

United Nations Conference on Trade and Development

**TRADING OPPORTUNITIES FOR
ORGANIC FOOD PRODUCTS
FROM
DEVELOPING COUNTRIES**

STRENGTHENING RESEARCH AND
POLICY-MAKING CAPACITY
ON TRADE AND ENVIRONMENT
IN DEVELOPING COUNTRIES



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TRADING OPPORTUNITIES FOR ORGANIC FOOD PRODUCTS FROM DEVELOPING COUNTRIES

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FOREWORD

Since 1999, the United Nations Conference on Trade and Development (UNCTAD) and the Foundation for International Environment Law and Development (FIELD), with the support of the United Kingdom's Department for International Development (DFID), have assisted developing countries in strengthening their research and policy-making capacity with regard to trade and environment issues.

Among the priority issues selected by beneficiary countries to be addressed under this programme has been the identification of opportunities for increased exports of organic agricultural products. I believe there are good reasons for this. As several of the papers in this volume indicate, a significant proportion of agricultural land in many developing countries is cultivated by traditional methods, with little or no use of agrochemicals. By converting some of these areas to organic agriculture, producers, and particularly small farmers, could improve soil fertility, move towards more sustainable forms of production and reduce their dependence on external inputs. In addition, where external agricultural inputs are expensive or difficult to obtain, as in many parts of the developing world, other methods of production might prove to be equally or even more efficient yet also more affordable.

UNCTAD is interested in organic agriculture because of the many ways in which it can contribute to trade and sustainable development for developing countries. In particular it is relevant to export diversification, poverty reduction, gender and environmental protection. The papers in this volume and other related work carried out by UNCTAD provide some useful observations and insights in this regard. First, the organic agriculture sector is still very small. Second, organic agriculture in developing countries faces several production, marketing and institutional constraints that need to be overcome. Third, subsidies and other support measures in developed countries have a serious negative impact on the competitiveness of organic products from developing countries that compete with locally or regionally produced organic products.

This book provides some ideas on how to address these issues, highlighting questions of standards, equivalence and certification. Even though many farmers in developing countries have been using organic methods of production for centuries, experience with certified organic agriculture is relatively new. This creates challenges for Governments and farming communities.

Certification issues figure prominently in a follow-up UNCTAD/FIELD project, also funded by DFID, and in work on organic agriculture carried out jointly by the United Nations Environment programme (UNEP) and UNCTAD through their Capacity-building Task Force on Trade, Environment and Development. In addition, the International Task Force on Harmonization and Equivalence in Organic Agriculture, recently created by UNCTAD, the Food and Agriculture Organization of the United Nations (FAO) and the International Federation for Organic Agricultural Movements (IFOAM), aims at facilitating international trade and access of developing countries to international organic markets.

Rubens Ricupero
Secretary-General of UNCTAD

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ABBREVIATIONS

AAN	–	Alternative Agriculture Network (Thailand)
AB	–	Agriculture Biologique (France)
ACP	–	African, Caribbean and Pacific (group of States)
ACT	–	Alternative Agriculture Certification Thailand, ACT
AME	–	Agriculture Man Ecology (India)
AMS	–	Agricultural Marketing Service (Unites States Department of Agriculture)
APEDA	–	Agricultural and Processed Food Export Development Authority (India)
BBTC	–	Bombay Burma Trading Corporation Limited
BET	–	Board of External Trade (United Republic of Tanzania)
BSE	–	bovine spongiform encephalopathy
CSA	–	community supported agriculture
CBI	–	Centre for Import Promotion (the Netherlands)
CBO		Church-based organization
CBTF	–	UNEP-UNCTAD Capacity Building Task Force on Trade, Environment and Development
CDO	–	Cotton Development Organization (Uganda)
CITEM	–	Center for International Expositions and Missions (Philippines)
DARAO	–	Department of Accreditation and Registry in Organic Agriculture (Costa Rica)
DENIVA	–	Development Network of Indigenous Voluntary Associations (Uganda)
DFID	–	Department for International Development (United Kingdom)
DIOFS	–	diversified and integrated organic farm system
DITC	–	Division on International Trade in Goods and Services, and Commodities (UNCTAD)
DPG	–	domestically prohibited good
DTI	–	Department of Trade and Industry (Philippines)
EPP	–	environmentally preferable product
EAGGF	–	European Agricultural Guidance and Guarantee Fund

EPOPA	–	Export Promotion of Organic Products from Africa (SIDA, Sweden)
EU	–	European Union
FAO	–	Food and Agriculture Organization of the United Nations
FCOJ	–	frozen concentrated orange juice
FIELD	–	Foundation for International Environmental Law and Development (United Kingdom)
FVO	–	farm verified organic (FVO)
GAIN	–	Global Agriculture Information Network (United States)
GFDC	–	Green Food Development Center (China)
GMO	–	genetically modified organism
GTZ	–	German Organization for Technical Cooperation
IAP	–	IFOAM Accreditation Programme
IBS	–	IFOAM Basic Standards
IBD	–	Biodynamic Institute (Brazil)
IFOAM	–	International Federation of Organic Agriculture Movements
IICA	–	Inter-American Institute for Cooperation on Agriculture
IIRD	–	Institute for Integrated Rural Development (India)
IMO	–	Institute for Market Ecology (Switzerland)
IPM	–	integrated pesticide management
INM	–	integrated nitrogen fertilizer management
IOAS	–	International Organic Accreditation Service
ITC	–	International Trade Centre (UNCTAD/WTO)
JAS	–	Japan Agricultural Standard (law)
JOAA	–	Japan Organic Agriculture Association
KACA	–	Korean Agricultural Cooperative Agency
KCU	–	Kagera Cooperative Union (United Republic of Tanzania)
KIHATA	–	Tanzanian Society of Organic Farming
KOFA	–	Korean Organic Farming Association
KSOA	–	Korea Society of Organic Agriculture Association
LDC	–	least developed country
LEISA	–	Low External Input Sustainable Agriculture (India)
LDDA	–	Lira District Development Agency (Uganda),

MAA	–	Ministry of Agriculture and Food Supply (Brazil)
MAFF	–	Ministry of Agriculture, Forestry and Fishery (Republic of Korea)
MAFF	–	Ministry of Agriculture, Forestry and Fishery (United Kingdom)
MAFF	–	Ministry of Agriculture, Forestry and Fishery (Japan)
MAL	–	Ministry of Agriculture and Livestock (Costa Rica)
MEA	–	Multilateral Environmental Agreement
NACF	–	National Agricultural Co-operative Federation (Republic of Korea)
NAPIO	–	National Agriculture Produce Inspection Office (Republic of Korea)
NEPA	–	National Environmental Protection Agency (China)
NOGAMU	–	National Organic Agricultural Movement of Uganda
NOSB	–	National Organic Standards Board (United States)
NDA	–	National Department of Agriculture (South Africa)
NGO	–	non-governmental organization
NOP	–	National Organic Program (United States)
NPOP	–	National Programme for Organic Production (India)
NTFP	–	non-timber forest product
OCN	–	Órgão Colegiado Nacional (Brazil)
OFDC	–	Organic Food Development Centre (China)
OFRC	–	Organic Food Research and Consulting Centre (China)
OFPA	–	Organic Foods Production Act (United States)
OA		organic agriculture
OTRDC	–	Organic Tea Research and Development Centre (China)
PDS	–	Peermade Development Society (India)
PNAO	–	National Programme for Organic Agriculture (Costa Rica)
PROCOMER	–	Promotora del comercio exterior (Costa Rica)
R&D	–	research and development
RDE	–	research, development and extension

RDO	– rural development office
SANU	– Sustainable Agriculture Network of Uganda
SEVA	– Society for Equitable Voluntary Actions (India)
SEWAK	– Society for Employment Welfare and Agricultural Knowledge (India)
SIDA	– Swedish International Development Agency
SOA	– Society for Organic Agriculture (India)
SOEL	– Stiftung Oecology und Landbau
SPS	– sanitary and phytosanitary
S&D	– special and differential (treatment)
TBT	– technical barrier to trade
TCA	– Trade Centre for Agricultural and Rural Cooperation
TED	– trade, environment and development
TRQ	– tariff rate quota
UEPB	– Uganda Export Promotion Board
UAS	– University of Agricultural Sciences (Bangalore, India)
UCDA	– Uganda Coffee Development Authority
UNCED	– United Nations Conference on Environment and Development
UNCTAD	– United Nations Conference on Trade and Development
UNDP	– United Nations Development Programme
UNEP	– United Nations Environment Programme
USDA	– United States Department of Agriculture
WALMI	– Water and Land Management Institute (India)
WTO	– World Trade Organization

1. OVERVIEW AND SUMMARIES

I.1 SYNTHESIS

BACKGROUND

The project, Strengthening Research and Policy-Making Capacity on Trade and Environment in Developing Countries (INT/98/A61), was implemented between June 1999 and April 2001 by the UNCTAD secretariat in collaboration with the Foundation for International Environmental Law and Development (FIELD) of the United Kingdom. It was funded by the United Kingdom Department for International Development (DFID). The following countries participated in this project: Bangladesh, Brazil, Costa Rica, Cuba, India, the Philippines, South Africa, the United Republic of Tanzania, Tunisia and Uganda. It brought together trade and environment officials from these countries in an exchange of national experiences and discussions on key issues,¹ aided by background papers prepared by developing country participants, consultants and staff from UNCTAD and FIELD.²

This report provides a synthesis of the studies and discussions on one of the key themes identified: *Promoting Trade in Environmentally Preferable Products (EPPs), in Particular Organic Products*. It also contains material prepared by experts from Cuba, Costa Rica, the Philippines, the United Republic of Tanzania and Uganda as well as from UNCTAD.

¹ Participants identified the following key themes to be addressed under the project:

- Biodiversity issues, specifically *sui generis* systems for the protection of traditional knowledge and access to genetic resources and mutual benefit sharing;
- Market access and trade liberalization;
- Promoting trade in environmentally preferable products (EPPs), in particular organic products;
- Sectoral studies on textiles and garments, and agriculture and fisheries products;
- Technology transfer issues and the WTO, Agenda 21 and multilateral environmental agreements (MEAs);
- The issue of exports of domestically prohibited goods (DPGs).

² The project organized workshops in Los Baños, the Philippines (11 to 13 November 1999); Havana, Cuba, (31 May to 2 June 2000); London, the United Kingdom (2 and 3 November 2000); and Dar es Salaam, the United Republic of Tanzania (4 to 6 April 2001).

About the studies

In section II, Vossenaar, Jha and Wynen³ highlight the fact that the increased demand for organic food, as a result of heightened consumer concerns in the area of food safety and quality, generates trading opportunities for developing countries. However, these opportunities should be assessed from the perspective of broader market dynamics. First of all, the current size of the market for organic food products is small. Secondly, products from developing countries will need to compete in markets where there are stringent quality requirements, increasing pressure for subsidies and other support measures, uncertain price premiums and preferences for locally produced food. Thirdly, several production and export constraints need to be addressed. Another problem is the lack of comprehensive and reliable data on organic production, consumption and trade.

In European countries, the certified organic sector represents between 1 and 8 per cent of total agricultural production. In the United States, only 0.2 per cent of the total agricultural area was under certified agricultural production in 1997 (and about 2 per cent of the major fruit and vegetable crops were organically cultivated). In most developing countries, the area devoted to certified organic production is less than 0.1 per cent of the total agricultural area.

Nevertheless, organic agriculture is among the fastest growing agricultural segments. The governments of several developed countries have announced ambitious targets for organic agricultural production. It is also growing rapidly in developing countries, although largely without government subsidies. The International Trade Centre of UNCTAD and WTO estimates that sales of organic products in developed countries amounted to almost US\$ 21 billion in 2000, and represented a market share of no more than 1 to 2 per cent in most of these countries. In several markets, however, demand is growing by approximately 10 to 20 per cent a year. Consumer demand currently appears to be growing even faster in the United Kingdom and Sweden.

³ *Vossenaar R and Jha V, Trading opportunities for organic food products from developing countries. Paper presented at the workshop in Dar es Salaam, April 2001.*

Price premiums are important incentives for many farmers to shift to organic production, although such premiums may fall when production increases. In several cases, price premiums may exist but be insufficient to render organic production profitable. However, when comparing profitability of organic agriculture with that of intensive agriculture, it is important to remember that market prices in general do not adequately reflect environmental costs and benefits.

To obtain a larger share of the organic market, producers and exporters in developing countries need to design appropriate marketing strategies, seek more direct links with retailers in importing countries – including through e-commerce – and create partnerships. Fair-trade organizations also play an important role in helping small producers to benefit from trade, including in the area of organic products.

In order to be able to take part in the organic market, organic standards need to be adhered to. The organic “guarantee system” assures consumers that the certified products are indeed organically produced. Briones describes the situation in many Asian countries where the personal guarantee of organic farmers is considered sufficient. This is common practice in small towns and villages across Asia. The producer’s guarantee is also sufficient where there has been a mutual understanding between producers and consumers, such as in various versions of producer-consumer partnerships. However, for the anonymous market, certification is required that is acceptable to the importing country.

For exporting countries, this means that they need to comply with several standards and certification systems. It is important to find a balance between the need for harmonization (for trade and fair competition) and the need to take account of local and regional conditions and requirements. The Basic Standards, Codex Alimentarius Guidelines of the International Federation of Organic Agriculture Movements (IFOAM) as well as national standards in the European Union and the United States are reviewed, with special attention to trade issues. According to the Codex Alimentarius Guidelines, import requirements should be based on the principles of transparency and equivalence.

An important constraint to the conversion to organic agriculture is the lack of assured markets and price premiums. Certification costs, technical standards and sanitary and phytosanitary (SPS)

requirements (applied to both conventional and organic products) may pose obstacles to exports of organic food products from developing countries. Furthermore, rapidly growing organic vegetable and fruit markets in developed countries tend to rely largely on locally produced food. Comprehensive policies need to be put in place to promote imports of organic food from developing countries. This includes, in particular, measures in the area of trade policy.

The authors propose several steps to reduce certification costs in developing countries. Small countries, in particular the least developed countries (LDCs), often experience significant problems in establishing the necessary infrastructure for national certification. Assistance from donors, as well as sharing the costs of certification with developed country partners, for example in the framework of fair-trade and development projects, may be the preferred option. On the other hand, for developing countries with a relatively large organic potential, establishing national standards and developing a national certification system may be a priority. For example, Argentina, Costa Rica and Tunisia have already established national standards. An important issue for developing countries is also how to make certification more affordable for small producers, for example through group certification.

Several recommendations are also directed to developing countries. First, there is a need to increase awareness of the environmental, economic and social benefits of organic production as well as trading opportunities. Second, both research and development (R&D) and training are needed. Third, developing countries should identify suitable marketing strategies and partnerships and appropriate government support should be provided. Governments in developing countries are not providing significant financial support to organic agriculture, and efforts should be made to outline options for these governments to enhance their ability to support organic producers. Meanwhile, governments can play a key role in raising awareness, providing market information, and promoting training and capacity building. Farmers' associations, non-governmental organizations (NGOs) and bilateral and multilateral donors can also play an important role here.

Importing countries can implement several measures to promote imports of organic products from developing countries. First, they can provide information on organic standards and regulations, market opportunities and other factors relevant to exporters from developing

countries. Second, multilateral and bilateral donors, as well as import promotion agencies can provide technical assistance. Third, access to their organic food markets can be made easier by simplified requirements and procedures for products from developing countries and enhanced application of the concept of equivalence between national organic standards.

So far, organic agriculture and trade in organic food products have not been significant issues in the context of the World Trade Organization (WTO). However, the current emphasis on bringing about a rapid increase in organic agriculture through a range of policy measures and growing international trade in organic food products may have implications for discussions in the WTO. Organic food standards have been notified under the WTO Agreement on Technical Barriers to Trade (TBT). Trade policy issues include equivalence, subsidies, conformity assessment procedures and trade preferences.

In section III, Vossenaar and Jha present information and analysis on particular developing countries participating in the project. In developing countries, certified organic agricultural production is still very limited. Yet significant shares of agricultural land are under traditional or "alternative" production methods, with little or no use of agrochemicals. Such areas could be converted to certified agriculture without major difficulties, provided that technical information and markets are available and certification costs can be kept low.

