural practice as many farmers lack market access to modern farming techniques like hybrid seeds, mineral fertilizers or synthetic pesticides. Still, organic agriculture and the interlinked certification has become a more and more important factor in developing countries, as the demand for certified organic products from the South increases in Western countries.

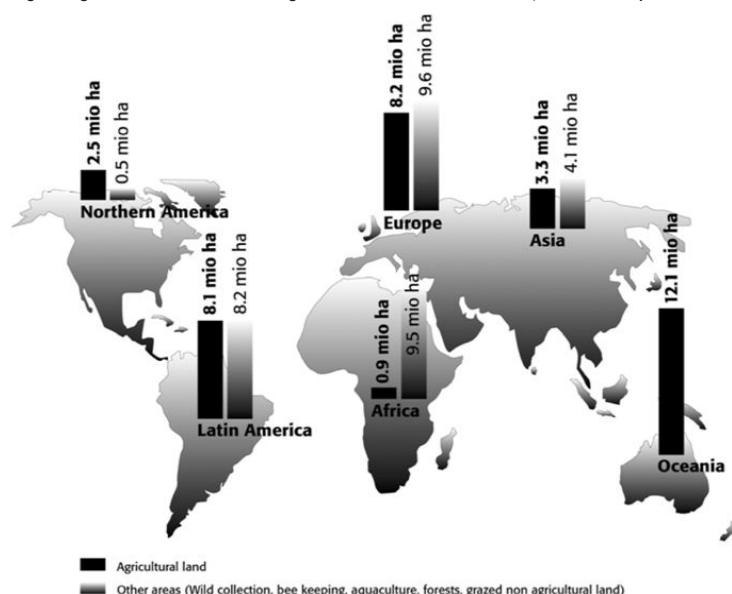
This paper starts with a short overview of the current state of organic agriculture in Africa, whereby the focus will be on organic agriculture and its certification for export purposes. The certification system of this region shall be illustrated at the example of the United Republic of Tanzania. The aim is to analyse the opportunities and threats of organic agriculture and organic certification espe-

cially for smallholder farmers with special regard to food security issues. While certification and the ensuing export of organic products can constitute a new source of income, it can involve the danger of an exaggerated run into an export oriented economy, followed by an increasing dependency to fluctuating world market prices and a decrease of the self-supply rate.

Certified organic agriculture in a global context

The map below should give a first overview of the current situation of certified organic agriculture worldwide. In 2008, 35 million hectares of land were managed organically by almost 1.4 million producers. About one-third of the world's organically managed agricultural land – around 12 million hectares – was located in developing countries. Most of this

Organic agricultural land and other organic areas in 2008. Source: FiBL/IFOAM Survey.



land is in Latin America, with Asia and Africa in second and third place. Beside the agricultural land, “other areas” under organic production are mentioned in the graph. With 31 million hectares, these areas mainly consist of areas for organic wild collection and bee keeping. Further organic areas include aquaculture areas (0.43 million hectares), forest (0.01 million hectares) and grazed non-agricultural land (0.32 million hectares). One may highlight that the majority of these so called „other areas“ is located in developing countries – in contrast to agricultural land, of which two-thirds can be found in developed countries (cp. WILLER 2010).

The worldwide trend towards more land cultivation under organic agricultural principles and standards is evident, as can be seen from new FiBL & IFOAM (2012) surveys. Despite of a slight decrease of organic agricultural land from 2009 to 2010 of around 50,000 hectares (or 0.1 percent), the total land under organic cultivation has tripled since 1999, where data considering organic farming worldwide were available for the first time.

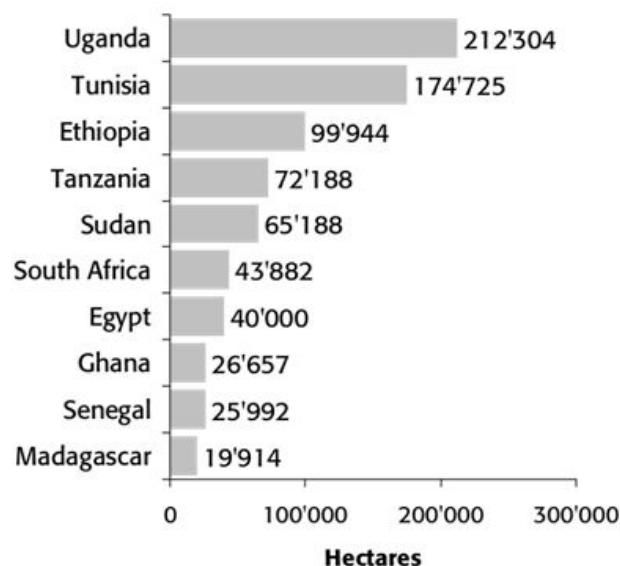
As already mentioned above, these data explicitly refer to the share of certified organic agricultural land. The absolute area of agricultural land in developing countries, which is not certified but more or less under organic production („by default“), would be significantly higher, as available data are still insufficient for particular countries or regions.

