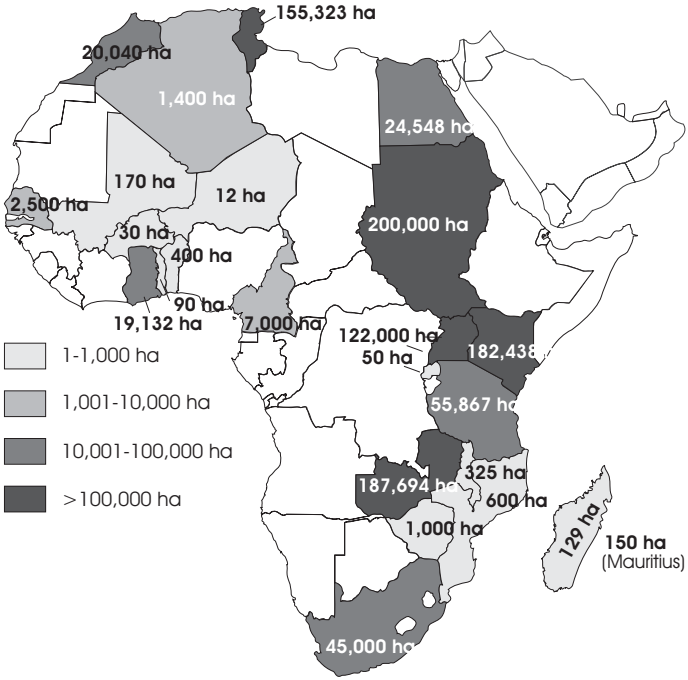
12 Organic Farming in Africa

Nicholas Parrott[1], Charles Ssekyewa[2], Chido Makunike[3], Samuel Muwanga Ntambi[4]



Map 1: Organic farming in Africa.

Source: FiBL Survey 2005 / 2006. © Stiftung Oekologie & Landbau (SOEL) and Research Institute of Organic Agriculture FiBL

This chapter draws upon a recent IFOAM Publication "Organic and like minded movements in Africa" by Nicholas Parrott and Bo Van Elzakker (2003), and has been supplemented with updated information.

1 Dr. Nicholas Parrott, E-mail Nick.parrott@wur.nl.

2 Charles SSekyewa ,Uganda Martyrs University, Faculty of Agriculture, P.O.Box 5498, UG- Kampala, Uganda

3 Chido Makunike, Coordinator, Africa Organic Service Centre of the International Federation of Organic Agriculture Movements (IFOAM), Dakar, Senegal

4 Dr. Samuel Muwanga Ntambi, Faculty of Agriculture, Makerere University, PO Box 7062, Kampala, Uganda

12.1 Introduction

There are two levels of organic farming in Africa, certified organic production and non-certified or agro-ecological farming. Certified production is mostly geared to products destined for export beyond Africa's shores. However, local markets for certified organic products are growing especially in Egypt, South Africa, Uganda, Kenya and Tanzania. Statistics for certified production are provided in table 8. Although these are probably incomplete, (most countries do not have data collection systems for organic farming) they indicate that with, few exceptions (notably Uganda), certified organic farming is relatively underdeveloped, even in comparison to other low-income continents. Organic certification is mainly organized under participatory guarantee systems, in this case an Internal Control System operated by a farmers' group linked to an exporter, who holds the organic certificate.

However, certified organic production only represents a tip of the iceberg of organic farming in Africa, and evidence is emerging of a far larger agro-ecological movement in parts of Africa. Local NGOs and farmers' groups, as well as development agencies are increasingly adopting organic techniques as a method of improving productivity and addressing the very pressing problems of food security faced by all too many Africans. Agro-ecological approaches also address a number of other priority concerns. They resonate with and are being used in initiatives designed to:

- ensure food security
- eradicate poverty
- maintain and enhance soil fertility
- combat desertification
- promote tree-planting and agro forestry
- develop low and no input means of combating pests
- promote the use of local seed varieties
- maintain and enhance biodiversity
- support the most vulnerable social groups (often particularly women and households headed by women) and
- combat global warming

To date research to track the extent to which these approaches are being employed on the ground, or their effectiveness, viz a viz other approaches, in meeting economic, social and environmental objectives, is very limited. Yet there is growing evidence that their appeal is increasing and often proving highly successful in meeting these aims.