The paper by Briones⁴ focuses on the experiences of organic agriculture in several Asian developing countries. Briones summarizes achievements in standard setting, inspection and certification in selected Asian developing countries, and discusses production and exports of organic products from China, Japan, the Republic of Korea and some other countries. She then describes different models for promoting organic agriculture in Asian countries, which can be:

- *Government-led and farmer-supported.* An example is the Chinese model conceived by the National Environmental Protection Agency (NEPA) and supported by farmers;

⁴ Briones AM (University of the Philippines, Los Baños), *Organic Agriculture in Asia: Implications for Development, Environment and Trade in Developing Countries. Paper prepared for the workshop in Havana, May/June 2000.*

- *Farmer-led and Government-supported.* In the Republic of Korea, the Korean Organic Farming Association (KOFA) has played a lead role in developing organic agriculture, with financial support from the Government for training and inspection purposes. The Government has created an agency to manage certification, but only KOFA-inspected organic farms can be certified;
- *Producer-consumer partnership.* Japan's *Teikei* (co-partnership), developed in the early 1970s, is a unique form of the producer-consumer partnership.
- *Consumer-led.* Consumers' organizations that promote organic agriculture can be found in the Republic of Korea and Japan;
- *Partnership between civil society and farmer organizations.* In several Asian developing countries NGOs, including church-based organizations (CBOs), work in partnership with farmer organizations on education and training programmes for sustainable agriculture. Such programmes increasingly focus on the promotion of organic agriculture;
- *Village-based.* Several Asian developing countries have adopted village-based promotion of agricultural (and industrial) production in accordance with ecological principles, for example in China, Viet Nam and the Republic of Korea. However, agricultural production methods may not fully conform to standards of organic production.

In light of existing realities in rural Asia, Briones puts forward recommendations on organic agriculture in the context of an agenda for development, in particular the need for:

- Investment in infrastructure and the development of rural credit and savings institutions in favour of smallholder agriculture, together with poverty alleviation and the promotion of equality;
- A participatory approach to the development of smallholder agriculture, with the transformation of mono-cropping into diversified and integrated organic farm systems (DIOFS) that depend largely on renewable and local resources. Considering the knowledge-intensive nature of DIOFS, learning is an important element;

- Research and development institutions and programmes that work out solutions with local farmer communities and grassroots organizations.

The paper by Jha,⁵ UNCTAD project coordinator, focuses on the experiences of India. This country traditionally practised organic agriculture, but the process of modernization, in particular the green revolution in India, led to the increased use of chemicals. In recent years, however, the limitations of agriculture based on the use of chemicals and extensive irrigation have become apparent and there has been a resurgence of interest in organic agriculture. Several movements, such as LEISA (low external input sustainable agriculture), are being promoted in India. However, the scope of such programmes has been relatively limited.

Jha's paper draws on empirical work carried out under UNCTAD/UNDP projects in India coordinated by the author. Case studies cover Darjeeling tea, spices and coffee. In the case of Darjeeling tea, one major reason for tea gardens to turn organic was that yields were decreasing (although not merely due to excessive usage of chemicals). In addition, in the early 1990s tea gardens had to substantially reduce the use of pesticides because of restrictions on residues in export markets. Moving to organic tea was not seen as a big extra step. Finally, in the early 1990s, a market premium of over 80 per cent prompted many growers to export organic tea. Twenty of the 87 tea gardens in Darjeeling, most of them entirely export oriented, converted to organic tea production. However, only 10 gardens, exporting directly to buyers in Germany, Japan and the United States, experienced an increase in profit margins. In order to benefit from organic tea farming, market diversification into other products such as herbal tea and green tea, as well as ecotourism may be required.

Under this project, a survey was conducted of 28 organic spice growers in the Idukki district. Smallholders did not experience major difficulties in converting to organic production, but price premiums were not obtained. The Spices Board, an organization of the Government of India, and NGOs, such as the Peermade

⁵ Jha V, *Production and trade in organic agricultural products: India and Viet Nam. Paper presented at the workshop in Havana, May/June 2000.*

Development Society (PDS), actively support organic production. The Spices Board, for example, has elaborated guidelines for organic production, offers training in organic farming practices and has institutionalized a scheme for meeting 50 per cent of the cost of inspection and certification of accredited certification agencies. Insufficient markets for organic pepper, nevertheless, constitute a constraint and three quarters of certified organic black pepper has been sold in markets for conventional products.

A survey was also conducted of two groups of coffee growers. These surveys indicate that organic coffee cultivation has not yet been very successful in commercial terms. In many cases yields have diminished, costs have increased and price premiums have not materialized.

Jha notes that the renewed emphasis on organic agriculture in India originates from two concerns: (a) falling agricultural yields in certain areas, as a result of such factors as excessive use of chemical inputs and decreased soil fertility, and (b) environmental concerns. Export opportunities also play a role, but perhaps less than in other countries.

The organic agriculture movement in India is led by local IFOAM members and associates, NGOs, farmer organizations, commodity-specific boards (such as the Spices Board, the Tea Board and the Coffee Board) and other stakeholders. Recently, the Government has initiated some programmes in support of organic agriculture, but it does not provide subsidies.

Jha argues that organic agriculture in India helps maintain and improve soil fertility over long periods of time, which translates into sustainability. In such cases, organic agriculture can increase productivity, improve and protect the environment, protect human health and ensure sustainable development. Methods of organic and biodynamic cultivation can also significantly increase yields in traditional agriculture.⁶ Jha makes the following recommendations:

⁶ *This practice involves planting and harvesting according to the cycles of the moon, which is believed to lead to higher productivity.*

- Raise public awareness and promote the demand for organic products by increasing the range and quantity of organic products in the domestic market. At the same time, promote exports of high-value traditional products such as aromatic rice, upland rice, fruits and medicinal materials;
- Enhance the conservation and promotion of agro-biodiversity in the development of organic agriculture. This includes arranging diverse and suitable cropping patterns and cropping times, and exploring and utilizing local traditional varieties well adapted to the ecological and socio-economic conditions of each locality;
- Select and breed crops for pest and disease resistance, and for tolerance to adverse agro-ecological conditions; and
- Combine, in the most effective way, the use of crop varieties with integrated pesticide management (IPM) and integrated nitrogen fertilizer management (INM), thereby promoting the use of locally available resources.

Jha makes a number of recommendations in the area of trade policy, focusing on trade preferences for organic agriculture, and the use of subsidies, technical assistance and special measures for small producers in developing countries.

Llorente, Perez, Berenguer and Garrido⁷ from Cuba note that in the past, the large majority of Cuban farmers did not use methods of intensive agricultural production. All the same, most of them lacked an organic farming culture and, until recently, did not include organic agriculture among their objectives. However, since the 1980s various trends and initiatives have been more favourable for the development of certified organic production, in particular:

- The implementation of a programme for biological control of pests and bio- fertilization in the 1980s;
- A considerable reduction of imports of agro-chemicals as a result of the economic crisis in the 1990s;

⁷ Llorente B, Pérez N, Berenguer G and Garrido R, *Organic Products in Cuba. Paper presented at the workshop in Dar-es-Salaam, Tanzania, April 2001.*

- The Urban Agriculture movement, aimed at supplying vegetables and fresh products to city populations, using non-polluting production methods;
- The creation of a Steering Group for the Promotion of Organic Agriculture, aimed at demonstrating its benefits to producers;
- The initiation in 2000 of a programme aimed at promoting exports of organic food ingredients for industrial use, in cooperation with the Centre for Import Promotion (CBI) in the Netherlands.

Cuba now produces organic sugar, coconut, cocoa, coffee, vegetables, oranges and grapefruit. Organic sugar is the most advanced in terms of production, certification and exports. The sugar industry started organic production in 1988, based on the results of a research project carried out by the Central University of Santa Clara. Organic sugar is processed in the Carlos Baliño Mill and exports started in 2000. The processing mill is certified by ECOCERT, for the European Union (EU) market.

The authors conclude with the observation that organic products may open up new trading opportunities for developing countries. However, a number of constraints have to be overcome, such as lack of information, insufficient awareness of commercial and environmental benefits of organic agriculture, lack of certification infrastructure, lack of qualified personnel and lack of domestic demand. They recommend that possibilities to promote organic agriculture should be explored together with options for other traditional and sustainable methods of production to enhance national food security. They also highlight the need for international collaboration in the areas of certification and capacity building in favour of developing countries.

The sub-section on **Costa Rica** indicates that the transition towards organic agriculture in Costa Rica over the last 15 years has been the result of several factors. These include initiatives of small agricultural producers, motivated by the high cost of fertilizers; loss of efficiency of synthetic agro-chemicals; the search for new markets as well as health, environmental and biodiversity-related concerns. The area under organic production or in process of conversion is approximately 9,600 hectares, which represents 1.9 per cent of the total area under permanent cultivation. As much as 94 per cent of

certified farms are smaller than 5 hectares. Small producers therefore play a key role in advancing organic agriculture. There are more than 4,000 organic producers and approximately 135 organizations of such producers. For the most part, small-scale organic producers are organized in groups by region and products; the largest group is made up of 1,600 producers. Some provinces have local projects that group small producers, including indigenous communities, in sectors such as bananas, cocoa and coffee.

In the past, organic producers received most of their support directly from NGOs, cooperation agencies and some university projects. However, more recently the public sector, mainly through the National Production Council and the Ministry of Agriculture and Livestock (MAL), has become more actively involved in supporting this type of production and the commercialization of organic products. In 1995 Costa Rica established a National Programme for Organic Agriculture (PNAO) under the auspices of the MAL. Some of its activities in support of organic agriculture include:

- Carrying out consumer-oriented promotion campaigns;
- Promoting capacity-building programmes;
- Strengthening research; and
- Coordinating and unifying efforts between public and private organizations.

Furthermore, the PNAO has established general procedures related to accreditation of certification agencies, as well as rules and regulations for the inspection of organic agriculture. Specific laws and regulations set a legal framework for organic agricultural production. The competent authority dealing with issues related to the inspection of organic agriculture in Costa Rica is the Directorate of Phytosanitary Protection Services of the Ministry of Agriculture. Within this Directorate, the Department of Accreditation and Registration of Organic Agriculture is authorized to carry out the following tasks: implementing legislation concerning organic agriculture; creating a registry of operators; and approving and supervising different private and public inspection bodies.

Costa Rica has a good certification and accreditation infrastructure. Two national certification agencies and foreign

agencies with offices in Costa Rica have been accredited by the national authorities. In early 2003, the country was accepted on the EU's "third-country list" under Regulation 2092/91 (Article 11.1), which will greatly facilitate market entry for its products into the EU.

The PNAO also works towards the promotion of production and commercialization of organic products at the national and international levels. A large proportion of Costa Rica's organic production is exported to the EU (mainly processed foods such as banana *purée*, oranges, mango juice and coffee) and the United States (mainly coffee). The most important export products are organic coffee and organic bananas.

The paper by Waniala suggests that most of the traditional techniques of agricultural production in Uganda respect the rules of "organic" production. The fact that most of the land is still free of chemicals provides a good starting point. The National Organic Agricultural Movement of Uganda (NOGAMU), the national umbrella body, provides the institutional framework that enables such production systems to become certified as organic. It is connected to the sector umbrella bodies that act as intermediaries between the NOGAMU and actors such as out-growers and private exporters.

Waniala discusses constraints facing organic agriculture in Uganda, related to (a) production, (b) market access and marketing, and (c) institutional and policy-related issues.

The products that would benefit from a clear strategy of organic production and exports include coffee, cotton, sesame, cocoa, vanilla, and horticultural products. Experiences, particularly with regard to production and market access, vary across products. Some products have already been exported for some years and have benefited from external support in terms of know-how and certification. This is the case of cotton and sesame, promoted by a collaboration launched in 1994 between the Swedish International Development Agency (SIDA), the Government of Uganda and some private companies. The experience of other products, such as organic coffee, is more recent.

The study analyses two products – cocoa and vanilla – which are not being exported as organic, although their production

processes have all the necessary characteristics. The high fixed costs of launching a certification process are a major constraint and certification is too expensive for small producers in particular.

The study also describes the experience of horticultural products, with special reference to a case study of a local enterprise, African Organics. This company specializes in organic horticultural products (such as pineapple, ginger, and apple banana). It collects and exports the production of almost 100 organic farmers in eight different districts. The main incentive is the price premium that the company pays to the farmers. African Organics also ensures conformity with standards in export markets, based on its own internal inspection system that monitors farms on a monthly basis.

During the 2000/2001 season organic farmers were able to sell less than 20 per cent of their organic cotton and organic sesame as organic products. The rest had to be sold as conventional products. However, where organic farmers do receive price premiums, these tend to be significant. In the case of coffee, a 20 per cent premium over the conventional price was offered. Organic cotton farmers received a price premium of over 30 per cent. And while the conventional sesame crop fetched 500/kg Uganda shillings (U Sh) (US\$0.29), organic sesame farmers were paid U Sh 620/kg (US\$ 0.36). This price was maintained even when the price of conventional sesame fell to U Sh450 (US\$ 0.26) per kg. Organically-produced horticultural products fetch price premiums of 120 per cent and African Organics pays its growers of pineapple, apple banana, passion fruit and ginger a price premium in the range of 40 to 80 per cent.

A case study on cotton and sesame in Lira district in northern Uganda shows that although yields and unit costs of production of organic and conventional coffee and sesame are similar, price premiums give organic farmers higher returns.

Waniale concludes by presenting the challenges and opportunities for organic agriculture. Uganda is already well placed to adopt organic agriculture as part of its agricultural specialization, in large measure due to the abundance of land and the lack of extensive use of chemical products. Conversion could easily be made among small-scale producers, who constitute the main source of agricultural production in Uganda. Organic agriculture offers an avenue for farmers to improve much more on farm efficiency and

profitability than they could under traditional management. Moreover, the majority of small-scale producers can afford to make this change. The opportunity for Uganda to become an important exporter of organic products depends mainly on its certification capacity. The country currently lacks a locally based certification body. A national institution that would actively support organic agriculture and facilitate the creation of a local certifying body is needed to lower certification costs and to provide incentives. It would also be necessary to ensure permanent supervision of the crops and to demonstrate the significance of the potential market for organic products in order to avoid overproduction as has occurred in the past.

Waniala recommends that the Government develop a clear policy on organic agriculture and play a proactive role through supportive policies. Areas of support could include:

- Awareness-raising and promotion of a local market for organic products;
- If producer subsidies are deemed to be advisable, credit programmes for organic agriculture would be a possibility, and subsidizing the establishment of local standards and a certification scheme that is internationally recognized;
- Identification of markets; and
- Provision of information on prices and possible market saturation.

National bodies such as the Uganda Export Promotion Board (UEPB) could also undertake these activities. In addition, these exporters could gainfully focus their out-grower initiatives in areas where they can easily realize a critical mass, and, accordingly, reduce the costs of supervision and marketing.

International bodies could be sought for:

- Assisting with certification costs, at least initially; and
- Assisting exporters in obtaining direct contacts with buyers in Europe (to obtain higher price premiums). This is especially important

in immature markets (such as for organic products), where traders may receive monopoly rents.

Conclusions

All the papers in this publication emphasize the important potential economic, social and environmental benefits of organic agriculture in developing countries. Briones, Jha and Waniala argue that organic agriculture can increase productivity, improve and protect the environment, protect human health and ensure sustainable development. Waniala notes that yield levels under organic management may be lower than those where fertilizers have been applied, but are higher than those under traditional management practices. Thus organic agriculture offers an opportunity, affordable to small-scale farmers, to improve farm efficiency and profitability above levels achieved under traditional management.

However, the papers in this volume emphasize that organic agriculture must be considered from a realistic perspective. First, the sector is still very small. Second, organic agriculture faces production, marketing and institutional constraints that need to be overcome. In particular, the availability of markets and price premiums is often uncertain. Third, complex import procedures and certification/accreditation issues need to be addressed. Fourth, the effects of subsidies and other support measures in developed countries on the competitiveness of organic products from developing countries that compete with locally or regionally produced organic products are a matter of concern.

While many farmers in developing countries have practised organic methods of production for centuries, experience with certified organic agriculture is relatively new. This poses great challenges to governments and farming communities. Larger conversion to certified organic production also requires that certification be affordable and market outlets be available. The papers in this publication indicate that comprehensive policies at both national and international levels are required, including in the area of trade policy, to allow developing countries to derive larger economic, social and environmental benefits from the increased interest in organic agriculture worldwide. The results of these papers continue to be complemented and disseminated at UNCTAD meetings, including at a workshop on Trading Opportunities for Developing

Countries in Organic Products in Geneva in June 2001, organized by the informal UNEP-UNCTAD Capacity-Building Task Force on Trade, Environment and Development, and one on Policy Dialogue on Promoting Production and Trading Opportunities for Organic Agricultural Products in Brussels in February 2002. Several suggestions contained in this publication are reflected in the recommendations of subsequent UNCTAD expert meetings.