Certified organic agriculture in Africa

Organic agriculture is increasingly globalizing and rapidly gaining importance for the global South (cp. HALBERG et al. 2006). A number of African countries have experienced significant growth in organic production and the adoption of organic farming principles. Accordingly, the International Federation of Organic Agriculture Movements (IFOAM) has supported the expansion of organic agriculture in countries of the South for a number of years through its “IFOAM Goes Organic” (I-GO) Program and through the establishment of an office on the African continent to assist local capacity building and training in organic agriculture across this region in 2004 (LYONS & BURCH 2008). Since then, the organic agricultural production has steadily developed. As a consequence thereof, organic certification gained more and more relevance, whereby one has to bear in mind that certified organic production is mostly tailored to products destined for export markets. Nevertheless, local markets for certified organic products are growing, especially in Egypt, South Africa, Uganda, Tanzania and Kenya, where the certification system is already well developed in comparison to other African countries (cp. BOUAGNIMBECK 2008).

Data related to organic production in Africa has only begun to be collected in recent years, and as such, figures are sometimes more approximations and incomplete. Underlining this statement, BOUAGNIMBECK (2008), however, points out that it is still difficult to get a clear sense of the scale of organic production – referring to both certified and non-certified organic production – in Africa. The given data must therefore be seen as a reference value. Nevertheless, in order to give an overview and to point out the relevance of organic agriculture in Africa, the following table shows the African countries with the largest area under organic cultivation.

Currently 0.88 million hectares of land is certified organic land, constituting an increase of more than 10,500



The ten countries with the largest organic agricultural land areas in 2008.

Source: FiBL/IFOAM Survey.

hectares compared to the previous survey. This land is managed by at least 470,000 farms (BOUAGNIMBECK 2008). As the graph shows, certified organic agriculture is mainly concentrated in Northern and Eastern Africa. The three leading countries in organic agricultural production (Uganda, Tunisia and Ethiopia) amount for more than half (486,973 ha in total) of the total area under organic cultivation in Africa. Together with Tanzania, Sudan and Egypt, which are placed on position four, five and seven, the leading Northern and Eastern African countries amount for nearly three quarters (74.8%) of the total certified organic production. With only a handful certification bodies, most of which in South Africa and Eastern Africa, the African continent has a low density of certifiers (cp. EGELYNG 2006). As a major problem among others, this low concentration implies that the majority of the African countries is still excluded from the organic exporting market, which could bring valuable additional revenues to these developing economies.

But there are yet big differences in the extent of the production of certified organic products in East African countries to overcome. In this regard, TAYLOR (2006) points out that each of the three East African countries has had quite a different history since gaining independence, which has influenced the development of their organic agriculture sectors. (...) In Kenya a few large commercial farms have led the way in export orientated organic production, in Tanzania organic produce comes from smallholder farmers arranged in strong cooperative unions, while in Uganda organic production is dominated by smallholder farmers organized through private companies.

Furtheron, we want to set our focus on the current state of organic agriculture and certification in Tanzania. Certification bodies and projects will be introduced and promoting as well as inhibiting factors concerning organic agriculture and certification for smallholder farmers will be discussed.

Organic Agriculture in Tanzania

Agriculture plays an immense role in Tanzania as it makes up 50 percent of the GDP and depicts a foundation for the employment of 80 percent of the workforce, with women constituting the majority of agricultural workers (cp. KLE-

DAL & KWAI 2010). The agricultural system is dominated by smallholder farmers producing foodstuff mainly for their own consumption. Surpluses are sold at the domestic markets to create additional income for the families. The degree of mechanization is very low, the majority of the farmers are still using the hand-hoe as their main tool. Tractors are scarce and mainly used where bigger or industrial farm units are concentrated.