African agriculture is characterized by very low level of input use and the low take up of Green Revolution technologies. Hence, it is sometimes claimed that most farming in Africa is already de facto organic. Because of the unsustainable way in which traditional agriculture, which is predominantly subsistence, becomes partially commercialized, the system evidently fails to meet food security needs or to protect fragile environments. However, where conversion to organic farming has been fully achieved, economic and viable yields are attained. This is in stark contrast to the experience in the Northern Hemisphere where conversion to organic farming usually leads to a loss in yields (at least in the first years).

Organic agriculture is showing itself to be a viable sustainable development option for Africa. Adopting organic agriculture does not mean a return to some form of low technology, backward

or traditional agriculture – but involves pursuing a blend of innovations originating from a participatory intervention involving scientists and farmers. The organic farming system emphasizes management (M) over technology (T) and biological relations (BR) and natural processes (NP) over chemically intensive methods (CIM) (IFOAM, 2004). Organic farming in Africa must be viewed beyond the perspective of providing commodities for the global market. Rather it should be seen as an agricultural system that "enhances" and "manages" the complexity of the ecosystem rather than reducing and simplifying the biophysical interactions on which agricultural production depends. It consciously integrates and takes advantage of naturally occurring beneficial interactions and the rich layers of indigenous knowledge (Twarog and Kapoor, 2004). But most importantly, organic farming in Africa must be seen as a process of learning and adaptation, which results in meeting household objectives, for sustainable and adequate food production, increasing environmental resilience and social capacity.

In recent years some policy makers and donors have started to recognize the potential of export oriented organic agriculture as a means of generating foreign exchange and increasing incomes. Yet the broader benefits of organic farming and agro-ecology (in terms of enhancing food security, environmental sustainability and social inclusion and reducing exposure to toxic pesticides) often go unrecognized or are simply ignored.

Furthermore, promoters of modern technologies, such as GMOs, view Africa as a virgin and receptive market. These technologies are being enticingly packaged and sold to African States as modernizing agricultural development programs (Paul and Steinbrecher, 2003). However, with the growth of the Organic Agriculture sub-sector, these packages are being more carefully scrutinized by some African states, some of who are rejecting them.

12.2 Statistics / Historical Development

The formal organic sector in Africa remains relatively underdeveloped and statistics concerning its status are often difficult to come by. In the past years there has been evidence of substantial growth in certified organic land in Ghana, Ethiopia, Kenya, Tanzania, Uganda and Zambia.

Certified organic farming in Africa takes two main forms: relatively large farms or plantations under single ownership, like SEKEM (Egypt), and smallholder groups. These latter groups collectively implement an internal control system that involves organizing extension, inspection, certification and marketing activities, and have strong links with export companies (operators) (IFOAM, 2005). Many of the smallholder groups are technically supported through development aid programs, such as the Swedish financed Export Promotion of Organic Products from Africa (EPOPA), and the EU supported COLEACP-PIP programs, which have stimulated the development of the organic sector in a number of countries, including, Cameroon, Egypt, Ghana, Kenya, Madagascar, Senegal, Sudan, South Africa, Tanzania, Tunisia, Uganda and Zambia, Zimbabwe. Most smallholders in these programs will only use part of their land for their export cash crop, using the remainder for household consumption and local markets. Occasionally out grower schemes, which are hybrids of these two forms, exist whereby large plantations buy in additional produce from these certified smallholder farmers.

12.3 Markets

With a few exceptions (notably Egypt and South Africa) the African market for organic produce is very small. This is due to lack of awareness, low-income levels, lack of local organic standards and other infrastructure for local market certification (Kalibwani, 2004). Therefore, most certified organic production in Africa is geared towards export markets, with the large majority being exported to the EU, which is Africa's largest market for agricultural produce (and the world's largest organic market). The range of certified organic products currently being produced in Africa is shown in the table below.