1.2 RECOMMENDATIONS OF THE UNCTAD EXPERT MEETING⁸

The papers in this volume and the recommendations contained therein provided useful inputs to the preparations for discussions at the UNCTAD Expert Meeting on Ways to Enhance the Production and Export Capacities of Developing Countries of Agriculture and Food Products, Including Niche Products, such as Environmentally Preferable Products held in Geneva on 16-18 July 2001. This section summarizes the experts' recommendations in the area of organic agriculture.⁹

Recommendations at the national level

Recognizing that the share of organic products in agricultural markets is generally less than 2 per cent, Governments, in cooperation with farmers' associations, NGOs and other stakeholders should play a proactive role in promoting organic agriculture and trade, in particular by:

- Increasing awareness of the environmental, economic and other benefits (such as livelihoods and living conditions) of organic agriculture, as well as the trading opportunities it provides developing countries;
- Identifying and recognizing civil society organizations of the local organic community, and facilitating their participation, along with the Government, in a national multi-stakeholder

⁸ Government-nominated experts and representatives from ITC, FAO, IFOAM and civil society participated in the Expert Meeting. On 2-4 October 2002, a similar meeting was held in Geneva, entitled *Environmental Requirements and International Trade*.

⁹ These should not be considered as agreed recommendations; they represent a variety of views expressed by experts. This section represents only those recommendations that are most relevant in the context of this publication.

committee to develop organic policies and a national plan for the organic sector;

- Promoting R&D in local organic production systems and locally adapted, high-quality, disease-resistant seeds and planting materials, bio-control agents and fertilizers;
- Providing training and technical advice on organic farming practices through agricultural extension services, and developing information networks among farmers;
- Designing, implementing and enforcing national and regional standards, based on international standards such as the IFOAM Basic Standards;
- Promoting certification infrastructure, including local certification bodies, particularly where there is potential for significant organic production and exports;
- Promoting suitable marketing strategies and partnerships;
- Supporting the development of a domestic market for organic agricultural products;
- Providing, where possible, financial support to farmers, particularly during conversion periods;
- Introducing supportive government policies; and
- Identifying and helping to develop appropriate subsidies or incentives to support the development of strong organic production systems in developing countries, especially to assist farmers in converting to organic production.

Recommendations to the international community

The international community should support the efforts of developing countries, especially LDCs, to derive economic, social and environmental benefits from organic agriculture and trade, in particular by:

- Assisting developing countries in designing national and regional organic standards, based on international standards such as the IFOAM Basic Standards and the Codex Alimentarius Guidelines;

- Promoting and facilitating a framework of harmonization, including the IFOAM Basic Standards and Accreditation Programme,¹⁰ which establishes a framework for mutual recognition between IFOAM-accredited certifiers;
- Promoting market research on issues such as trends in supply and demand in international markets and marketing channels, certification and quality requirements to be met in importing countries;
- Reducing costs of certification of organic producers in developing countries by: (a) setting up local certification systems, (b) promoting smallholder certification, and (c) reducing the costs of international accreditation for certifiers in developing countries;
- Ensuring transparent and simple rules and requirements governing imports of products for sale in organic markets, including through the application of the concept of equivalence;
- Providing information on organic standards and regulations, market opportunities and other factors relevant to exporters from developing countries;
- Facilitating technical assistance, including under the TBT and SPS Agreements, to help developing countries meet organic standards in international markets, as well as to participate in international standard-setting bodies;
- Extending benefits to organic agricultural products in preferential trade arrangements;
- Examining, carefully, the implications, if any, for developing countries of subsidies to assist farmers in converting to organic production and post-conversion support programmes;
- Identifying and helping to develop appropriate subsidies or incentives to support the development of strong organic production systems in developing countries, especially to assist farmers in converting to organic production; and
- In the follow-up to the LDC-III Conference, full attention should be paid to “Supporting LDCs’ efforts to develop and take advantage of niche markets for organic products and handicrafts, as well as cultural products” paragraph 68(bb).

¹⁰ See *Vossenaar R and Jha V, box 2*.

Recommendations to UNCTAD

UNCTAD, in cooperation with ITC (International Trade Centre) of UNCTAD/WTO, FAO, IFOAM, UNEP and other relevant institutions, should contribute to the development of the supply capacity of developing countries and assist them in deriving advantages from growing markets for, among others, organic products and non-wood forest products, in particular by:

- Carrying out analysis and promoting policy dialogues on trade and the sustainable development aspects of organic agriculture;
- Considering ways to promote the practical application of the concept of equivalence and mutual recognition between government and private sector standards;
- Promoting national and regional capacity-building projects, in particular in the framework of the UNEP-UNCTAD Capacity-Building Task Force on Trade, Environment and Development (CBTF), to support interested developing countries in exploiting trading opportunities for environmentally preferable products;
- Examining market strategies, including through the use of electronic commerce; and
- Facilitating and promoting the creation of local and regional certification bodies in developing countries, in particular LDCs.

2. TRADING OPPORTUNITIES FOR ORGANIC FOOD PRODUCTS FROM DEVELOPING COUNTRIES

René Vossenaar, Veena Jha and Els Wynen, UNCTAD

2.1 SOME KEY ISSUES

Market opportunities for several categories of “environmentally preferable” products (EPPs) appear to be promising. In particular, heightened consumer concerns in the area of food safety and quality, and about the environmental effects of agriculture, have generated greater demand for organic food, especially in developed countries. Concerns about genetically modified organisms (GMOs), recent food scares related to bovine spongiform encephalopathy (BSE, popularly known as mad-cow disease) and other problems have had far-reaching implications for agricultural production and demand for food products.¹¹ It is likely, however, that abating concern over other food scares leads to lower demand for organic foods in Europe. Such instability in the market is to be expected in a new industry.

To the extent that producers in developing countries use traditional production methods (applying little or no chemical fertilizers and pesticides), they have certain advantages over producers in developed countries in producing organic food products. On the other hand, in several developed countries there is increasing pressure for subsidies and other support measures. This implies that developing countries may face stiffer competition in existing niche markets for certain organic products, though many of their products are not available (such as coffee) or out of season in developed countries. Overall, to the extent that demand grows or outpaces domestic supply in developed countries, recent trends appear to create good trading opportunities for developing countries in the short- and medium-term.

Organic farming enables smallholders to achieve household food security and earn modest incomes while regenerating the land,

¹¹ Several governments have announced ambitious plans to promote organic agriculture. For example, the German Government plans to ensure that organic agriculture will obtain a 20 per cent market share in 10 years. (See statement by Renate Künast, German Minister for Consumer Protection and Agriculture on 8 February 2001, at: <http://www.bml.de>)

regaining biodiversity and supplying quality food to local communities. The potential of organic agriculture to contribute to trade, environmental improvement and social development in developing countries has been highlighted in various UNCTAD reports.¹² However, there is a need to overcome existing policy, market and technical obstacles, such as lack of information, insufficient technical capacity, and lack of supportive policies at home and abroad.¹³

In this section background information is presented and recent developments analysed, with particular reference to developed countries.¹⁴ Section III summarizes the experiences of individual developing countries participating in this project. Section IV identifies policies and measures to strengthen the capacities of developing countries to take advantage of trading opportunities for organic products.

Definition

The International Federation of Organic Agriculture Movements (IFOAM) describes organic agriculture as follows:

Organic agriculture includes all agricultural systems that promote the environmentally, socially and economically sound production of food and fibres. These systems take local soil fertility as a key to successful production. By respecting the natural capacity of plants, animals and the landscape, it aims to optimize quality in all aspects of agriculture and the environment. Organic agriculture dramatically reduces external inputs by refraining from the use of chemo-synthetic fertilizers, pesticides, and pharmaceuticals. Instead

¹² See UNCTAD, *Organic Agriculture in Developing Countries: Potential for Trade, Environment Improvement and Social Development. Report by the UNCTAD secretariat, UNCTAD/COM/88, July 1996.* See also, UNCTAD report prepared for the Expert Meeting on Ways to Enhance the Production and Export Capacities of Developing Countries of Agriculture and Food Products, Including Niche Products, such as Environmentally Preferable Products (EPPs), TD/B/COM.1/EM.15/2, June 2001.

¹³ Robins N, *Building sustainable markets.* In: Ward H and Brack D, *Trade, Investment and the Environment.* London, the Royal Institute for International Affairs, Earthscan Publications Ltd, 1999.

¹⁴ In part based on Internet research. It also draws from and updates the UNCTAD secretariat report, UNCTAD/COM/88, *op.cit.*

it allows the powerful laws of nature to increase both agricultural yields and disease resistance.

Major objectives of organic agriculture include improving soil fertility and quality and enhancing biodiversity on the farm, in both time and space. Synthetic fertilizers and pesticides are seen as an impediment in this process, and are not allowed to be used in the production. These aims are integrated with the farmer's primary objective of operating a viable farm.

In the context of the Codex Alimentarius Guidelines, "organic" is a labelling term which denotes products that have been produced in accordance with organic production standards and are certified by a duly constituted certification body or authority. Other terms can be used, such as "biological" and "ecological", depending on the country. "Biodynamic" is also covered under this term, but it includes additional practices.

Size of sector

It is estimated that there are over 22 million hectares under certified organic agricultural production worldwide. The largest areas are in Australia, Argentina, Italy, the United States and Germany (see table II.1). Australia's area represents close to half of the world total, though that figure is dominated by one syndicate of extensive grazing properties in one location. In European countries, the certified organic sector comprises up to 11.3 per cent of the total agricultural area. As a percentage of total agricultural acreage, certified organic agriculture is most important in Austria, Switzerland, Italy, Finland, Denmark and Sweden (though not all of them are shown in the table). In most developing countries, the certified organic area is less than 0.1 per cent of the total agricultural area (see also table II.1).

**Table II.1. Selected developed countries:
Areas under certified organic agricultural production**

Country	Certified organic area (hectares)	As a percentage of total agricultural area (%)
Australia	10 500 000	2.31
Argentina	3 192 000	1.89
Italy	1 230 000	7.94
United States	950 000	0.23
Germany	632 165	3.70
United Kingdom	679 631	3.96
Spain	485 079	1.66
France	419 750	1.40
Canada	430 600	0.5
Austria	285 500	11.3
Brazil	275 576	0.08
Total*	22 811 267	

Source: Stiftung Oekologie und Landbau (SOEL), 2003.¹⁵

* Also includes countries not shown in this table.

In Germany, in 2003 there were 14,703 organic-production holdings, with just over 632,000 hectares farmed, accounting for about 3.7 per cent of the total agricultural area. In the United States, only 0.2 per cent (1.3 million acres) of total cropland was under certified agricultural production in 1997. For corn and soybeans (i.e. the major United States field crops) this was only 0.1 per cent. Organic production was relatively more important for major fruit and vegetable crops (such as apples, carrots, lettuce and grapes), with around 2 per cent of total cropland under certified organic production. Half the organically produced vegetables originated in California.¹⁶

¹⁵ Stiftung Oekologie und Landbau (SOEL), *Organic Agriculture Worldwide 2003, Statistics and Future Prospects* (http://www.soel.de/inhalte/publikationen/s_74_ges.pdf): 82-3.

¹⁶ Economic Research Service, *United States Department of Agriculture, United States Organic Agriculture*. <http://www.ers.usda.gov/emphases/harmony/issues/organic/organic.html>

Organic agriculture is among the fastest growing segments of agriculture in many developed countries. At present, the sector in the United Kingdom is one of the fastest growing in the EU. The area of land converted to organic production or in the process of conversion to organic farming increased from 50,000 hectares in 1996 to around 680,000 hectares at the end of 2001.¹⁷ In the United States, certified organic cropland more than doubled from 1992 to 1997.¹⁸ And, as discussed in section 3, organic agriculture is also growing rapidly in developing countries.

Demand

1. Trends

A review by the ITC indicates that in most developed countries the market share for organic agricultural products is no more than 2.5 per cent. In some countries such as Austria, Denmark and Switzerland, market shares are higher. The market for organic produce in developed countries in 2000 was estimated to be around US\$ 16 billion at the retail level. In several markets, however, demand was estimated to be growing at the rate of approximately 15 to 20 per cent a year. Estimates for 2001 were therefore closer to US\$ 20 billion. For 2003, the forecast for the world market for organic food and beverages is between US\$ 23 and US\$ 25 billion (see table II.2).

Following highly publicized food scares, consumer demand for products from organic agriculture appeared to be growing fast in the past. In the United Kingdom, for example, demand for organic foods was reported to be increasing by 40 per cent per year (albeit from a very low base), with supply increasing by only 25 per cent.¹⁹ In this market, as in others, organic food is seen as safe, natural,

¹⁷ This represents 4.0 per cent of the agricultural area in the United Kingdom (SOEL, 2003). Nearly 4,000 holdings – or around 1.7 per cent of the total number – are now registered with an organic inspection body.

¹⁸ Greene C, *US organic farming emerges in the 1990s: adoption of certified systems. Agricultural Information Bulletin No.770. Washington., DC, Economic Research Service, United States Department of Agriculture, 2001.*

¹⁹ Various press releases at BioFach, February 2001. According to the Soil Association's *Organic Food and Farming Report 2000, United Kingdom demand for organic food increased by 55 per cent a year to April 2000* (<http://www.soilassociation.org>)

“environmentally friendly”, “animal welfare friendly” and “free of genetic modification”. Overall, retail sales of organic food products in the United Kingdom amounted to around US\$ 1,150 million for the year 2000. Imported products accounted for 75 per cent of organic sales in 1998/99. Imports of organic meat, which were negligible in 1997/98, comprised over 4 per cent of total supply that year. Eighty per cent of organic fruit and vegetables sold in the United Kingdom are imported. In Germany, sales of foodstuffs from organic production currently represent 2 to 2.5 per cent of food retailers’ total turnover.²⁰ As mentioned earlier, the German Government’s policy aim is for organic agriculture to gain a 20 per cent market share in 10 years. In Germany, 81 per cent of all organic vegetables on the market are domestically produced.²¹

Concerns have also been expressed that the current high growth rates of demand are not sustainable in the long term and that Government targets for increased production may be unrealistic. It is believed that market forces alone will not be sufficient, and that large amounts of subsidies may be required, to achieve these ambitious targets. Also, according to some sources, there may be a risk of market saturation, though this will depend on the responsiveness of prices in the market.

²⁰ Most organic products in Germany (46 per cent) are traditionally sold over the counter in some 5,000 organic food shops and health food stores. The conventional retail food trade is, however, strongly following suit – partly with its own organic brands – with a share of 26 per cent in 2001. Direct marketers make up 19 per cent of the turnover. In the United Kingdom, the large supermarket chains, with 74 per cent of the market, constitute the major sales channels. (Information taken from the BioFach website: www.biofach.de.)

²¹ Since supermarkets currently play a small role, there is high growth potential in the German market. The introduction of a national logo in 2001 should facilitate the marketing of organic foods. The Government supported an information campaign for the new logo in 2002 (GAIN Report nr. GM2002, at: <http://www.fas.usda.gov/gainfiles/200203/135683621.pdf>).

Table II.2 Overview of world markets for organic food and beverages

Markets	Retail sales estimate (US\$ million) 2000	Retail sales forecast (US\$ million) 2003	Approximate share in total food sales (per cent)	Expected annual growth rates 2003–2005 (per cent)
Total	15 225–16 475	23 000–25 000	-	
Europe	6 950–7 650	10 000–11 000	-	
- Germany	2 100–2 200	2 800–3 100	2.0-2.5	5-10
- United Kingdom	1 100–1 200	1 550–1 750	1.8-2.3	10-15
- Italy	1 000–1 050	1 250–1 400	1.0-1.5	5-15
- France	800–850	1 200–1 300	1.0-1.5	5-10
- Switzerland	450–475	725–775	2.5-3.0	5-15
- Denmark	350–375	350–375	2.5-3.0	0-5
- Austria	200–225	325–375	2.5-3.0	5-10
- Netherlands	275–325	425–475	1.0-1.5	5-10
- Sweden	175–225	350–400	1.5-2.0	10-15
- Belgium	100–125	200–250	1.0-1.5	5-10
- Other Europe*	400–600	790–900	-	-
United States	7 500–8 000	11 000–13 000	2.0-2.5	15-20
Canada	500	850–1,000	1.5-2.0	10-20
Japan	275–325	350–450	<0.5	-
Oceania		75–100	<0.5	-

*Finland, Greece, Ireland, Norway, Portugal and Spain. For 2003 it includes Ireland.