As one takes a look at recent FAO (2010) statistics, the total agricultural area in Tanzania amounts 37.3 million hectares. Around 33 million people are counted as agricultural population (these are 'All persons depending for their livelihood on agriculture, hunting, fishing and forestry. [...] This population is not necessarily an exclusively rural population' accord to FAO guidelines), which is a vast majority in comparison to the total population. If we talk about agricultural area under organic production, we have to go down by two decimal powers and reach a total area of just 72,000 hectares (or 0.19 %). 57 percent of this area or 41,000 are under certified organic production. This illustrates, that more than half of the organic production is certified and therefore mainly designated for the export (cp. FAO 2010). However, there is a long history of low-input farming in Tanzania and although it may not be recognized as such, organic production is already thought to be feeding the majority of people across Eastern Africa, in particular those living in remote rural areas who mainly eat naturally, organically-produced food from their own gardens (cp. TAYLOR, 2006). This fact also indicates, that there is already a huge amount of organic cultivated but non-certified products to be found on domestic markets. Main products for export are organic herbs and spices, pineapple, coffee, tea, honey, cotton and cashews. Export production mainly takes place by smallholder farmers, which are organized into cooperatives (cp. HINE & PRETTY 2007).

The formal organic production and the organic agricultural movement in Tanzania established in the early 2000's and was mainly driven by two organisations, namely TanCert and TOAM. TanCert (www.tancert.or.tz) was established in 2003 and registered in 2004 by the government of Tanzania as the first certification body for the organic agricultural production system (cp. TANCERT 2010). In the meanwhile, after ten years of experience, they provide certification services to:

- Crop organic production
- Livestock organic production
- Beekeeping
- Sustainable fishing/Aquaculture
- Wild harvest of organic products
- Processors of organic foods and agriculture products
- Handling of organic produces (packers and distributors) and
- Recertification.

In addition to local certifiers, there are other, external certifiers such as IMO, EcoCert, KRAV, Soil Association or Bio-Inspecta beside TanCert, but these certifiers are exclusively certifying for the export market (cp. TAYLOR 2006). In 2005, a national network called Tanzanian Organic

Agricultural Movement (TOAM) was formed aiming at placing organic farming in the centre of the members goals to counter food security, poverty and environmental degradation (BAKEWELL-STONE 2006). With 89 institutional members that include farmer associations and cooperatives, NGOs and FBOs, organic operators, researchers and trainers, TOAM has emerged as the most important network concerning organic agriculture in Tanzania (cp. TOAM 2010).

As we can conclude from the data above, organic certification area amounts to more than half (57%) of the total area under organic production and is therefore of high importance in this sector. Still, there seems to be a lot of potential for the future. But one also has to consider the other side of the coin and question oneself if there are certain threats and restraints arising simultaneously, especially in the context of smallholder farmers and food security.

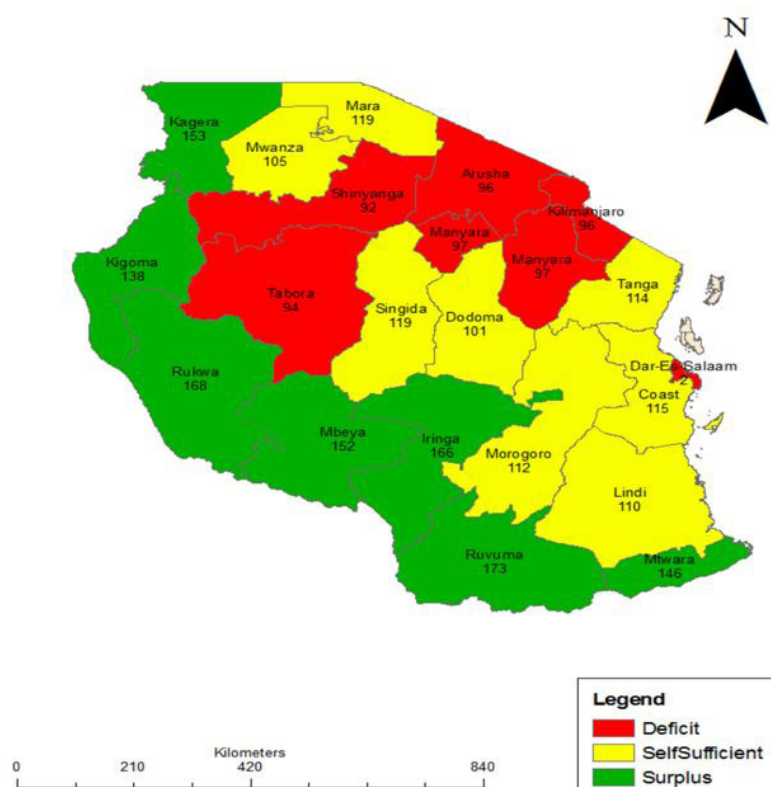
Food Security in the context of organic agriculture and certification

Food Security is a term which gained more and more importance in recent years. Especially when one talks about agricultural development in developing countries, food security is the main target of projects and development strategies in most cases. The World Food Summit of 1996 defined food security as existing "when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life". Commonly, the concept of food security is defined as including both physical and economic access to food that meets people's dietary needs as well as their food preferences (WHO 2013).