Table 24: Organic produce from Africa (by type and country) Organic produce from Africa (by type and country)

PRODUCT GROUP	COUNTRIES
Fresh Vegetables	Egypt, Kenya, Madagascar, Malawi, Morocco, South Africa, Tunisia, Uganda, Zambia
Bananas	Cameroon, Ghana, Senegal, Uganda
Citrus Fruits, Grapes (including wine)	Egypt, Morocco, South Africa
Tropical fruits (fresh) Avocadoes, mangoes, pineapples, papaya etc.	Cameroon, Egypt, Ghana, Madagascar, Senegal, South Africa, Tanzania, Uganda
Dried Fruits	Algeria, Burkina Faso, Egypt, Madagascar, Morocco, Tanzania, Tunisia, Uganda
Coffee	Cameroon, Ethiopia, Kenya, Madagascar, Tanzania, Uganda
Tea	Tanzania, Uganda
Cocoa	Cameroon, Ghana, Madagascar, Tanzania, Uganda
Sugar	Madagascar, Mauritius,
Cotton	Benin, Egypt, Senegal, Tanzania, Uganda
Coconut Oil	Mozambique
Palm Oil	Ghana, Madagascar Tanzania
Olive Oil	Tunisia
Ground Nuts (peanuts)	Zambia
Tree Nuts (cashew, shea)	Kenya, Malawi, Morocco, Tanzania
Sesame	Burkina Faso, Uganda, Zambia, Zimbabwe
Herbs (culinary)	Egypt, Ethiopia, Ghana, Kenya, Madagascar, Malawi, Morocco, Mozambique, South Africa, Tunisia, Zambia, Zimbabwe
Spices (culinary)	Cameroon, Egypt, Ethiopia, Madagascar, Malawi, Mozambique, South Africa, Tanzania, Uganda, Zimbabwe
Medicinal / Therapeutic Herbs and Spices	Egypt, Morocco, Namibia, Tunisia, Zambia
Essential Oils	Madagascar, Tanzania
Honey	Algeria, Malawi, Tanzania, Tunisia, Zambia
Other Forest Products	Uganda, Zambia, Zimbabwe
Cereals	Egypt

With the exception of the Maghreb countries and Egypt, which benefit from their proximity to European markets, the potential of an export led organic strategy is constrained by high transport costs and poor infrastructure. For most sub-Saharan African countries the best potential for organic exports undoubtedly lies in low volume – high value crops (such as coffee, herbs, spices, medicinal and beauty products), non-perishable items and those which offer opportunities for adding value locally, such as tropical fruits (which can be dried or juiced).

Domestic markets for organic produce are developing in Egypt and South Africa, both reasonably prosperous countries by African standards. Sekem, the pioneer of the organic movement in Egypt, has developed a substantial domestic market for a range of products, including herb teas, fruit and vegetables and organic cotton. Domestic sales now account for more than half of its certified production. In other countries and particularly in the larger cities, there are reports of some demand for "naturally" grown produce. Often, however, this is not certified and its popularity is often due to these products tasting better than their intensively grown counterparts. The potential of applying organic approaches within urban farming, which provides a high proportion of fresh vegetables and protein within many African cities, is being explored in some places.

12.4 State Support, Standards and Legislation

At present Tunisia is the only African country with its own organic (EU compatible) standards, certification and inspection systems. Egypt and South Africa have both made significant progress in this direction. Both have two certifying organizations and are well on the way to developing standards. Morocco and Zambia have made some progress to developing their own standards. The Namibian government has expressed an interest in developing an organic sector and the Ugandan Coffee Development Authority recognizes the commercial potential of organic coffee (Kampala recently hosted the 3rd IFOAM organic coffee conference).

In general however, the potential of organic approaches, even those geared to premium export markets, has not yet been recognized by the majority of African governments. In consequence the organic sector in most African countries is reliant upon both foreign standards and certifying bodies. This is a major constraint on the development of the organic sector, creating a "chicken and egg" situation, where the market does not develop because the necessary infrastructure is not in place, and the infrastructure is not there because the market is inadequately developed. The Swedish Development Agency, SIDA, is currently funding a program to develop local certification and inspection capacity in South and Eastern Africa (covering Uganda, Tanzania, Zambia and Kenya). The absence of local certification and inspection capacity is a critical bottleneck that needs to be overcome in order to develop the potential of African organic exports.