Source: ITC, compiled in January 2003.

Note: The figure for Japan is considerably lower than previous ITC estimates (US\$ 2–2.5 billion) of the Japanese organic retail sales. This downward revision is a result of many organic sales being relabelled as “green” after the introduction in 2000 of the Japan Agricultural Standard (JAS).

Some believe that the situation in Austria, where a number of organic farmers have reverted to conventional methods, is an example of the effect of market saturation. However, others attribute the drop in the number of organic farmers in that country to the fact that other agro-environmental schemes became available with similar subsidy rates as for the organic scheme but with less strict requirements.²²

2. Products

The major organic products sold in global markets include fresh fruits and vegetables, dried fruits and nuts, processed fruits and vegetables, cocoa, spices, herbs, vegetable oils, sweeteners, dried leguminous products, meat, dairy products, alcoholic beverages, processed food and fruit preparations. Non-food items include cotton, cut flowers, animals and potted plants.²³

Safety, taste, freshness and quality rank among the main reasons for purchases of organic food in Europe and the United States.²⁴ However, the market for organic products does not necessarily follow the trends of conventional products. For example, while the United Kingdom is the major consumer of conventional tea, Germany is the major consumer of organic tea.

Price premiums

According to several studies, price premiums for organic niche products can be significant. However, these may fall when production increases, although increases in demand would counteract this. Production increases may be particularly relevant in countries with

²² See Lampkin N, Foster C, Padel S and Midmore P, *The Policy and Regulatory Environment for Organic Farming in Europe. Report commissioned by the European Commission. Stuttgart, Germany, University of Hohenheim, 2002: 49.*

²³ ITC, *Organic Food and Beverages: World Supply and Major European Markets, Geneva, 1999.*

²⁴ ITC (1999) *op.cit.*; and Lohr L. *Factors affecting international demand and trade in organic food products. Athens, GA., Department of Agricultural and Applied Economics, College of Agricultural and Environmental Sciences, University of Georgia, 2001.*

policies that encourage organic farming.²⁵ A recent study argues that market saturation, seasonality (for fresh produce), outlet type, marketing type and costs of production are determinants of price premiums.²⁶

In general, price premiums to organic producers should compensate for lower net returns to farming – influenced by a management system that tries to minimize environmental costs. These lower returns can be due to lower yields, a change in the rotation that includes lower-value enterprises, and certification costs. But the price premiums do not necessarily need to be high at retail level, provided that marketing agents (i.e. importers, wholesalers and retailers) do not appropriate most of the premium. As producers receive only a small percentage of the retail prices – barely surpassing 10 to 20 per cent for many products, changes in farm-gate prices may not significantly affect the retail prices. However, higher handling and marketing costs for organic produce would require higher marketing margins for wholesalers and retailers of organic, as compared with conventional, products.²⁷ Thus an important question is what the extra trading costs – as opposed to production costs are – and who captures the price premiums. Much will depend on such factors as the category of organic products, market structures and sales strategies.

A special case exists for those producers who are in the conversion process. Investments required to shift to organic agriculture, production losses during conversion, and the limited possibility of capturing premiums during that time, cause politicians

²⁵ In Sweden, for example, the trebling of organic land resulting from an official conversion scheme contributed to a swamping of the organic cereal market, and the disappearance of the organic premium. (See Alexander D, paper presented at an UNCTAD/UNDP/STAMEQ workshop on Organic Agriculture held in Hanoi, September 2000, under Project VIE/98/036). Another reason for the increased supply in the European grain market was the changed situation between Eastern and Western Europe in the early 1990s (Michelsen J, Hamm U, Wynen E and Roth E, *The European Market for Organic Products: Growth and Development*. Report commissioned by the European Commission. Stuttgart, Germany, University of Hohenheim, 2000.

²⁶ Lohr L, *op. cit.*

²⁷ Limited retail outlets, higher handling risks, smaller handling and sales volumes, education of sales assistants and special promotion and information campaigns for consumers, all create additional costs.

often to concentrate on producers in transition, and to contemplate subsidies.

In most developed country markets, imports and marketing of major organic food products are increasingly concentrated in a few companies. This market structure carries the risk that only a few marketing companies appropriate most of the price premiums at retail level. Stringent certification requirements and the role of certain environmental labels could reinforce the bargaining position of key marketing companies.²⁸ This explains the interest, both of producers and consumers, in promoting more direct links between producers and customers and “fair-trade” schemes for enhancing the production, export and marketing of organic produce at fair producer prices.

Farm financial performance

Surveys show that in the past, farmers converted to organic management largely because of problems they experienced with conventional farming practices. These affected health – either the farmers’ or their families’ – crops and livestock (thus having an impact on the farm’s profitability), or created environmental problems.²⁹ More recently, it is often assumed that farmers, both in developed and developing countries, are aware of the environmental and occupational improvements that organic production can generate, but that an important motivation for conversion is improved income in the short term. Price premiums are important incentives for many farmers to shift to certified organic production, as are reduced outlays for chemical inputs.

²⁸ *Although the organic foods industry remains highly fragmented, with a large number of small companies operating in the sector, the rapid development of the market has attracted the interest of the world’s major supermarket chains and food processors, and many of the large multinationals now have products competing in the market. (OrganicTS).*

²⁹ *See, for example, Lockeretz W and Madden P, Midwestern organic farming: a ten-year follow-up, American Journal of Alternative Agriculture, 1987, 2 (2): 57-63; Lockeretz W and Wernick S, Commercial organic farming in the corn belt in comparison to conventional practices, Rural Sociology, 1980, 45 (4): 708-22; and Wynen E, Sustainable and conventional agriculture: An economic analysis of Australian cereal-livestock farming. PhD-thesis, La Trobe University, Melbourne, Australia, 1989. (<http://www.elspl.com.au/abstracts/orgprodgen2001.HTM>).*

In many cases, however, possible price premiums may not be sufficient to induce large shifts to organic agriculture. There are, therefore, strong pressures for support measures to make conversion to organic agriculture remunerative. As will be discussed later, some developed countries are providing much larger subsidies and other support measures than other developed countries and developing countries in general, which could make it difficult for producers of the non-subsidizing countries to compete in markets for organic products.

In a summary of a selection of papers on the economics of organic agriculture worldwide it was concluded that, organic farmers generally experienced lower yields, lower variable costs, similar fixed costs and lower gross profit margins as compared to conventional farmers. Therefore, price premiums for organic products would be needed to ensure similar net returns to those obtained from conventional farm products. However, there were wide variations. For example, yields showed lower or no decreases in less intensively farmed areas such as those in the United States, Canada and Australia – of special relevance to many developing countries – and similar net returns were not dependent on premiums in all countries (such as in Australia).

Another study, done more recently, on farm profitability in Europe³⁰ summarized the situation as follows:

- Profits were comparable between organic and conventional farms, though they varied considerably by both locality (country) and kind of enterprise;
- Arable farms in particular were doing well, though specialized, highly intensive farms generally were not profitable under organic management;
- Very few studies were available on pig and poultry farming, possibly indicating few conversions in those sectors;

³⁰ *Offermann F and Nieberg H, Economic performance of organic farms in Europe, Organic farming in Europe: Economics and Policy, Vol. 5, Stuttgart, Germany, University of Hohenheim, 2000.*

- Support payments for organic farming and price premiums were important contributory factors to the profitability of organic farms in the study area.

A study in the United States claimed that producers there were turning to organic farming in order to lower input costs, conserve non-renewable resources, capture high-value markets, and boost farm income, especially as prices fell for staple commodities.³¹

Some studies on developing countries (e.g. Jha and Wani, in this volume, and some cited in FAO (1998)³² indicate that net financial returns for organic farms may be better than for farms using traditional production and management practices. However, yields may be lower than on farms using chemical inputs. However, yields are only one aspect influencing net profits, as long-term profits also depend on input costs, total farm production (important due to the need to change rotations) and product price. Possibilities for reducing input costs, rather than receiving price premiums, could be important.³³

It has been argued that the environmental benefits of organic products are not fully reflected in current price premiums that result from market forces. Alternatively, the prices of competing products with a greater environmental impact do not fully reflect social and environmental costs. The competitiveness of organic products may increase in the longer term as environmental policies requiring greater cost internalization are put in place.³⁴

³¹ Greene C, *U.S. Organic Farming Emerges in the 1990s: Adoption of Certified Systems*, USDA, Economic Research Service, Agriculture Information Bulletin (ERS-AIB) No. 770, June 2001.

³² FAO, *Evaluating the potential contribution of organic agriculture to sustainability goals*. FAO's technical contribution to IFOAM's Scientific Conference Mar del Plata, Argentina, 16-19 November 1998. Available on: <http://www.fao.org/organicag/doc/organic.doc>.

³³ Gitli E and Acre R, *Considerations on the International Marketing of Organic Products in Central America and some Ideas on Costa Rica*, March 2001.

³⁴ Rundgren G, (IFOAM), in his welcome address at the BioFach 2001 trade fair stated: "Yes, we can use the kind of direct support to organic farming provided for within the European Union agri-environmental programmes. We could use even more of creative support to the sector, e.g. market development support. But even more important for the development of organic farming is to get rid of the distortions that favour industrial, chemical agriculture, to make food prices reflect the full costs of production – i.e. to internalize external costs like environmental degradation, health costs etc. into the price of food". Press release, 15 February 2001.

A study on India has noted that while organic production is seen to bring a number of private benefits to the farmer, there are also a number of public goods benefits that support the case for public intervention in this sector. These include pollution reduction, food safety, less soil erosion, conservation of biodiversity, animal welfare, and the maintenance of rural communities and employment.³⁵

Supply factors

Among the major constraints facing growth in organic production is the conversion period, during which a temporary drop in production is possible and price premiums are unlikely. Once established as an organic farmer, there are still issues of knowledge about availability and efficacy of inputs, including labour, and effects on yields and total productivity on the farm. In addition, marketing issues such as finding a market, facilities for certified storage, and processing (especially regarding livestock) can be of importance.³⁶ In these respects, constraints in both developed and developing countries appear to be similar.³⁷

Developing countries, however, may be in a better position to change towards organic management. To the extent that producers in these countries use traditional production methods (using little or no fertilizers and pesticides), conversion to certified organic production may be relatively easy, provided that affordable certification services are available. India, for example, is believed to have good opportunities for increasing organic production. First,

³⁵ Kaushik A and Saqib M, *A Study of the Impact of Environmental Requirements on India's Export Performance and a Scoping Study for Environmentally Friendly Products (See in particular Section VI on Environmentally Friendly Products (forthcoming). Study undertaken for UNCTAD under projects IND/97/955 (funded by UNDP, New Delhi) and INT/92/06 (funded by the Government of the Netherlands).*

³⁶ For more details, see next section.

³⁷ A study in the United States notes that farmers who consider shifting to organic production face several obstacles. These include "large managerial costs and risks of shifting to a new way of farming, limited awareness of organic farming systems, lack of marketing and infrastructure, inability to capture marketing economies, insufficient numbers of processors and distributors, and limited access to capital". See, *Economic Research Service, United States Department of Agriculture, United States Organic Agriculture. Op. cit. <http://www.ers.usda.gov/emphases/harmony/issues/organic/organic.html>*

there has been a long and rich tradition in organic farming. Second, on 70 per cent of the arable land, which is mainly rain-fed, fertilizers have not been used. Studies suggest that there is ample scope to increase production and productivity in the rain-fed areas.³⁸

The studies presented in this publication, however, show that there are also a number of obstacles in developing countries. In India, for example, land ceilings imposed on small farmers hinder their chances of achieving economies of scale. Moreover, there may be difficulties in supplying required nutrients to crops only through organic sources and ensuring sufficient availability of organic matter to farmers. These issues are further elaborated in several studies in this publication.

Institutional support³⁹

As mentioned earlier, the promotion of organic agriculture in some developed countries has been accompanied by significant support measures for farmers, as, for example, in the EU. An early example is Council Regulation 2078/92 on "Agricultural production methods compatible with the requirements of the protection of the environment and the maintenance of the countryside." This regulation has been repealed by EU Regulation 1257/1999 on support for the development of rural areas by the European Agricultural Guidance and Guarantee Fund (EAGGF), which is part of the Agenda 2000 decisions.

In the EU, subsidies under agro-environmental programmes are a large part of the total support for organic farming. Direct payments to farmers, for established and in-conversion farms, amounted to 260 million ECU in 1996. In the same year, subsidies were also provided for other purposes, such as R&D (15 million ECU), advice, extension and information (15 million ECU), regional development programmes (9–10 million ECU), training and education (5–10 million ECU) and marketing and processing (5–10 million ECU).⁴⁰

³⁸ Kaushik A and Saqib M, *op. cit.*

³⁹ Partly taken from Wynen, E. (2002), *What are the key issues faced by organic producers? In Organic Agriculture: Sustainability, Markets and Policies. Proceedings of an OECD Workshop held in Washington DC, United States, 23-26 September, Paris.*

⁴⁰ Lampkin N, Foster C, Padel S and Midmore P, 2000 *op.cit.*

In addition, general policy measures encouraging low-input farming are implemented at both the EU and member State levels. An example is the nitrate directive, which limits the amount of nitrate run-off. Other measures adopted by individual countries include the encouragement of reductions in pesticide use, for example in Denmark, the Netherlands and Sweden in the 1980s. These kinds of measures facilitate expansion possibilities of low-input farming in the EU. Whilst low-input farming is not necessarily certified organic, it is a step in that direction, making it easier for farmers to reach certified production.

In the United States, direct subsidies for organic farming practices are considerably lower. There are no federal subsidy schemes for organic agriculture *per se*. States administer agri-environmental cost-sharing programmes (such as the Environmental Quality Incentives Program), for which only one state has classified organic farmers as being eligible. However, organic farmers do make use of the traditional commodity programmes and disaster payment programmes. This gives them an advantage over foreign organic (and conventional) growers, but not over United States conventional farmers. Research and education programmes for organic agriculture attracted US\$ 2.0 million (0.11 per cent of the research and extension appropriations of the United States Drug Administration (USDA) in 1995).⁴¹ In 2001, US\$ 499,000 was allocated to the Organic Transition Program for research on conversion systems. In marketing, the USDA Market Access Program (MAP) contributed US\$ 48,520 for organic export promotion, representing approximately 0.05 per cent of the US\$ 90 million spent on that program in 2000. At present, organic farmers are exempt from a 'tax' that producers within commodity groups assess upon themselves to pay for research and advertising, on the basis that no research is conducted on organic farming.⁴²

Institutional support to organic agriculture is weak or non-existent in most developing, and some developed, countries. Though producer subsidies in developed countries may well increase supply,

⁴¹ See also Lipson M. *Searching for the o-word*. Santa Cruz, CA, United States, Organic Farming Research Foundation, 1997.

⁴² Lohr L, Associate Professor Agricultural and Applied Economics, University of Georgia, Athens, GA, personal communications (August 2002), and publication of 2001.

it may also reduce prices for which producers are willing to sell, thus expanding the demand. It is also the case that where production subsidies are provided, part of the advantage for farmers is captured in higher input prices, such as those for land. However, in total it is likely that in the long run such unequal treatment disadvantages those without subsidies.

II.2 PRODUCERS⁴³

For organic farmers to be able to survive or thrive, both the physical production and the marketing process are of importance. A summary of these issues is provided here to serve as a background for the policy issues, discussed in the next section.

Production and marketing issues

Inputs

In essence, organic farmers manage soil fertility (often called crop nutrition by conventional farmers) and combat pest problems (including insects, weeds, fungi, nematodes and diseases) in a different way than conventional farmers. Management methods may include, for example, changes in inputs (crop varieties and livestock breeds, nutrients and predators), rotations (more and different crops and livestock) and timing of activities (planting dates and harvesting dates).