Due to different factors, many people, especially the smallholder farmers in developing countries, are still affected by food insecurity. Land degradation, climate change, or global water crisis can be mentioned as the major physi-

Total food supply forecast at regional level for 2012/13.

Source: Ministry of Agriculture, Food Security and Cooperatives 2012.



Export category	Metric tons	Farm gate price (Euro/kg)	Total value (farm gate) (Euros)
Cocoa	3'822	0.95	3'630'900
Cashews	2'671	0.95	2'537'450
Coffee	590	1.00	590'000
Tea	500	2.10	1'050'000
Spices:	400		
- Pepper	160	0.48	76'800
- Lemon grass	120	0.08	9'600
- Cardamom	60	0.89	53'400
- Cloves	50	2.10	105'000
- Cinnamon	10	1.47	14'700
Sesame	273	0.94	256'620
Pineapple	196	0.12	23'520
Cotton	151	0.47	70'970
Vanilla	74	20.00	1'480'000
Total			9'898'960

The nine most exported organic products in Tanzania.

Source: TOAM and field data Kledal 2009 in Kledal & Kwai 2010.

cal threats. Liberalisation of the world market and doubtful structural adjustment programmes (SAP's) in the agricultural sector have often missed out on actually increasing food security.

Recent statistics from the Ministry of Agriculture, Food Security and Cooperatives of the United Republic of Tanzania predict that a self sufficient rate on the national level of 113% in terms of total food crops is likely to be achieved in 2012/13, whereby cereals constitute 100%, non-cereals 135%. In this regard one has to add that – at the sub-national level – from the 21 regions, seven will definitely produce a surplus, eight will be self-sufficient and six will have an insufficient production (cp. MIN. OF AGRICULTURE, FOOD SECURITY AND COOPERATIVES 2012). Six regions are therefore producing a deficit, which can be compensated through the excess production in other regions. Unpredictable circumstances (eg. extreme climate events) and dropping harvests, however, can lead to food insecurity and threaten the livelihood of many smallholder farmers. The map below illustrates the total food supply forecast at the regional level for Tanzania for the 2012/13.

As already mentioned in the above chapters, organic farming practices became more and more important and there is also evidence, that organic agriculture could lead to more food security among smallholder farmers as different studies have testified this issue. HINE and PRETTY (2007), for example, remark that where organic farming principles are adopted for the whole of an integrated agricultural system in a holistic manner, »organic« can be synonymous with »sustainable« and increased food security in a region is more likely to occur while at the same time building up natural, human and social resources.

Therefore, it is important how the organic farming principles are practised. A high diversity of adapted crops on-site creates a more resilient (eco)system, which is less vulnerable for extreme weather events and secures a stable income base from various crop sources. Beyond that, this process of diversification makes farmers less vulnerable to market price fluctuations. Production costs can be reduced by using locally-available or on-site natural resources. Where farmers start monocropping for the export market (whether organic or conventional), however, the whole farming system gets vulnerable and world market prize fluctuations for their products could lead to an unstable income.

The question arises if organic certification and the in-

terlinked export of organic products could threaten food security in Tanzania, as the majority of certified organic produce from Tanzania is destined for export markets, with a vast majority being exported to the European Union and the United States (cp. WIL- LER 2010).

Different studies (PRETTY & HINE 2007, BOLWIG & ODEKE 2008, WIL- LER 2010) about food security and organic certification did indeed show that the export of certified organic products and the interlinked premium prices can undoubtedly lead to a decrease in smallholder farmer poverty and therefore enhance food security. In this context, the organization

of farmers into associations, cooperatives, enterprises, or other types of groups is critical to the development of the organic agriculture and the certification system. They play a major role as they fulfill different tasks like offering organic farming trainings, giving technical assistance, acting as an extension service and providing a framework for the processing and marketing of certified products (cp. FAO 2007). Therefore, certification cooperations have the potential to fulfill other important tasks as multifunctional or multipurpose groups for issues around organic agriculture.