12.5 Innovations in Agroecology

In many countries improved organic farming methods are being developed and disseminated as part of broader packages for sustaining livelihoods. This process is mainly led by the civic sector. Indigenous NGOs, and farmers' groups are particularly active in this field in Ghana, Kenya,

Senegal, South Africa, Uganda and Zimbabwe, and have got to the point of forming national organic networks that provide effective lobbying and advocacy bodies for the organic movement. These are most developed in Uganda (NOGAMU), Tanzania (TOAN) and Kenya (KOAN). In addition, PELUM in Zimbabwe, KULIKA in Uganda and SACRED Africa in Kenya are further examples of networks that are, often very effectively, integrating the organic message into more general development efforts. There are also pro-organic NGOs active in training, support, and advocacy in Togo, Benin, Zambia, Ethiopia and Madagascar. In Uganda, the privately owned Uganda Martyrs University (UMU) offers short courses in organic agriculture in collaboration with EPOPA, and also offers a distance learning degree program in organic agriculture (Ssekyewa, 2005). The emphasis of these training activities varies significantly according to local market demands and circumstances. For example,

- In Kenya groups are successful experimenting with using the virulent Water Hyacinth as a basis for making silage, compost and its stems for furniture making.
- In South Africa traditional healers are being encouraged to switch from collecting to organically cultivating those medicinal herbs that have come under pressure, partly as a result of the HIV/AIDS pandemic.
- In Madagascar an innovative system of rice cultivation under organic management is giving higher yields than those obtained on demonstration farms run by the agro-industrial sector. This system is now being widely experimented with in Asia and tested by the International Rice Research Institute (IRRI).
- In Uganda, UMU has come up with three tomato varieties that can be economically produced under an organic farming system, employing enhanced indigenous knowledge/pest control and locally adapted cultural practices for soil fertility improvement

Elsewhere international development agencies are recognizing the potential of organic farming as a central plank in developing sustainable livelihoods for the rural poor. Helvetas and GTZ (the Swiss and German development agencies) explicitly support (non-certified) organic approaches to agriculture, as do HIVOS, Misereor and Weltfriendensdienst (the first a Dutch donor agency, the second two German NGOs). Elsewhere in Africa international support for organic approaches can be found amongst agencies with remits as varied as the Save the Children Fund UK and the Biodiversity Institute for Sustainable Development of the Global Environment Facility.

12.6 Research, Extension and Training

Agricultural research in Africa is quite fragmented between the international research centers (often under the umbrella of CGIAR), universities, national research institutes and field level research. Often there is inadequate communication between these different levels, particularly over research priorities. However, there is increasing development towards regional research network initiatives, such as those organized under the Association for Strengthening Agricultural Research in Eastern, Central and Southern Africa (ASARECA). However, there is generally not a very strong focus on Organic Agriculture, and disciplinary boundaries often inhibit the adoption of the holistic approach required within an organic system. In addition the extension services in many countries are often understaffed, under-funded and demoralized. NGOs and church

groups often play an important role in filling these gaps at the grass roots level, often advocating organic (or near organic) approaches.

Nonetheless there are some outstanding examples of innovative organic research at all these levels. Pioneering research on organic farming techniques has emerged from the World Agroforestry Center (formerly ICRAF) and the International Center for Insect Physiology and Ecology (ICIPE). Other centers, such as the International Institute for Tropical Agriculture (IITA) and the International Livestock Research Institute (ILRI) could also potentially contribute to finding solutions to the problems facing organic farmers. National initiatives, like that of Uganda Martyrs University (UMU, 2005), are increasingly becoming of importance in developing organic research capacity. Another example is the Agricultural Research Institute –Kabanyolo - (MUARIK) at Makerere University in Uganda, which has embarked on organic research, starting a long-term soil fertility experiment in 1993 to compare organic soil fertility with conventional soil fertility. However many tensions exist between mono-disciplinary based science and industry based research priorities and those of the poorest farming communities. Solutions that would satisfy organic criteria often prove to be inappropriate, or unaffordable, to small-scale producers. Often there is little commercial interest or available funding to address and meet the needs of small-scale farmers. A final further barrier to developing the potential of the organic sector is that much expertise and experience (of failures as well as successes) is locked away in the "gray literature" of project evaluations and consultants reports and rarely reaches the public domain.

Paradoxically organic and agro-ecological farming appears to thrive better in countries where the extension services have been worst affected by "restructuring programs" as extension services have traditionally been the carriers of modernization. Where they have been absent or ineffective farmers have been left to their own devices, and have often innovated with organic approaches rather than those that require (expensive and often unavailable) artificial inputs.