Thus one area in which organic farmers encounter problems in the production of crops and livestock is in the maintenance of soil fertility and avoidance of pest attacks, while minimizing the environmental effects of their actions. The exact nature of the soil, pest and environmental issues is geographically determined. For example, in a climate where frequent small amounts of rainfall occur, weeds are more likely to be a problem, while warm and humid conditions are more conducive to fungi or pest problems in crops and livestock. Dealing with these may require a change in use of other inputs, such as labour and capital. It is therefore not surprising that when only a few farmers adopt organic practices,

⁴³ Taken from Wynen E, 2002, *op cit*.

many of their complaints concern lack of knowledge about organic management methods or inputs (where to purchase and efficacy of the available products). In addition, inputs may be more expensive due to extra transport and handling charges for those inputs not commonly purchased.⁴⁴

It is often assumed that more labour is needed in organic than in conventional agriculture, but this depends on the industry and country. Higher values for labour on organic arable and mixed farms are reported in Europe, with similar or lower values for dairy farms. In general, organic horticulture enterprises need considerably more labour.⁴⁵ In Australia, the organic cereal-livestock industry and dairy industry do not show any signs of requiring more labour than the conventional industries.⁴⁶ While higher labour requirements may be seen as a problem by some, and as an advantage in regions with high unemployment, availability of the input, when required, may be a constraint.

Studies on differences in capital values of land used for organic and conventional production are more difficult to find. As land values are determined by expected returns, there should not be a large difference between the two types of farms. Organic farms may require additional capital, for example for changes in farm layout (fencing), storage, livestock numbers and machinery. As these investments are needed when converting to organic farming, it is mainly the farmers in transition who carry this burden.

Another issue sometimes discussed by farmers, perhaps more in the past than at present, is the moral support needed to take the

⁴⁴ Wynen E, *Conversion to Organic Agriculture in Australia: Problems and Possibilities in the Cereal-Livestock Industry*. Report funded by the Rural Industries Research and Development Corporation. National Association for Sustainable Agriculture, Australia, June 1992. A summary can be found on: <http://www.elspl.com.au/abstracts/CONVERSION.HTM>.

⁴⁵ Offermann F and Nieberg H, *Economic Performance of Organic Farms in Europe, Volume 5 of Organic Farming in Europe: Economics and Policy*, Stuttgart, University of Hohenheim, 2000: 15-16.

⁴⁶ Wynen E, *Bio-dynamic and conventional irrigated dairy farming in Australia: An economic analysis*, *Agribusiness Perspectives*, Paper 50, 2000 (<http://www.agribusiness.asn.au/Review/Perspectives/2002/Wynen.htm>), and Wynen, *The Economics of Organic Cereal-Livestock Farming in Australia Revisited*. Proceedings of an RIRDC Inaugural Conference on Organic Agriculture, Sydney, 27-28 August 2001 (<http://www.elspl.com.au/Abstracts/abstract-a17.htm>).

step towards organic management while there is social pressure against adopting the technology.⁴⁷

Output

Nutritional and pest constraints under organic management can result in yield decreases to a greater extent than with conventional agriculture. However, this is by no means always the case, especially not in areas where conventional agriculture is practised relatively extensively, such as in the Australia, Canada and the United States.⁴⁸ Some studies, but not all, indicate that the difference between organic and conventional yields is widening.⁴⁹ In developing countries, the availability of conventional inputs is often restricted anyway, so that higher yields, if they were to be a result of those inputs, are not achievable. In addition, slow mineralization of nitrogen – one of the factors that affect a difference in yields between the two systems in cool climates – is not relevant in many developing countries.⁵⁰ In fact a number of success stories in organic agriculture in developing countries are being recorded.⁵¹

The variability of yield and financial returns has been a topic of study in developed countries. Little evidence has been found to show that the management system is a major factor in the degree of yield and financial variability,⁵² although some studies show less variability under organic management.⁵³ The tendency towards mono-cropping in conventional farming is reversed on an organic

⁴⁷ Wynen E, 1992, *op.cit.*

⁴⁸ Lampkin N and Padel S (eds.) (1994), *op.cit.*, pp.202.

⁴⁹ Offermann F and Nieberg H, 2000, *op.cit.*

⁵⁰ FAO, *Evaluating the Potential Contribution of Organic Agriculture to Sustainability Goals*. FAO's technical contribution to IFOAM's Scientific Conference, Mar del Plata, Argentina, 16-19 November, 1998. Available on: <http://www.fao.org/organicag/doc/organic.doc>. According to this paper, "Due to slow mineralization of nitrogen under cool growing conditions, crops on organic farms have a shortage of nitrogen early in the season. However, in countries where low soil temperature is not a limiting growth factor, as in many developing countries, this factor should not prove significant."

⁵¹ See, for example, FAO, 1998, *op.cit.*; and El-Hage Scialabba N and Hattam C, *Organic Agriculture, Environment and Food Security*. Rome, FAO, Sustainable Development Department. 2002.

⁵² Lampkin N and Padel S (eds.), 1994, *op.cit.*

⁵³ Lampkin N and Padel S (eds.), 1994, *op.cit.*: 193.

farm. That is, less financially rewarding crops may be included in the rotation. This affects the total farm production, and has a negative effect on gross returns.

Farm returns

From the producers' point of view, net returns to farming is an important, albeit not sole, consideration to continue farming. These net returns are made up of gross returns for the whole farm minus input costs. The gross returns are dependent on total production (that is, yields of individual enterprises and rotation practised on the farm), product prices and farm subsidies.

Although price levels influence demand for a product, it is the relative prices of conventional and organic products that are of importance in consumer decisions. This means that there are two prices that are of importance. One is the retail price of the organic product, which is only for a part (depending on the product) influenced by the farm-gate price. As long as organic production is low, the off-farm cost of marketing of the product (including cost of transport, insurance and distribution) will be high relative to that of conventional products. This extra cost will need to be recouped by the traders, resulting in high retail prices. However, in markets where traders have monopoly power, the retail price can also, at least partly, reflect monopoly rent.

The other important price is the retail price of conventional products. External costs of conventional farming practices (such as problems with water quality, people's health and biodiversity) are often higher than those of organic farming.⁵⁴ If these costs were to be borne by conventional producers instead of by tax payers, at least some would be passed on to the consumer, thus reducing the

⁵⁴ See, for example, work carried out by Pimentel D, Acquay H, Biltonen M, Rice P, Silva M, Nelson J, Lipner V, Giordano S, Horowitz A and D'Amore M, *Assessment of environmental and economic impacts of pesticide use*. In: Pimentel D and Lehman H (eds.), *The Pesticide Question: Environment, Economics and Ethics*. New York, Chapman and Hall, 1993: 47-84; FAO, *Environment, Sustainability and Trade Linkages For Basic Foodstuffs*. Rome, 1996; Redman, *Industrial Agriculture: Counting the Costs*, Soil Association United Kingdom 1996; and Stolz M, Pierr A, Haring A and Dabbert S, *The environmental impacts of organic farming in Europe*, volume 6 of *Organic Farming in Europe: Economics and Policy*, Stuttgart, University of Hohenheim, 2000.

difference between the retail prices for products of the two farming methods. Another way in which (farm) prices can be reduced is by subsidies for organic production, as provided in some European countries. This may result in a lowering of the cost of production, and the farmers could then accept lower product prices and still survive. This could be passed on to the consumer.

In order to be able to obtain price premiums, organic products need to be certified as genuinely organic. In some countries that have the appropriate infrastructure, certification is fairly straightforward. In others, any certification, and especially one that is acceptable to enable international trade, can be a major problem, and rather costly.

Another issue concerns availability of a market; campaigns in favour of “domestic consumption” can enlarge the market for some producers and restrict access for others (see below).

In summary, separate marketing can be fairly expensive for several reasons, including present low volumes, possibly monopoly power of the trading sector and the requirements of a certification system. The taxing of pollution causing inputs in conventional farming and subsidies for organic farming could reduce the differences in consumer price for organically and conventionally grown products. Costs of certification, possibly through international certification, to secure (international) sales can be a major problem (and very costly). An additional cost for producers in exporting countries is that they may have to fulfil the requirements (and organic standards) of several countries simultaneously. A separate problem for those countries is that the organic movement, especially in developed countries, may be focused on local consumption, thus making market access for exporting countries more difficult.

A further issue of relevance to farmers who do not own their land – possibly more frequently the case in developing countries – is investment in soils. In organic agriculture, the emphasis is on soils: improvements are seen as essential for nutrient and pest prevention management. In those countries where farmers own their land, or where leasing arrangements are such that land cannot easily be taken away from the user, investment in the land base is not a problem, as the investor reaps the returns. However, where the farmer has no land tenure, there is no incentive for the lessee

to improve soil quality; indeed, there may be a disincentive, as improvement of land quality may be directly linked to the land being withdrawn from the user.

Some further thoughts

When listing producer constraints, it is important to realise that some issues relate to the scale and maturity of the industry and will be resolved as the industry grows. That is, these problems are not intrinsic to the organic system, even though farmers may experience them as problems for the time being. For example, lack of information about organic practices is often mentioned as a major problem to convert to organic agriculture. Whereas this may be a problem for many prospective organic farmers at present, if future generations on organic farms continue to farm organically, much of the knowledge will be automatically transferred between generations – and to non-organic neighbours. Another example is the market for both inputs and outputs. There is no reason to believe that the markets for inputs, at least not the physical one (private goods – see below), will behave differently from those operating for conventional farmers at present. That is, the market will not be inefficient merely because it involves organic agriculture. The costs due to the processing and marketing of organic produce also should decrease per unit of product when the number of organic farmers increases. And a greater involvement of traders could reduce the scope for monopoly rents.

Many of the problems that are genuine long-term problems for organic agriculture can be alleviated by government policies. This is the topic of the next section.

Policies

Some countries realize that there is a role for government in the expansion of organic agriculture. As negative externalities in conventional farming are larger than in organic agriculture, these countries believe that some measure of government interference in favour of organic agriculture (or adjusting the balance, some would say) is justified.

Inputs in organic agriculture often possess more of the public goods characteristic – a justification for government involvement – than those in conventional farming. Changes in rotation, crop and

livestock mixtures, and biological processes such as those involving predators and parasites replace pesticides and fertilizers – private goods, for which companies are willing to do research and advertising. Therefore, without government intervention, obtaining and dispersing knowledge about the most efficient use of many of the practices in organic agriculture would be carried out at a sub-optimal level. Also the development of a separate market, requiring standards and certification – both for the domestic and international market – has public goods aspects, and deserves government attention. Policy measures are therefore usually in the areas of subsidies for organic farmers, taxes for conventional farmers, research and extension, and product certification and harmonization.

The last policy mentioned in this section refers also to markets. However, it is mainly a private initiative to influence the market availability for domestic producers.

Subsidies for organic growers

Agriculture is carried out fairly intensively in many European countries, and population density is such that any negative effects of such farming would perhaps be felt earliest, and most intensively, by inhabitants/consumers in those countries. In addition, since Europe is a region with a tradition of supporting agriculture, it is not surprising to see that arguments for special aid for organic agriculture have resulted in subsidies in many areas. Although organic growers in other countries may well receive some support in one form or another, it will rarely be to the extent seen in Europe. In developing countries, in particular, aid is often totally lacking

Organic farm subsidies have a number of direct and indirect effects. First of all, they allow farmers to sell their products cheaper than they otherwise could have done. This will affect the number of consumers who are willing to buy the produce: a very important aspect in building a market. At the same time, it is likely to affect the prices of inputs in the production process, especially of land. This is because there is a conversion period for organic production, that is, a threshold to entry. However, the price is unlikely to rise too much, as other land can, generally, readily be converted to organic farming. The net effect for organic farmers is therefore an increase in income, depending on the price effect.

In countries where conventional farming is subsidized, this can have (unintended) negative effects on organic agriculture. For example, due to a difference in crop mix on organic and conventional farms, EU policies (which pay different amounts for different enterprises) can deliver higher subsidies to conventional farms than to organic farms of the same size. Thus, in Denmark in 1996, the average conventional farm received 49,000 Danish kroner (DKr) from EU subsidies and the same sized organic farm received only DKr 124,000.⁵⁵ Part of the extra subsidies (of DKr 53,000) specifically for organic farming compensated for the shortfall in conventional subsidies, and could therefore rightly be deducted from the organic subsidy. Even so, compared to countries without a subsidy, the rest (DKr 53,000 minus the difference between DKr 149,000 and DKr 124,000, which amounts to DKr 28,000) could still be considered a significant subsidy for organic agriculture.

A second class of effects of farm subsidies is created vis-à-vis producers who do not receive the benefits of these subsidies. If they have similar costs to the producers who do receive subsidies, they will become less competitive and may go out of business. This was recognized in the United Kingdom, where the Soil Association called for similar payments for organic farmers "...as UK farmers are currently disadvantaged".⁵⁶ A similar argument is being used the United States, of farmers there being disadvantaged vis-à-vis European farmers, as this latter group receives subsidies for organic farming practices.⁵⁷ However, there are many countries in which organic producers cannot expect to ever be granted a subsidy. For those producers (often exporters from developing countries), European subsidies to organic production are a double-edged sword. On the one hand they help develop the market into which exporters may be able to sell, and on the other hand they increase the competition.

⁵⁵ Wynen E, *Organic Agriculture in Denmark – Economic Implications of a Widespread Change*. Report No. 99. Copenhagen, Danish Institute of Agricultural and Fisheries Economics, 1998.

⁵⁶ Soil Association. Response to NFU survey of organic farmers. Press statement, 25 July, 2002. <http://www.soilassociation.org/sa/saweb.nsf/848d689047cb4666780256a6b00298980/80256ad80055454980256ac010045b622?OpenDocument>.

⁵⁷ Lohr L, *The importance of the Conservation Security Act to US competitiveness in global organic markets*. Faculty Series 01-19, Dept of Agricultural and Applied Economics, Athens, GA, University of Georgia, 2001.

Farm subsidies in general can lead to inefficient use of resources, in organic agriculture as well as in conventional agriculture. In other words, subsidies in one country, by affecting the price level and the quantity of production (number of farmers who are able to stay in business), affect farmers in other countries. This can distort the true picture of efficiency in resource use between organic farmers in different countries – bad news from an environmental perspective.

The international organic movement presses for subsidies for organic agriculture, as this is its role. However, these subsidies may have the indirect effect of limiting production in non-subsidized areas where organic farmers are also farming according to organic practices. They therefore deserve as much support by those who are concerned about minimizing the world's use of resources in the quest for agricultural production. A more appropriate approach for the international organic movement may therefore be to target the externalities generated by conventional farming.

Taxes on conventional farming methods

The market solution to forcing conventional farmers to take more responsibilities for the externalities they cause through farming is, in theory, reasonably straightforward. It proposes taxing the use of fertilizers and pesticides so that producers only use the amount of input that would cause damage equal to the taxes paid. The Scandinavian countries, in particular, have had policies in this area. For example, Denmark has taxed pesticides since the 1980s. Though it started with a modest rate of 3 per cent in 1987, by the late 1990s this had risen to 33 per cent for herbicides and fungicides and 53 per cent for insecticides and soil disinfectants.⁵⁸

If the intention of taxes is to make farmers carry the burden of the total cost of the input, the practicalities of a tax are not too clear. As fertilizers and pesticides have different effects on different soil types and under different climatic conditions, the use of the same amount of the same input does not create the same environmental damage. Making farmers pay their particular costs is

⁵⁸ Schou J and Streibig J, *Pesticide taxes in Scandinavia, Pesticide Outlook, December 1999: 227-229.*

therefore difficult; thus assumption of average costs in cost calculations may be the most appropriate.

Research and extension

Lack of allocation of funding for organic purposes is often pointed out, and the direction of research to promote organic agriculture has also been the topic of discussion.⁵⁹ In the past, the emphasis of research has generally been on farm production techniques. For example, at the IFOAM Scientific Conference in 2000, almost half the papers (and three quarters of the posters) were presented under production-related headings (soil, plants and animals). Only about 15 per cent each were devoted to papers on market development (including standards and certification) and policy issues.

Very little effort has gone into analysing where the limited funding could best be spent to reach the goal of expanding organic agriculture.⁶⁰ One area that has been recognized as worthy of attention, for example in Denmark, is that of consumer education.⁶¹ Generation of higher demand is expected to automatically pull along production. Research leading to more efficient use of inputs into organic farming will result, in the long run, in lower farm-gate prices, not in higher returns to farming. This means that, in an indirect way, fewer problems with production techniques result in lower production costs, which are then passed on to the consumers.