But still, there are major challenges arising on the export market for organic products. As the market volume of traded products is rising, the numbers of operators and consumers worldwide is increasing, competition is becoming tougher, and profit margins are declining (MBIHA et al. 2008). If farmers or export cooperatives want to compete, they require strong partners who give them support by providing infrastructure and logistics in the cultivation, processing and marketing phase and strengthen the network within the stakeholders. This point constitutes a major restraining factor, as organic agriculture in Tanzania is not that much supported by the government, which for its part could play an essential role in spreading the principles and strengthening or rather pushing the sector of organic certification forward. However, this will be a major task for the future, as there is a strong need to cooperate on sub-national, national and international levels as well as to encourage more links between governments, NGO's and the private sector. (cp. PRETTY & HINE 2007, FiBL & IFOAM 2010).

Furtheron, the certification process is expensive and single smallholder farmers are normally not able to handle the costs on their own. For that reason, it makes sense to build up cooperatives and umbrella organizations, where farmers can find themselves under a good and competent leadership regarding their interests. But high certification costs are just one part of the problem. HARRIS et al. (1998) points out that the choice of the certifier and the complexity of procedures including transaction certifications are often greater constraints than certification costs in terms of accessing increasingly controlled import markets.

To make matters more complicated, domestic people with skills and knowledge in international trade and business are scarce (cp. KLEDAL & KWAI 2010), whereby management-skills and knowledge poses an overall problem

in the entire sector of organic agriculture. Organic farming pursues a holistic approach where networked thinking is required and many more factors must be considered. Knowledge and experience are often the limiting factors and therefore hindering the distribution of organic farming ideas and principles in Tanzania. For now, external technical assistance is still required in the Tanzanian organic sector for example to build capacities for technical, organizational and legal skills that are needed to establish reliable certification and accreditation programs (BAKEWELL-STONE 2006). Umbrella organisations as multifunctional bodies could take over these tasks and by doing so support the entire organic farming development in these areas.

Conclusions

Results from various studies show that organic agriculture has great potential to improve the livelihood of smallholder farmers in Tanzania. Organic production allows access to new markets for farmers to obtain premium prices for their produce (export and domestic) but also to use extra incomes for extra foodstuffs, education or healthcare. Furthermore, evidence shows that organic agriculture can build up natural resources, strengthen communities, and improve human capacity, thus, improving food security by addressing many different causal factors simultaneously (HINE & PRETTY 2007).

Once we talk about organic certification and the export of organic produce, one has to ask the question if food security for smallholder farmers can still be taken for granted. The most important aspect I was able to draw from the research concerns the circumstance how organic certification and export is embedded in the agricultural system. If monocropping systems, even if they are cultivated in an organic way while unadapted technologies are applied for the production, the system gets vulnerable and food security for the farming communities is threatened. This implies a major risk for the single farmer, as sudden changes or happenings are unpredictable. However, where local food markets are functioning and organic conversion does not involve major risk-taking by farmers, the integration of smallholders in international value chains for organic products does not normally constitute a threat to food security (BOLWIG & ODEKE 2008). It furthermore offers new opportunities for extended markets and premium prices.

Another important aspect which is linked to the above mentioned statement, is the motivation of the farmer him*herself to practise organic agriculture. If premium prices are the only motivation for the farmer to practise organic farming, he might change his cultivation techniques if the frame conditions are changing or price differences are decreasing (cp. BAKEWELL-STONE 2006). Along with the process of converting to organic agriculture (and furtheron to organic certification), farmers must identify themselves with the principles and the ethics beyond organic farming and understand its holistic impacts and embeddedness in the ecological and the particular livelihood system. The transition of paradigms is a hard process, but the most effective leverage point in case these agricultural systems (or systems in general) are ought to be changed in a sustainable way (cp. MEADOWS 2008). A possible framework to create this deeper understanding could be provided from cooperatives, NGO's, CSO's, extension service providers or umbrella

organisations. These partnerships should also include certification bodies.

For the organic certification, there is a considerable need to create a united and comprehensive certification system that is internationally recognized and allows produce to enter directly into developed markets (cp. TAYLOR 2006). A better infrastructure of physical and informal nature must be built up as satisfying export market demands in terms of quality, quantity and consistency of supply is another major challenge for organic farmers and exporters (cp. BAKEWELL-STONE 2006). A crucial factor of great potential will be the implementation at the governmental level, where major interventions to boost organic agriculture and the interlinked certification could be undertaken. So far, governments have played a more inhibiting role.

Summa summarum, there is still a long way to go and many restraints are threatening the development. Nevertheless, there is a positive trend to be observed in the organic agricultural movement and organisations are aspiring and getting more and more active to create awareness about organic agriculture and the opportunities of organic certification. Recent history shows that the change towards a new agricultural vision in Tanzania is possible.

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