These issues are by no means unique to Africa, and despite these obstacles, there is abundant evidence of innovative organic research within research institutes, universities, private sector led projects and farmers own experimentation. Finding ways to disseminate the findings of these experiences, within both the research and farming communities, and to develop research agendas that meet real organic farming systems needs, are two major obstacles that need to be addressed.

12.7 Outlook

The fact that traditional African agriculture is low external input agriculture, although not necessarily organic, provides a potential basis for organic agriculture becoming a viable development option for Africa. Organic farming practices deliberately integrate traditional farming practices and make use of locally available resources. As such they are highly relevant to a majority of African farmers, who have often resisted Green Revolution, seeing them as unsustainable, risky and inaccessible.
African society is highly socially accountable and there are strong social fibers within and between communities. Given these social ties (Mbithi, 1982), the link between organic agriculture and

social accountability must be emphasized. The benefits of organic agriculture must be seen to be more than just trade related. Most organic agriculture in Africa is non-certified – and will probably remain so for a while to come. There is need to develop domestic markets as well as new or alternative forms of standardization and verification that suit the African context.

There is undoubtedly room for a substantial increase in certified organic production in Africa, and smallholders engaged in it often derive significantly benefits, improving their incomes as a result. Yet there are also significant constraints on the potential for developing. In part these are external, to do with the costs of certification, problems of infrastructure, maintaining links with distant markets and the vagaries of world markets. Yet also they are internal. The over-riding priority for African agriculture is that of achieving sustainable food security. Organic agriculture has a huge potential in helping meet this aim, which is only just beginning to be recognized.

The formal and informal organic sectors in Africa share much common ground. Yet because of their different orientations and the different actors involved, the potential for knowledge sharing and pooling of resources, which undoubtedly exist is rarely realized. The development of networks between NGOs, development agencies and research institutes will be a necessary step along this path.

12.8 IFOAM Relocates Africa Office to Dakar

The International Federation of Organic Agriculture Movements (IFOAM) established the Africa Organic Service Centre (AOSC) in 2004 to help the growth of organic agriculture on the continent. Africa's special challenges includes food security deficiencies that are far more critical than on other continents, conditions that have inhibited the take off of a "green revolution" and a lack of infrastructure.

The AOSC is intended to assist the many efforts all over the continent to enhance the role that organic agriculture plays in helping meet food security needs as well in helping individual African farmers, communities and local economies to generate extra income..The AOSC was initially located in Kampala, Uganda. In 2005 the IFOAM World Board made the decision to relocate the AOSC to Dakar, Senegal. Among many considerations, it was felt that Dakar would be a good base from which to give more encouragement and a higher profile to the organic movement in West and French-speaking Africa. This was seen as a priority as the organic movement is comparatively more developed in Eastern and Southern Africa.

One of the roles that the AOSC will perform is facilitating the exchange of information on different experiences from various parts of Africa. Working together with many other organizations promoting organic agriculture and sustainable development in general, IFOAM. through its member network, is involved in various projects for the development of local and export markets for organic produce. There are also initiatives in several countries where cohesive national movements have come to lobby their governments on issues such as formally incorporating organic agriculture within agricultural planning, and adopting organic standards. IFOAM has the know-how and the networks to provide assistance to these efforts.

A key role for AOSC in the coming years will be to build up a database on the general state of organic agriculture in Africa. Through networking with IFOAMs members in different African countries, it is intended to build up a more accurate picture of the extent of organic agriculture within Africa. While this will not be achieved overnight, it is intended that the process of regular and close communication with IFOAM members and with sister organizations will help substantially close the information gap that presently exists. These efforts will rely substantially on internet communication and the active support and goodwill of IFOM members and sister organizations, as IFOAM (and the AOSC) do not have the resources to undertake a full scale survey of the state of organic farming in such a vast, and often poorly, interlinked continent.

The AOSC will therefore work closely with the member organizations in the various countries to get information on developments in those countries, and then provide a platform for that information to be shared with others in Africa and beyond. The methods that will be employed to do this will include a new Africa page on IFOAMs website and a monthly internet-based newsletter, as well as periodic electronic discussions on issues of interest to members. In addition, other ad hoc opportunities will include IFOAMs participation in various shows and other events.