⁵⁹ See, for example, Krell R (ed.), *Biological Farming Research in Europe*, REU Technical Series No. 54, FAO, Rome, 1998 (<http://www.fao.org/regional/europe/PUB/RTS54.PDF>); Lipson M, *Searching for the O-word*. Santa Cruz, CA, Organic Farming Research Foundation, 1997; Wynen E and Vanzetti D, *Research in organic agriculture: Assessment and future directions*, in: David C, Allard G and Henning J (eds.) *Organic Agriculture Faces its Development: The Future Issues*, 12 emes Entretiens Jacques Cartier ISARA/Université LAVAL/ INRA, 2000, at <http://www.elspl.com.au/Abstracts/abstract-g4.htm>; FAO, *Research methodologies in organic farming: on-farm participatory research*, REU Technical Series No. 63, FAO, Rome, 2000, at: <http://www.fao.org/regional/europe/PUB/RTS63.pdf>.

⁶⁰ Wynen E and Vanzetti D, 2000, *op.cit.*

⁶¹ See, for example, Wynen E and Vanzetti D, 2000, *op.cit.*; and Lampkin N, Foster C, Padel S and Midmore P, 2000, *op.cit.* (pp.ii-iii).

Standards, certification and harmonization/equivalence

Product certification is an essential aspect of the viability of organic producers, and is important in international trade. Some countries, for example in Europe, have subsidized the setting up of these systems. State help has been provided in the implementation of national protection of the word “organic”, with suitable standards and certification schemes. The aim has been to recompense the private standard setting and certification bodies for their involvement in regulatory activities. State help is also provided in a number of countries, both in the EU and the United States, for the inspection and certification fees that farmers may otherwise have incurred.⁶²

Despite the organic movement’s professed interest in local consumption of organic products (see below), there are a number of countries for which exports are and will be of particular relevance. In developing countries, export markets are essential for income generation, especially where more premium prices can be secured in developed countries than domestically. In other cases, such as Australia, Canada and New Zealand, which have a high production potential and relatively low population density, domestic consumption could not absorb total production. For those countries export is essential,⁶³ and the question then is how this can be accommodated.

In order to facilitate international trade, a worldwide system of standards and certification is needed.⁶⁴ This should not imply exactly the same standards for all countries. As agricultural conditions are dissimilar, flexibility in standards is required. IFOAM certainly

⁶² Lampkin N, Foster C, Padel S and Midmore P, 2000: 99.

⁶³ There are countries where a large proportion of the organic production is sold in the conventional market. For example in Australia, 72 per cent of all organic wheat is sold as organic, half of the organic milk, and only 10 per cent of the mutton and wool. The rest of the production of these products is sold in the conventional market (Wynen E (2003), *Organic Agriculture in Australia: research levies and expenditure. Report for the Rural Industries Research and Development Corporation, (Canberra)* (see <http://www.rirdc.gov.au/reports/org/02-45.pdf>)). Michelsen J et al. (2000), *op cit.*, mentioned that, in the Czech Republic, ‘...only few organic products were reported sold as organic and price premiums were not obtained for most products’. Also, in India, a large part of the organically-grown produce is sold on the conventional market (see Jha in this volume).

⁶⁴ See IFOAM, *International Harmonisation and Equivalence in Organic Agriculture*, at the Conference on Organic Guarantee Systems, held by IFOAM in cooperation with FAO and UNCTAD, Nuremberg, Germany, February 2002.

recognizes this.⁶⁵ However, for countries to be able to export, their standards will need to be acceptable to the importing country. This may mean that standards need to be adopted which are not practicable to the exporting country. International trading rules permit countries to determine their own standards so long as they apply them equally to imported and domestically produced goods, and to countries with similar conditions. However, there is still the danger that countries might set particular standards to protect their own producers.

The two markets with the largest demand for organic produce, the EU and the United States, have developed an organic certification scheme that deals not only with domestic organic certification and marketing, but also with international trade, that is, import issues. For producers in many developing countries, and also in developed exporting countries, such requirements mean that export of organic produce may not be easy. Many developing countries do not have a domestic organization that can carry out the required certification. Certification by international certification bodies then becomes essential, which is likely to be expensive. This may be an insurmountable problem, particularly for smallholders in developing countries. The need to comply with different standards in different markets would add to the cost of production and marketing. In addition, time delays, due to the requirement of documentation for each consignment, may well inhibit exports.

Market availability

Over the past few years, the organic movement has placed increasing emphasis on local production and consumption, as this would cut down on transport costs, and therefore be better for the environment.⁶⁶ While organic organizations may campaign for consumers choosing locally produced food,⁶⁷ the case for reduction in resource use through producing goods as efficiently as possible

⁶⁵ See IFOAM's website: <http://www.ifoam.org/standard/basics.htm> under: Variations in Standards.

⁶⁶ See, for example, Geier B, *Ecology & Farming*, 26, 2001 at, <http://www.ifoam.org/orgagri/regionalseasonal.html>.

⁶⁷ See press release by UK Soil Association, *New partnership launched to promote local food*, 8 July 2002, <http://www.soilassociation.org/sa/saweb.nsf/d918a008fbadb58780256aae00533ff9/80256ad80055454980256bf0003f0122?OpenDocument>.

(through specialization of production and international trade) seems forgotten or misunderstood.⁶⁸ Purchases of locally produced products at higher prices than those which international trade allows, can accentuate non-optimal resource use to the detriment of people – and environments - in all countries. The concept of evaluation of the “whole life-cycle” in terms of resource use is well established,⁶⁹ yet its importance is rarely mentioned when the issue of local food consumption is discussed. Furthermore, exports of organic goods provide an important opportunity for many poor farmers in developing countries.

Conclusions

Concerns facing organic producers can be divided into two main groups. One is in the area of production (inputs with their effects on yield and total production) and the other is marketing (product prices, cost of marketing and market availability). In the early days, the production problems of farmers were emphasized, and research topics were often concentrated on soil, pests and diseases. More recently, as international trade in organic products has grown, the importance of market-related issues has come to the fore.

Direct subsidies to organic farming, to aid with conversion or to compensate for environmentally more friendly practices, and other forms of subsidies, have been obtained in some countries but not in most. These create advantages for some (including producers and consumers) and disadvantages for others (producers in exporting countries whose competitive edge decreases). It is realized that a decline in consumer prices is essential for growth in the organic market, which will partly happen through increased production and maturity of the market. It is also necessary to realize the need for

⁶⁸ Vanzetti D and Wynen E, *Does it make sense to buy locally produced organic products?* In: Hall D and Moffitt J (eds.), *Economics of Pesticides, Sustainable Food Production and Organic Food Markets*. Amsterdam and New York, NY, Elsevier, 2002: 195-20, at: <http://www.elspl.com.au/abstracts/E2.htm>.

⁶⁹ See, for example, Meier-Ploeger A, Kjer I and Simon K-H, *Nutrition and climate: the influence of food processing, transportation and food habits on the atmosphere*. In: Kristensen NH, Høgh-Jensen H (eds.), *Fundamentals of Organic Agriculture*, Vol. 2. *Proceedings of the 11th IFOAM International Scientific Conference*, Copenhagen, 11-15 August, 1996: 208-216.

harmonization and equivalence in agriculture. Serious issues regarding non-tariff barriers (such as time delays due to the need for documentation for importing purposes) are raised. A push towards domestic consumption seems afoot, which could also be seen as a non-tariff barrier: organic producers in some developed countries protecting their patch against products from exporting countries.

Rather than dividing the organic movement through promoting policies that are good for some and bad for other producers, a more useful approach for all organic producers may be to encourage governments to play a more active role by initiating “polluter-pays” policies. A tax on pesticide and fertilizer use is one such example in agriculture. Though several countries in Europe have adopted this approach, far more could be done. Such policies are likely to prove beneficial to organic producers, consumers and environmentalists in all countries.

2.3 STANDARDS, CERTIFICATION AND ACCREDITATION⁷⁰

Overview⁷¹

In this section we provide an overview of what organic standards are, the system by which these standards can be certified, and how the certification process itself can be checked and approved for quality; in other words how certifiers can be accredited. In subsequent sections some details are provided about two international organizations involved in these areas, and of two major importers: the EU and the United States.

Standards and inspection

Standards serve as a basic guide for organic producers in designing, managing and operating their farms or processing units. Certification agencies offer certification services to organic producers; for developing countries such certification is often given by agencies

⁷⁰ For basic concepts on these issues, see ITC, Trade Centre for Agricultural and Rural Cooperation of ACP-EU (TCA) and FAO, *World Markets for Organic Fruit and Vegetables: Opportunities for Developing Countries in the Production and Export of Organic Horticultural Products. Joint study. Geneva, International Trade Centre of UNCTAD/WTO, 2001.*

⁷¹ This sub-section was written by AM Briones, University of the Philippines, Los Baños.

based abroad. The guarantee system also includes accreditation of certifiers. National accreditation is sufficient for the domestic market but international accreditation is necessary for certifiers whose clients want to access foreign markets.

The main basis of certification is inspection, whereby the certifying agency taps the services of independent inspectors. The inspector looks into the farm design and whether and how the farmer utilizes the desired processes in organic production. The farm or production system is certified as organic or not, based on the inspector's report and the applicant's compliance with other requirements of the certification programme. Inspection is a task that requires technical knowledge and practical experience, preferably in both organic and conventional production systems. In addition, inspectors must have communication skills, investigative skills, and good working relations with producers. Moreover, they must be imaginative and resourceful, and their integrity and credibility must be well recognized. It is the inspector's report that serves as the main basis for certification by the committee. The inspection process has its own manual of operations and inspection programmes. In Asia trained inspectors are only found in countries that have certifying agencies.

Certification

Market growth is a reflection of industry growth, and certification is a tool of the market. It should be emphasized, however, that there are other marketing schemes that do not require formal certification. These are called producer-consumer partnerships, and they can take various forms.

The organic guarantee system is a way of assuring consumers that the foods they are purchasing are organically produced. Broadly, this is done in two ways: one way is the producer's personal guarantee (that does not involve certification), and the other is third-party certification, a system by which conformity to applicable standards is determined and confirmed by a third party or an independent body.

Producer's guarantee

The producer (farmer, processor or operator) gives assurance to consumers. This is applicable where the producer's integrity is

widely known to consumers who usually live within the same locality as the producer. There may be no popular term used for it, but such patronage is a common practice in small towns and villages across Asia. The producer's guarantee is also sufficient where there is mutual understanding between producers and consumers such as in various versions of producer-consumer partnerships. One version in developed countries is called Community Supported Agriculture (CSA), where small organic farms produce for a community of consumers who are members of the CSA.

Members of CSAs have varying levels of participation depending on what has been mutually agreed upon. At one extreme are CSAs that require all participants (consumer-members) to do some work on the farm, such as helping with planting, with various stages of crop growth or with harvesting, as part of their payment.⁷² Members usually bring their families to help on the farm. This is observed in localities where the CSA also serves as an educational tool for young people to better appreciate nature, agriculture and food.

In contrast to the CSAs that require some farm work by members, there are those referred to as subscription CSAs, where each member simply receives a box or a bag of produce every week. Farmers may do distribution themselves. In the case of consumers in urban centres who simply want to have a constant supply of organic produce, a distributor handles the produce (primarily sorting and packing) and delivers the boxes to consumers. Between the two CSA forms described here, many variations in terms of the relationship or extent of partnership between producers and consumers exist. The Japanese *Teikei* is a unique form of a producer-consumer partnership developed in Japan in the early 1970s (see below).

Third-party certification

For the anonymous market, the guarantee that products are indeed produced according to organic principles can be provided by an independent certification organization. These check whether

⁷² Henderson E with Van En R, *Sharing the Harvest: A Guide to Community Supported Agriculture*. Totnes, United Kingdom, Chelsea Green Publishing Co., 1999.

farms have produced according to organic principles, as defined in a specific set of standards. Certification for organic agriculture primarily refers to a production system or production method. In other words, it is the process that is certified and not the product. Thus the organic quality is not verifiable by product testing, although in some cases this can be used to detect non-compliance.

A certification programme is carried out by agencies that could be private companies, NGOs, government or farmer-based organizations, or multiparty associations. The administration of a certification programme consists of a certification manager and certification staff in charge of such aspects as registration, bookkeeping, budgeting and business planning, processing applications and inspection reports, promotion and other functions, depending on the stage of development of the agency.

Certification requires professionalism, but considering the socio-ecological objectives of organic agriculture, the process should not be treated like that of merely imposing regulation. Regulatory bodies have inspectors/authorities who search for or detect violations and take legal action against offenders. In contrast, certification is basically a positive statement that farm or processing operations are being conducted in accordance with basic specified standards. In cases where certain conditions are not being met, the certifier may advise the operator to correct the problem or situation within a certain period.

The certification described above is the prevailing practice in the North; it is also the model that was initially being followed in the South. For certification to be attractive to small farmers, it is necessary to devise appropriate procedures that are not an overwhelming process. For example, smallholder certification should be done for farmers organized in groups. The same certification standards hold, but there are substantial changes in inspection and certification. Essentially, the external inspection is reduced by an internal control mechanism from the farmers' organization. This internal control may be combined with extension services to the farmers. The mechanism is mutually agreed upon by the certifier and the organization. Another prerequisite of the smallholder certification is that members of the producers' organization should have common marketing resources. This should facilitate monitoring of the post-harvest handling of the produce for the whole organization.

Accreditation

Certification is a market instrument. Worldwide, certification services are being rendered by a number of certifying bodies. To ensure an acceptable level of services, certifying bodies are subject to scrutiny by national or international organizations. If these are satisfied with the performance, accreditation follows.

In order to assure the public's trust in the certification organizations, accrediting organizations should be perceived as guardians of public health, food safety and sound environment. They should not be perceived as a higher level of bureaucratic regulation or as a protectionist instrument. At present the cost of accreditation generally exceeds affordable levels in developing countries.

Standards

Standards play a key role in promoting the growth of organic agriculture. Important international standards and guidelines, as well as national standards, include:⁷³

- IFOAM Basic Standards;
- Codex Alimentarius Guidelines;
- European Union organic standards;
- United States organic standards.

According to IFOAM, the basic standards reflect the current state of organic production and processing methods. These standards should not be seen as a final statement, but rather as work in progress to contribute to the development of organic farming throughout the world. Similarly, the Codex Alimentarius Commission considers its guidelines as "...a first step into official international harmonization of the requirements for organic products in terms of production and marketing standards, inspection arrangements and

⁷³ See <http://www.organic-research.com/Laws&Regs/legislation.htm> for a database on organic legislation.

labelling requirements.”⁷⁴ It admits that experience with such requirements and their implementation is still very limited.

IFOAM Basic Standards (IBS)⁷⁵ are developed by the IFOAM Standards Committee (SC) in close cooperation and consultation with the IFOAM member organizations and other interested parties. Basic standards have been developed, for example, for:

- Crop production;
- Animal husbandry;
- Aquaculture production;
- Food processing and handling;
- Processing of textiles; and
- Forest management, including non-timber forest products.⁷⁶

IFOAM Basic Standards are presented as follows:

- *General Principles*, which set out the goals of organic production and processing;
- *Recommendations*, which provide “standards” that IFOAM promotes, but does not require to be incorporated into certification standards; and
- *Standards*, which are the minimum requirements that must be fully incorporated into certification standards.

⁷⁴ See *Codex Alimentarius, Guidelines for the Production, Processing, Labelling and Marketing of Organically Produced Foods, 2001* see: http://ftp.fao.org/codex/standard/en/CXG_032e.pdf. The Codex Committee on Food Labelling (CCFL) shall review these guidelines on a regular basis.

⁷⁵ See <http://www.ifoam.org/standard/>.

⁷⁶ Forest management covers both the extraction of timber and the harvesting of non-timber forest products (NTFPs). This includes products from both natural forests (i.e. primary forest and well-developed secondary forest) and plantations. These organic draft standards for forest management have been adapted from the *Principles and Criteria of the Forest Stewardship Council*.

The IBS cannot be used for certification. However, they provide a framework for certification bodies/standardizing organizations worldwide to develop their own certification standards. These take into account local conditions and may well be more detailed than the IFOAM Basic Standards.

The Codex Alimentarius Commission has developed guidelines for the production, processing, labelling and marketing of organically produced goods.⁷⁷ These Codex guidelines apply to:

- (a) Plants and plant products;
- (b) Livestock and livestock products;
- (c) Handling, storage, transportation, processing and packaging of items under (a) and (b).

The European Union Council Regulation No. 2092/91 on organic production and labelling entered into force on 22 July 1991.⁷⁸ The Regulation covers the production, processing, labelling and inspection of agricultural products and foodstuffs from organic agricultural production. Recently it was amended (Regulation No. 1804/1999) to harmonize the rules for organic production of the main species of animals (e.g. their origin, feed, veterinary care and environment) and also to harmonize the labelling and inspection standards.⁷⁹

In the United States, the Organic Foods Production Act (OFPA) of 1990 required the United States Department of Agriculture (USDA) to develop national standards for organically produced agricultural products and to establish an organic certification programme, based on recommendations of the National Organic Standards Board (NOSB). The National Organic Program (NOP)⁸⁰ first proposed draft standards in December 1997 and a revised proposal was issued in

⁷⁷ *Codex Alimentarius, op.cit.*

⁷⁸ *European Commission, Directorate-General for Agriculture. Organic Agriculture, Guide to Community Rules.*

⁷⁹ See <http://www.rural-europe.aeidl.be/rural-en/euro/11-3-1.htm>.

⁸⁰ *The National Organic Program (NOP; see <http://www.ams.usda.gov/nop/Consumers/Links.html>) is a marketing programme housed within the USDA Agricultural Marketing Service (AMS, see <http://www.ams.usda.gov/>), the agency that sets marketing standards.*

March 2000. The final regulation, adopted in December 2000, was fully implemented in October 2002. Standards⁸¹ have been developed, based on:

- NOSB recommendations;
- A USDA review of State, private and foreign organic certification programmes;
- Public consultations. The fact that USDA received over 300,000 public comments demonstrates the great interest in the development of standards for organic products.

The OFPA directs USDA to accredit certifying agents so that they can certify organic products (see next section). There are over 50 private and State organic certification programmes in the United States.

Several comparisons have been made between the different standards and guidelines, such as between IFOAM Basic Standards, Codex Alimentarius Guidelines for Organically Produced Food, and EU Regulation 2092/91,⁸² as well as between the EU and the United States.⁸³ ⁸⁴ There are important differences between the USDA and EU standards. As explained on the USDA website, "USDA national organic standards should be considered in two segments: (1) the verification system that includes certification of organic agricultural products and accreditation of certifying agents and (2) the production, handling and labelling standards under which organic agricultural products are produced and sold. NOP is consistent with the internationally accepted guidelines for certification and accreditation, International Standardization Organization Guides 65 and 61

⁸¹ See <http://www.ams.usda.gov/nop/NOP/standards/ProdHandPre.html>

⁸² Schmid O, *Comparison of EU Regulation 2092/9, Codex Alimentarius Guidelines for Organically Produced Food 1999/2001, and IFOAM Basic Standards 2000* In: *International Harmonisation and Equivalence on Organic Agriculture, IFOAM Conference on Organic Guarantee Systems, in cooperation with FAO and UNCTAD, February 2002.*

⁸³ Riddle J and Coody L, *Comparison of the EU and US Organic Regulations: In: International Harmonisation and Equivalence on Organic Agriculture, IFOAM Conference on Organic Guarantee Systems, in cooperation with FAO and UNCTAD, February 2002.*

⁸⁴ See: http://www.ota.com/US_EU.htm.

respectively. However, NOP requirements for production, handling and labelling, and allowed and prohibited materials differ significantly from those of other countries such as those of the EU, particularly in terms of livestock production standards.”

Certification and accreditation

Many countries are only willing to import organic produce if they are satisfied that those imports are indeed organic. This is achieved through certification and accreditation.

In exporting countries, certification can be carried out either by local certification bodies, international certification bodies or under partnership arrangements between these two types of bodies. Many private certification bodies have developed their own certification programmes, generally based on IFOAM Basic Standards, and they use their own trademarks. Governments have played an increasingly important role in developing organic standards and accreditation programmes. Basic requirements for certification are summarized in Box II.1. Certification involves a series of trade policy issues.

Box II.1 Basic requirements for certification of organic products

Basic requirements for certification of organic products can be summarized as follows:⁸⁵

- Minimum one full inspection per year;
- Full implementation of the relevant standards;
- Conversion period to be followed;
- No parallel production;
- Sustainable production system;
- Identification of product flow and audit procedure; and
- Clear management responsibilities.

Source: Rainer Bächli, Director, Institute for Marketecology (IMO), at the UNCTAD Expert Meeting, Geneva, July 2001.

⁸⁵ Bächli R, Director of Institute for Marketecology (IMO), Lowering certification costs for small scale organic producers. Paper presented at an UNCTAD Expert Meeting, Geneva, July 2001.

The IFOAM

The IFOAM Accreditation Programme provides for accreditation of certifiers on the basis of the IFOAM Basic Standards and the IFOAM Criteria for Accreditation. The programme was developed in accordance with ISO guidelines for conformity assessment: ISO Guide 61 for accreditation bodies and Guide 65 for certification bodies.

Box II.2 The IFOAM Accreditation Programme (IAP)⁸⁶

Differing standards for organic production and multiple accreditation requirements for certifiers have resulted in barriers to trade and duplicate costs for organic farmers, processors, and certifiers. Duplicate certifications have become necessary because different governments are requiring imported products to be accredited through their national systems.

Establishing bilateral mutual recognition agreements is one way to reduce this problem. However, so far governments have established no such agreements. The European Union has granted unilateral recognition to eight governmental programmes through Article 11 of Regulation 2092/91, but only two country have been recognized in the last 10 years.* Japan has granted unilateral recognition of the European Union system. In any case, mutual recognition agreements still have certain disadvantages. First, it would oblige developing countries with a relatively small organic sector to first establish their own accreditation programmes. Second, multiple negotiations and reviews would be required for a series of bilateral agreements.

Therefore, IFOAM has been developing a harmonized international system of standards and conformity assessment. In 1992, it established the IFOAM Accreditation Programme (IAP) to accredit certifiers throughout the world. IFOAM accreditation

⁸⁶ Vaupel, S. Vice-President of IFOAM, *The IFOAM Global Organic Guarantee System and Other Methods for Enhancing Developing Countries' Production and Exports of Organic Products. Presented at the UNCTAD Expert Meeting on Ways to Enhance the Production and Export Capacities of Developing Countries of Agriculture and Food Products, Including Niche Products, such as Environmentally Preferable Products. Geneva, 16-18 July 2001.*

is based on the IFOAM Basic Standards and the IFOAM Criteria for Organic Certifiers. Since 1997, this programme has been operated by the International Organic Accreditation Service (IOAS) in North Dakota.

In July 2001, 18 certifiers from 12 countries (including Argentina, Bolivia and Brazil) were accredited under this programme and 9 applicants from 4 additional countries (China and Thailand) were going through the process of accreditation. Certifiers that have been accredited by IFOAM have developed and signed an agreement to recognize the certifications of other IFOAM-accredited certifiers. The Agreement establishes a framework for mutual recognition based on IFOAM accreditation. This Agreement has been used as the basis for certification transference.

The IFOAM International Organic Guarantee System can interface with national organic programmes, and provides the following advantages:

- Facilitates international trade through a harmonized international system of standards and conformity assessment;
- Simplifies and accelerates legislative work on standards in developing countries;
- Conserves government resources by eliminating the need to develop an accreditation programme for organic certifiers; and
- Saves money for organic certifiers and producers by avoiding duplicate inspections, evaluations and reports.

Source: Suzanne Vaupel, Vice-President of IFOAM, at UNCTAD Expert Meeting, Geneva, July 2001.

*New Zealand was recognized in 2002 and Costa Rica in 2003

Codex Alimentarius

According to the Codex Alimentarius Guidelines, import requirements should be based on the principles of transparency and equivalency as set out in the Principles for Food Import and Export

Inspection and Certification.⁸⁷ In accepting imports of organic products, countries would usually assess the inspection and certification procedures and the standards applied in the exporting country. Imported products may be marketed as “organic” only where the competent authority or designated body in the exporting country has issued a certificate of inspection. According to Article 7.4, an importing country may:

- Require detailed information, including reports established by independent experts;
- Arrange, together with the exporting country, for site visits to examine inspection, certification and production in the exporting country; and
- Require, to avoid consumer confusion, that the product is labelled in accordance with the labelling requirements of the importing country.

European Union

Imports of organic produce into the EU are based on Article 11 of Regulation 2092/91/EEC. This opens up the EU organic food market to products from third countries based on the concept of equivalence. There are three ways to export organic products to the EU:

- *Paragraph 1:* Establishes a “third-country” list, indicating countries with which equivalence is established. However, only eight countries are on the list: Argentina, Australia, Costa Rica, the Czech Republic, Israel, Hungary, New Zealand and Switzerland;
- *Paragraph 6:* Organic products from countries which are not on the “third-country” list can be marketed in the EU, provided the importer submits documentation to confirm that the products are produced and certified according to rules equivalent to those of EU. Such authorization shall be valid only as long as these conditions are shown to be satisfied. Over 70 developing countries export to the EU under this provision.

⁸⁷ CAC/GL 20-1995.

- *Paragraph 7:* An EU member State assesses an inspection body in a third country and requests the Commission to approve it. The Commission can then add that inspection body to the Article 11 list.

European Commission Regulation No 1788/2001 of 7 September 2001 defines detailed rules with regard to the certificate of inspection for imports from third countries under Article 11.⁸⁸ Since 1 July 2002, import procedures have been harmonized throughout the EU. For each consignment, the approved authority or inspection body in the third country from where the goods are exported must produce an original “*certificate of inspection for import of products from organic production*”. It must be submitted to and endorsed by the authority of the EU member State where the product is imported, after which the product will be able to enter for free circulation within the EU.

United States

The National Organic Program (NOP) was adopted in December 2000, and implemented in October 2002.

Accreditation of goods to be imported into the United States from foreign countries can occur in three ways:

- Certifying agents operating in foreign countries may apply for *USDA accreditation*;
- The USDA determines, upon the request of a foreign government, that that country’s authorities are able to assess and accredit certifying agents as meeting the *requirements of the NOP*; or
- The USDA and a foreign government agree upon equivalency of standards and certification procedures, so that organic imports from this country are acceptable in the United States.

⁸⁸ This Regulation defines detailed rules with regard to the certificate of inspection required pursuant to Article 11(1)(b) and (3) of Regulation (EEC)No. 2092/91, and with regard to the submission of such a certificate for imports undertaken in accordance with the provisions of Article 11(6) and 11(7) of the same Regulation.

As of end December 2002, there were 74 USDA-Accredited Certifying Agents.⁸⁹

Japan

In Japan, the Ministry of Agriculture, Forestry and Fisheries (MAFF) issued organic regulations in early 2000 (Notifications No.59 and 60). They provide three options for imports of organic products into Japan:

- Certification by a MAFF-registered certification organization (RCO) in Japan, where the RCO in Japan certifies the production/processing in the exporting country.
- Certification by a MAFF registered foreign certification organization (RFCO) in the exporting country.
- Re-certification, carried out by an RCO in Japan, and needed for imported goods destined for use as ingredients in finished products marketed as organic in Japan.

Practical experiences

Concern has been expressed that exporting organic products may face certain difficulties, in particular because each importing country has its own standards, which can require multiple accreditation, and be time consuming. As the United States programme is yet to be fully implemented, experience is limited to the EU. A recent ITC/FAO study states, "In practice, the duration of the process to obtain an import permit can vary considerably." Some importers reported that it is a matter of weeks in some countries (e.g. the Netherlands), while it can take up to several months in other member States. In France, for example, some trade sources said that in the past it used to take up to six months to obtain an import permit. However, they said that there has been considerable progress recently, leading to a more reasonable time frame (generally not exceeding two months).⁹⁰

⁸⁹ See <http://www.ams.usda.gov/nop/CertifyingAgents/Accredited.html>

⁹⁰ ITC, TCA, and FAO, *World Markets for organic fruit and vegetables. Opportunities for developing countries in the production and export of organic horticultural products. Joint study. Geneva, ITC, 2001: 13.*

The high cost of certification is a major impediment to increasing certified agricultural production in developing countries. Box II.3 discusses several steps that could be taken to reduce such costs.

Another important issue for developing countries is how to make certification more affordable for small producers. It may therefore be useful to explore possibilities to facilitate certification of products through mechanisms such as “umbrella certification” of certain products (i.e. certification of entire geographical areas or groups of producers rather than individual enterprises), or the development of regional certification bodies. IFOAM Basic Standards have provisions for group certification.

Box II.3 Reducing certification costs in developing countries

This could be achieved by the following means:

1. Assistance from donors, as well as cost-sharing with developed country partners, for example within the framework of fair-trade and development projects. This may be the preferred option of small countries, in particular LDCs, as well as small rural and indigenous communities in both LDCs and other developing countries.
2. Training of local inspectors and other personnel who work for an international certification body operation in a particular developing country. This could involve a form of co-certification. For example, Demeter and SKAL International, the largest international certification bodies operating in India, employ local personnel.
3. Development of a national certification system, with the assistance of IFOAM or bilateral/multilateral donors, as well as Government support. As will be seen in Section 2, developing countries with a relatively larger organic sector and some certification infrastructure, such as Brazil, Costa Rica, India and South Africa, have taken steps in this direction. Brazil already has a well-developed certification infrastructure.
4. International accreditation of national certification bodies. Countries such as Brazil have certification bodies accredited

by IFOAM's International Organic Accreditation Service (IOAS), and by other competent authorities in major importing countries.

5. Negotiation of equivalency agreements, such as, recognition under European Union Regulation 2092/91. India, for example, has taken steps in this direction.
6. Regional cooperation.

Source: adapted from UNCTAD/COM/88, pp. 31-33.

An additional problem for the export of organic products from developing countries is the use of different logos in the importing countries. Though the EU Directive and Council Regulation 2092/2091 on organic products covers all member States, national organic schemes and labels continue to differ from each other. Policies on organic food procurement also tend to differ, as does consumer choice. In markets such as Belgium, Denmark, the Netherlands, and Sweden, certified organic quality is conveyed to the consumer by a single logo. In France, before the introduction of the *Agriculture Biologique* (AB) logo, several different logos dominated the market. In Germany, a single logo was introduced in 1999, which can be used for the whole country. All these are expensive and cumbersome to developing country suppliers.

Furthermore, there is a tendency to promote locally grown organic products among consumers, as mentioned before. Thus some consumers may seek out locally produced goods first, before imports are considered.

2.4 Strengthening capacities to export

ORGANIC PRODUCTS

Experience shows that support measures, including institutional support and export promotion, are needed to strengthen capacities of developing countries to take advantage of trading opportunities for organic products.

Policies and measures in developing countries

Awareness raising. There is a need to increase awareness of the trading opportunities for organic products as well as the

environmental, economic and social benefits of organic production. It is also essential to help develop a domestic market. NGOs can play a key role, particularly that of raising awareness among smallholders.

Research and development. Further research and development is needed to obtain more information on organic farming in developing countries, both in the area of production and marketing.⁹¹ For example, there is a need to identify or develop varieties of plants suitable for organic management, such as those resistant to diseases, fast-growing in the initial stages to outcompete weeds, and those that produce high yields without synthetic fertilizers (without resorting to genetic engineering). Other areas of research to be encouraged include rotation to diminish pest problems, and biological pest control methods, including the development of agricultural management suitable for local conditions. Research in the use of by-products and development of high-value organic products is also important. It is also important to identify constraints to increasing the supply of organic production as well as appropriate measures to overcome such constraints.

Market studies. Market research should be carried out to determine:

- Trends in demand in both foreign and domestic markets;
- Certification and quality requirements to be met in importing countries;
- Possible partners, including exporters, foreign buyers, distributors and consumers, in order to establish appropriate marketing strategies;
- Tariff protection in foreign markets (including preferential rates) and efficient ways to enter those markets (for example, establishing separate quotas for organic products where relevant);
- Availability of price premiums and likely future development of such premiums. Studies are also needed to analyse how

⁹¹ UNCTAD/COM/88, *op.cit.* pp.31-33.

price premiums are distributed along the supply chain and how developing countries could capture a larger share of such premiums; and

- Future markets for hedging price risks.

Development of national legislation and standards. The development of domestic standards is important for organic production and for the creation of domestic certification infrastructure. National standards can also contribute to the creation of domestic niche markets.

Development of certification services. In most cases, developing country exporters depend on certification by international certification bodies to be able to market their products as organic in foreign markets. Several steps can be taken to reduce certification costs, including the creation of a national certification infrastructure. In some developing countries there are domestic certification bodies that have been accredited by foreign institutions and are authorized to certify according to the standards of importing countries.