The resources available to the AOSC are but a drop in the ocean compared to the challenges and needs of organic agriculture in Africa. But "a journey of a thousand miles begins with one small step," and the AOSC will strive to use information technology, IFOAMs broad knowledge base and the dynamism of its members all over Africa to further develop the organic movement on the continent. One result of this will be an increase in the availability of information (including in this publication) about the status of organic farming in Africa and its relevance to addressing the needs of farmers and helping meeting Africa's development challenges. Contact: Chido Makunike, AOSC Coordinator, Dakar, Senegal, http://www.ifoam.org/about_ifoam/around_world/africa.html

12.9 References

Parrott, Nicholas and Bo Van Elzakker (2003): Organic and like-minded movements in Africa. International Federation of Organic Agriculture Movements IFOAM. Tholey-Theley, (Germany). Download www.ifoam.org/igo/africa_survey.pdf

Grolink, 2004 Training Manual, Hoje (Sweden).

IFOAM, 2004 IFOAM Training Manual for the Tropics. IFOAM. Tholey-Theley (Germany),

IFOAM, 2005 IFOAM Smallholder Group Certification: Training Curriculum and Guidance Manual for Producer Organizations. CD ISBN Nr. 3-934055-36-2. Compiled by IMO City?

Kalibwani ,F. 2004 Africa IFOAM Strategic Plan Draft (II). Outcome of the African Planning Workshop held in Nairobi, Kenya.

Mbithi, P. 1982 Rural Sociology and Rural Development. Its Application in Kenya. Kenya Literature Bureau. 218 pages.

Paul, H. and Steinbrecher, R. 2003 Hungry Corporations: Transnational Biotech Companies Colonise the Food Chain. Zed Books, London & New York. 220 pages

Ssekyewa, C. 2004 Research, Extension and Education in Africa, Policy paper presented at the OPPAZ workshop, December 2004, Lusaka, Zambia.

Ssekyewa, C. 2005 Organic Agriculture Research in Uganda. Paper presented at the International Society for Organic Agriculture Research (ISOFAR) Scientific Conference, 20th -23rd September 2005, Adelaide, Australia. 17 pages

Twarong, S. and Kapoor, P. 2004 Protecting and Promoting Traditional Knowledge: Systems, national Experiences and International Dimensions. United Nations Publication, 2004, 383 pages

Uganda Martyrs University, 2005 University Prospectus 2005- 2006 Academic Year.

12.10 Statistics & Information Resources for Africa

Table 25: Africa: Land under organic management and organic farms

COUNTRY	YEAR	AREA UNDER ORGANIC MANAGEMENT (HECTARES)	SHARE OF TOTAL AGRICULTURAL ARE	NUMBER OF FARMS
Algeria	2004	1'400	0.003 %	
Benin	2005	400	0.01%	650
Burkina Faso	2004	30	-	
Cameroon	2003	7'000	0.1%	
Egypt	2005	24'548	-	500
Ghana	2005	19'132	0.13%	
Ivory Coast	2005	0	-	
Kenya	2005	182'438	0.69%	30'000
Madagascar	2000	129	-	
Malawi	2002	325	0.01%	13
Mali	2003	170	.	
Mauritius	2004	150	0.13%	
Morocco	2003	20'040	0.14%	12'051
Mozambique	2004	600	-	5'000
Niger	2004	12	-	
Rwanda	2005	50	-	10
Senegal	2004	2'500	0.03%	3'000
South Africa	2001	45'000	0.05%	250
Sudan	2005	200'000	0.15%	650
Tanzania	2003	55'867	0.14%	30'000
Togo	2004	90	-	1
Tunisia	2004	155'323	1.59%	608
Uganda	2004	122'000	0.99%	33'900
Zambia	2004	187'694	0.53%	
Zimbabwe	2004	1'000	-	2'425
Total organic area/farms in Africa covered by the FiBL survey 2005 / 2006		**1.025.898**	**0.2%**	**119'140**

Source: FiBL-Survey 2005/ 2006

Table 26: Africa: Main land use categories in organic farming, Source: FiBL-Survey 2005/ 2006

ARABLE LAND (HA)	SHARE OF ARABLE CROPS OF TOTAL ORGANIC LAND	PERMANENT CROPS (HA)	SHARE OF PERMANENT CROPS OF TOTAL ORGANIC LAND	PERMANENT PASTURES(HA)	SHARE OF PERMANENT PASTURESOF TOTAL ORGANIC LAND	CERTIFIED LAND, USE NOT KNOWN(HA)	SHARE OF LAND WITH UNKNOWN USE OF TOTAL ORGANIC LAND	TOTAL LAND UNDER ORGANIC MANAGEMENT (HA)
76'961	8 %	298'598	29%	31'861	3 %	618"477	60 %	1'025'898

Information Sources

Algeria: Lina Al-Bitar, Coordination Committee, Organic Agriculture Sector, Mediterranean Agronomic Institute of Bari, Via Ceglie 9, 70010 Valenzano Bari, Italy

Benin: Emile Houngbo, 05 Bp 774 Cotonou (Republic of Benin), Tel. +229 90943976. Botswana: Brigitte Schuster. IUCN Botswana - The World Conservation Union. Kgale Siding (after St. Joseph College). P/Bag 00300. Gaborone. Botswana. Tel/Fax (gen.): + 267 3971584. Tel/Fax (dir): +267 3931883. Internet http://www.helvetas.ch/wDeutsch/topic_themes/biobaumwolle/info_burkina_faso.asp?navtext=Helvetas%20Projekte

Cameroon: Coffee data: Rice, 1998
Tropical fruits data: World Markets for Organic Fruit and Vegetables - Opportunities for Developing Countries in the Production and Export of Organic Horticultural Products. FAO publication, Rome 2001. http://www.fao.org/documents/show_cdr.asp?url_file=/DOCREP/004/Y1669E/Y1669E00.HTM

Côte d'Ivoire : Noufou Coulibaly. Organisation Professionelles Agricoles. Côte d'Ivoire

Egypt :
- Dr. Mohamad Yousri Hashem. Center for Organic Agriculture in Egypt (COAE). 14 Ibrahim El-Shawarby Street. P.O.Box 1535. Alf-Maskan. 11777 Cairo. Tel/Fax : +202 6248819
- Dr. Yousef Ali Hamdi. Chairman, ECOA(Egyptian Center of Organic Agriculture). 29 Yethreb st. Dokki, 12311, Egypt.
Please note that COAE provided data about cotton, rice, citrus, olives and pastures, whereas the other figures are a sum between COAE and ECOA data.
- Farms from 2003; source Lina Al-Bitar, Coordination Committee, Organic Agriculture Sector, Mediterranean Agronomic Institute of Bari, Via Ceglie 9, 70010 Valenzano Bari, Italy

Ghana: Bo van Elzakker. Director of Agro Eco. P.O.Box 63, 6720 AB Bennekom, the Netherlands tel +31.318.420.405, fax +31.318.414.820, Homepage: www.agroeco.nl and www.epopa.info and Samuel Adimado, GOAN (Ghana Organic Agriculture Network)

Kenya: Eustace Kiarii. KOAN Secretariat. P.O Box 7246. 00200 Nairobi. Tel: +254 20876119/4 Fax: +254 20876125, Homepage: www.koan.co.ke
For farm data (2003): Gunnar Rundgren, Grolink, http://www.grolink.se

Madagascar
- Coffee and cocoa data: Jean Marie Rakotovao. Director of information system. Ministry of agriculture, livestock and fisheries. Madagascar.
- Tropical fruits data: World Markets for Organic Fruit and Vegetables - Opportunities for Developing Countries in the Production and Export of Organic Horticultural Products. FAO publication, Rome 2001. http://www.fao.org/documents/show_cdr.asp?url_file=/DOCREP/004/Y1669E/Y1669E00.HTM
- Cocoa Data from: F.J. Koekoek. 2003. The Organic cocoa market in Europe. Opportunities for African Producers. EPOPA, Sweden/Netherlands
- Other data: Grolink 2004, Training Manual

Mali: Data about cotton: Organic Exchange http://www.organicexchange.org/

Mauritius: Mrs. Sunita Facknath and Dr. Bhanooduth Lalljee. Senior Lecturers. Faculty of Agriculture. University of Mauritius. Reduit. Mauritius. Tel: + 230 4541041 ext. 1394. Fax: +230 4549642

Morocco: Lina Al-Bitar, Coordination Committee, Organic Agriculture Sector, Mediterranean Agronomic Institute of Bari, Via Ceglie 9, 70010 Valenzano, Bari, Italy. Tel: +39 080 4606254. Fax: +39 080 4606206

Mozambique: Institute for Marketecology (IMO). Ines Hensler, Public Relations. Weststr. 51. 8570 Weinfelden. Switzerland. Tel: 0041-71-626 0 626 (general). Tel: 0041-71-626 0 633 (direct). Fax: 0041-71-626 0 623, Homepage: www.imo.ch

Niger: Institute for Marketecology (IMO). Ines Hensler, Public Relations. Weststr. 51. 8570 Weinfelden. Switzerland. Tel: 0041-71-626 0 626 (general). Tel: 0041-71-626 0 633 (direct). Fax: 0041-71-626 0 623. Homepage: www.imo.ch

Rwanda: Anne Turner, Ph.D. Horticulture and Commodity Development Specialist ADAR/Chemonics Kigali, Rwanda

Senegal: Cotton data: 2001. Organic Exchange http://www.organicexchange.org/
- Other data: 2003. Grolink, Training manual (2004)

South Africa: Farms: Piet Gernaat, BDAASA, Biodynamic Agriculture Association of Southern Africa, Paulshof 1056, South Africa, Tel:+27 11 8037191, Fax: +27 11 8037191
- Farmland: FAO (2002): "Organic agriculture, environment and food security", Environment and Natural Resources Series No.4, Rome 2002, ISBN 92-5-104819-3, page 69.

Sudan: El Hag Makki Awouda, Ministry of Agriculture and Forests, Khartoum – Sudan. P.O Box: 6699 Khartoum. Tel: + 2499 11344974
Tanzania: Cotton data: 2005. Organic Cotton Circular, issue 1-2005.
- Cocoa data from: F.J. Koekoek. 2003. The Organic cocoa market in Europe. Opportunities for African Producers. EPOPA, Sweden/Netherland
- Other data: 2003.: Charles S.A. Yongolo, Tanzania Commission for Science and Technology, P.O.Box 4302, Dar es Salaam, Tanzania

Togo: Institute for Marketecology (IMO). Ines Hensler, Public Relations. Weststr. 51. 8570 Weinfelden. Switzerland. Tel: 0041-71-626 0 626 (general). Tel: 0041-71-626 0 633 (direct). Fax: 0041-71-626 0 623, Homepage: www.imo.ch

Tunisia: Prof. Mohamed Ben Kheder. Director General Centre Technique de l'Agriculture Biologique B.P. 54 Chatt Meriem, 4042 Sousse, Tunisie Tel: +73 346279 ; Fax: +73 346277

Uganda: Coffe and cocoa data: 2004. Alastair Taylor. Agro Eco - Uganda Branch (Joint implementer of the EPOPA program). Box 71982. Kampala. Uganda. Tel/Fax + 256 (0) 41 268461
- Cotton data: 2001. Organic Exchange http://www.organicexchange.org/
- Other data: 2003. Grolink, Training manual (2004)
- Michael Hauser. Gregor Mendel Strasse 33. A-1180 Vienna. Austria, Europe. Tel: ++43(1) 47 654-3766 or 3750. Fax: ++43(1) 47 654-3792. Homepages: http://www.boku.ac.at/oekoland/ and http://www.boku.ac.at/dev-forum.html
- Total farms 2003 from Ssekyewa, Prof. Dr. Charles, Uganda Martyrs University, Faculty of Agriculture, P.O.Box 5498, UG- Kampala, Uganda, E-mail cssekyewa@umu.ac.ug

Zambia: Bridget O'Connor. Organic Producers & Processors Association of Zambia (OPPAZ). 14 Leopards Hill Road, Kabulonga. PO Box 35317. Lusaka, Zambia. Tel/Fax: +260 1265208 Tel: +260 1263070
- Other crops: Grolink 2004, Training manual
- Farms 2003: Annemieke de Vos, Green Fox Ltd, Lusaka, Zambia

Zimbabwe: The Organic Standard, Issue 17, September 2002.