Appropriate government support. Some developed countries are providing significant support through subsidies and other measures, for the conversion of conventional agriculture to organic agriculture (see above). In developing countries, however, subsidies do not appear to be very significant. Government support to organic farming, nevertheless, appears essential. This support could be directed towards different areas mentioned in this section. It should be borne in mind, however, that developing countries in general have limited financial capacities to grant subsidies. Awareness raising, training and capacity building are of key importance. NGOs and bilateral and multilateral donors can play an important role here.

Possible actions by developed countries

The following measures are needed to promote imports of organic products from developing countries:

- *Market information.* Developed countries' governments and import promotion agencies could provide information on organic standards and regulations, market opportunities and other relevant factors to exporters from developing countries.

Firms which have specific deficits in some products could be identified;

- *Technical assistance.* Multilateral and bilateral donors, as well as import promotion agencies, could provide technical assistance to developing countries with a potential to produce and export organic products;
- *Easier market access.* Market access requirements and procedures should be simplified, including improved application of the concept of equivalence;
- *IFOAM accreditation.* Certification by IFOAM-accredited certification bodies should provide a sufficient basis for allowing imported products to be marketed as organic. Accreditation by the IFOAM International Organic Accreditation Service (IOAS) should be recognized by importing countries;
- *Increase quota amounts under tariff quota systems.* The Harmonized System nomenclature currently does not contain specific tariff lines for organic products. However, within the system of tariff quotas, organic products may be entered under specific categories of quotas subject to low tariffs;⁹²

⁹² In the United States, imports of sugar are subject to tariff rate quotas (TRQs). Sugar imported within the quota usually is subject to no duty or a minimum duty of 0.625 cents a pound, depending on the exporter's trading relationship with the United States. Over quota sugar is subject to a prohibitively high duty. Organic sugar falls into the specialty sugar category, a subset of the refined sugar quota. This category, however, also covers other types of sugar that are not normally produced in the United States such as peal sugar, castor sugar and different types of sugars used by various ethnic groups. The USDA raised the specialty sugar quota from 4,656 tonnes in 1998/99 to 14,656 tonnes in 1999/00, in large part to accommodate the growth in organic sugar demand in the United States. However, for 1999/00 the specialty sugar quota was largely filled early in the quota year by imports of castor sugar. With the quota filled, importers of organic sugar were forced to place their sugar in bonded warehouses to await the start of the 2000/01 quota year for entry. In the light of projected high growth in organic sugar demand, interested parties have approached the Government of the United States to seek application for an additional quota line in the Harmonized Tariff Schedule of the United States (HTSUS) that would accommodate organic sugar specifically. Source: Buzzanell P (Executive Director, Peter Buzzanell & Associates, Inc.) Organic Sugar: Short Term Fad or Long Term Growth Opportunity? For the International Sugar Organization, 9th International Seminar on Hot Issues for Sugar, London, United Kingdom, 21 November 2000.

- *Partnerships and product stewardship* should be offered by supermarkets as well as fair-trade and similar organizations.

Trade policy issues

It is particularly important to ensure that policies to promote organic production do not result in trade distortions, and that standards for organic production, processing and marketing do not create obstacles to trade. The following issues are of particular concern/interest:

- The implications, if any, for developing countries of developed countries' subsidies to assist their farmers in converting to organic production;
- The implications of international, national and regional organic standards and certification for transparency and practical application of the concept of equivalence, taking into account the WTO Agreement on Technical Barriers to Trade;
- Possibilities to grant special and differential (S&D) treatment, including trade preferences, to organic products originating in developing countries.

2. 5 Conclusions

There is growing interest in organic agriculture in many developing countries, including those countries participating in this project. Several developing countries have practised organic agriculture for centuries. Even so, a number of measures are needed to allow developing countries to take advantage of new trading opportunities for certified organic products. These measures include research, capacity building in the form of the creation or strengthening of institutions, and appropriate policies, including in the area of trade.

While markets for organic products are still small, recent developments may have significant implications for agricultural production and demand for food products. Market forces are complemented by legal and institutional factors. For example, many developed and developing countries have now established legislation and organic standards for a growing number of product categories, such as plants and livestock and their products and aquaculture. Domestic markets are also emerging in several developing countries.

Developing countries can derive benefits from trading opportunities for organic products. However, there are commercial risks of embarking on a large-scale promotion programme for organic agriculture. Promotion programmes require careful attention, as building up standards and the certification infrastructure necessary to export to developed countries is expensive. Market chains and markets for organic products can be complex. Producer margins tend to be much smaller than retail margins, markets are uncertain and demand-supply gaps exist only for a relatively small group of products. There is no evidence to suggest that without supportive policies entry into organic markets is less complicated than entry into conventional markets; in fact it may be more difficult. Market information may be more difficult to obtain, and lead and lag times may be shorter and more difficult to respond to.

There is also a need to balance policies on organic production with other concerns such as food security. Empirical analysis is required to assist developing countries in designing clear policies in support of organic agriculture. The next chapter helps fill gaps in terms of information and analysis, but more work is needed. The final section of this publication contains some practical suggestions for further technical cooperation activities.

3. IMPLICATIONS FOR DEVELOPMENT, THE ENVIRONMENT AND TRADE IN SELECTED DEVELOPING COUNTRIES

3.1 SOME DEVELOPING COUNTRIES

Overview

This section provides information and analysis on organic agriculture in some developing countries. First, Vossenaar and Jha provide some background information, where available, on production and trade in countries participating in the UNCTAD/FIELD project. Second, Briones presents an overview of relevant issues in Asia, including Japan. Finally, the results of research carried out under the UNCTAD/FIELD project in India, Cuba, Costa Rica and Uganda are presented.

In developing countries, certified organic agricultural production is limited. However, significant shares of agricultural land are under traditional or “alternative” production methods. Such areas could be converted to certified agriculture relatively easily, provided that certification costs can be kept low. Areas under certified organic agriculture are shown in table III.1 for those developing countries that are participating in the UNCTAD/FIELD project. Some of those countries (Cuba, Costa Rica, India and Uganda) are discussed in more detail in subsequent chapters.

The main motivation for many developing countries to produce organic food and fibres is to tap market opportunities in developed countries. There are, however, other reasons to promote organic agricultural systems, such as economic self-reliance, finding alternatives to decreased access to agricultural inputs, natural resource conservation, food self-sufficiency, and rural and wider social development.⁹³

⁹³ Scialabba N, *Factors influencing organic agriculture policies, with a focus on developing countries*. FAO paper presented at the IFOAM Scientific Conference, Basel, Switzerland, 28-31 August 2000.

**Table III.1. Selected developing countries:
Areas under certified organic agricultural production**

Country	Certified organic area (hectares)	As a percentage of total agricultural area
Countries included in study		
Brazil	275,576	0.08
Costa Rica	9 974	2.00
India	41 000	0,03
Philippines	2 000	0.02
United Republic of Tanzania	5 155	0.01
Tunisia	18 255	0.36
Uganda	122 000	1.39
Cuba	8 495	0.13
South Africa	45 000	0.05
Other countries mentioned:		
China	301 295	0.06
Israel	7 000	1.25
Japan	5,083	0.09
Republic of Korea	902	0.04
Sri Lanka	15 215	0.65
Source: SOEL, 2003.		

There may be some regional differences. Latin America, one of the biodiversity reservoirs of the world, has very good potential for organic agriculture. It has the farming traditions, the fertile lands and the varied climatic zones that allow it to produce almost any agricultural goods in an organic way.⁹⁴ The most popular form of organic trade in Latin America is probably the neighbourhood fair or small informal market. Most Latin American countries have

⁹⁴ *Lernoud P, IFOAM World Board Member based in Argentina.*

specialized organic stores, or health food stores, and supermarkets are now beginning to sell organic products. The range of organic processed products on offer is sparse due to the difficulty of obtaining large enough quantities of organic produce for processing.⁹⁵

In Latin America, despite growing local demand for organic produce, the export market remains the main outlet for most crops. The basic products are normally exported from these countries without any value added, with the processing taking place in the developed countries for their national markets. There are some well-developed certification bodies in the region.⁹⁶ No government provides subsidies or economic aid for organic production. Some countries give peripheral support. For example, in Costa Rica there is official funding for organic research and training. In general, though, the organic movement in Latin America has grown through its own efforts, aided by seed funding from international aid agencies, for extension and association building. Buying companies and fair trade organizations have stimulated international trade. Activities relating to education in organic agriculture can be found throughout Latin America. Many universities and agricultural organizations run training courses and experimental on-farm projects.

In Asia, organic farming is practised with the aims of reaching self-sufficiency in food grains, to improve soil fertility or for export. It is generally organized by individual farmers, women's organizations and a variety of NGOs. Local distribution is limited, it produces little or no price premiums and access to credit remains a problem. Among the significant organic food producers are China, India, Israel, Japan, Malaysia, the Philippines, the Republic of Korea, Sri Lanka and Turkey. Certification is an issue only with regard to exports or organized domestic markets. Foreign certifiers are active in Asia, although China, India and Japan have their own well-established certification bodies. The main products exported are dried and fresh fruits and nuts, cocoa, coffee, tea, essential oils, herbs and spices,

⁹⁵ However, Argentina has a wide variety of oils, flours, honeys, wines, and teas for sale, and some supermarket chains have developed their own organic brands for their clearly defined organic sector.

⁹⁶ These include IFOAM-accredited certifiers such as Argencert and OIA (Argentina), Instituto Biodinamico (Brazil), Bolicert (Bolivia), and several other organizations, such as Biolatina (Peru).

and rice. The main characteristics and trends of organic agriculture in Asia are further examined in subsequent chapters by Briones and Jha.

In African countries organic farming generally occurs on a small scale. Numerous NGOs promote organic farming to advance national food security and traditional farming styles and practices. Production for export markets is relatively limited, and certification does not appear to make much economic sense to the majority of African farmers. Among the African countries, Egypt, Madagascar, the Maghreb countries and South Africa are the main exporters of organic products. The main exports from Africa comprise exotic fruits, herbs and spices, nuts, essential oils, oil seeds, vegetables and cotton. Inspection and certification is primarily carried out by foreign certifiers.

According to Walaga (2000), organic agriculture in Africa is growing for the following reasons:⁹⁷

- There has been disappointment with some of the green revolution technologies associated with resource degradation;
- Attractive green revolution technologies remain inaccessible to most farmers;
- Synergies exist between organic farming and indigenous knowledge;
- The growing worldwide environmental movement has raised awareness among the people in Africa that organic farming helps prevent soil erosion and desertification; and
- The international market for organic products with premium prices is an opportunity for farmers to increase their incomes.

Organic food products of interest to developing countries, based on information provided by experts and other sources, include:

⁹⁷ Walaga C, *Organic agricultural trade: State of the art in Africa. In: Quality and Communication for the Organic Market (2000). Proceedings of the Sixth IFOAM Trade Conference, Florence, 23 October, 1999.*

Brazil	Soya, sugar, orange juice and several other products.
Costa Rica	Coffee, bananas, vegetables, blackberries, some spices such as ginger and cinnamon, medicinal plants, sugar, pineapples, mangoes, plantains and cocoa.
Cuba	Sugar.
India	Tea, coffee, spices and rice.
Philippines	Fresh and processed fruits and vegetables, herbs and spices, rice, sugar, soybeans, honey, livestock (including poultry) and dairy.
South Africa	Avocados, herbs, sugar and vegetables.
Tunisia	Herbs, olive oil and vegetables.
Uganda	Avocados, coffee, dried fruit, sesame and sweet bananas.
United Rep. of Tanzania	Cocoa, coffee, spices and tea.

The following sections provide basic information and analysis, where available, on organic agriculture in countries participating in the project. See also the studies on Cuba, Costa Rica, India and Uganda, that follow later in this publication.

Brazil

Background

Organic agriculture in Brazil is reported to be growing rapidly, although from a very small base.⁹⁸ It is estimated that in 2001 over 275,576 hectares were certified organic and producing on a commercial scale. This was only about 0.08 per cent of the total agricultural land.⁹⁹

⁹⁸USDA, Foreign Agriculture Service, *Organic Farming in Brazil. Global Agriculture Information Network (GAIN), Report #BR2002, 2002.*

⁹⁹SOEL, 2003, *op.cit.*

Favourable conditions exist for a rapid increase in certified organic production:

- Methods of “alternative” agriculture are used on an estimated 10 per cent of the total cultivated area in Brazil;
- The cost of chemical fertilizers, a large proportion of which is imported, is high;
- There is an attractive price premium for organic products, which helps offset lower yields, if occurring;
- Certifying bodies have been set up, including the Biodynamic Institute (IBD);¹⁰⁰
- There is increasing domestic demand for organic food, and supermarket chains are playing a role;
- National standards are being developed for organic agriculture (see below).

Products¹⁰¹

Soybeans

The organic product most extensively produced in Brazil is organic soybeans, estimated to be about 7,000 tonnes, and most of the exports are carried out by one company. The major markets for Brazilian organic soybeans are the EU (mainly Germany) and Japan. The product is certified by IBD and is produced by a partnership system that involves nearly 500 producers in Rio Grande do Sul and Parana.

*Sugar*¹⁰²

The Brazilian sugar industry has become the world’s largest conventional sugar producer and exporter. In recent years the Brazilian industry has also become the world leader in the production and export of organic sugar. Its production is concentrated in the

¹⁰⁰ See <http://www.ibd.com.br/>

¹⁰¹ The case studies referred to below are based exclusively on Internet research.

¹⁰² This section is based on Buzzanell PJ, *op.cit.*

State of São Paulo. The main producer, the Balbo Group, claims to produce 50 per cent of the world's organic sugar, which is processed at Balbo's São Francisco Mill. The company started to produce organic cane in 1996; in 2000, it grew organic cane on 7,540 hectares.

In 1999/00 the Balbo Group's total organic sugar production was estimated at 23,000 tonnes, up from 4,000 tonnes in 1998/99 and 1,600 tonnes in 1997/98. In January 2000, the company introduced a retail brand for the domestic market. An estimated 11,000 tonnes of the 1999/00 production was earmarked for the domestic market and the rest for export. The company planned to raise production to 40,000 tonnes in 2000/01 and to 60,000 tonnes by 2005, when all sugar processed by the company's two mills are to be organic. The Univalem mill in Valparaíso, São Paulo is also transforming to organic sugar. It recently had 3,200 hectares under organic cane with plans to expand to 4,200 hectares.

The Balbo Group's organic sugar production is certified organic for the United States market by Farm Verified Organic (FVO), and for the EU market by ECOCERT. Organic sugar standards for Univalem are set and monitored by the IBD.

Oranges

Montecitrus,¹⁰³ a company formed by 400 small farmers, accounts for 5 per cent of the national orange production. It was estimated that during the crop year of 1999/00, a production volume of 1.5 million boxes (40.8 kg) of organic oranges would be processed into organic frozen concentrated orange juice (FCOJ). The entire production of organic FCOJ was to be exported to the EU.

Other products

Brazil is also exporting small quantities of other organic products, such as organic fat (derived from palm oil produced in the Amazon region), tobacco, coffee, fruit pulp, malt and dry beans.

¹⁰³ <http://www.montecitrus.com.br/>

Price premiums

Although most of the data is confidential, it is estimated that producers of organic soybeans obtained a premium of 30 to 40 per cent above the price for conventional soybeans.

With regard to organic sugar, high price premiums are reported, compensating for lower yields (organic sugar yields are estimated to average 70 tonnes of cane per hectare compared with 85 tonnes for conventionally grown cane).¹⁰⁴ At the time of writing (2001) the export market price was three times the price for conventional sugar. For the domestic market, the organic sugar being sold in Brazilian supermarkets reportedly cost five times that of conventional sugar.

It was estimated that the production cost of organic oranges in Brazil was nearly 50 per cent above that of conventionally produced oranges; however, no information was available on price premiums.

The above estimates suggest that large exporters with well established marketing channels are able to capture significant price premiums. No information is available, however, on price premiums available for the numerous small farmers working with these large exporters, or for small companies exporting through other channels.

Standards

The Ministry of Agriculture and Food Supply (MAA) enacted national legislation concerning organic production through Normative Instruction (Instrução normativa) N^o 007 of May 1999. The Instruction takes into account national and international comments received in a process of public consultations held on the basis of Law (Portaria) MA N^o 505 of October 1998. This Instruction covers organic production of both plant and animal origin. Some highlights are:

- The banning of GMOs;
- The establishment of detailed rules concerning conversion periods;

¹⁰⁴ *Buzzanell PJ, op. cit.*

- The creation of a national institution (Órgão Colegiado Nacional, OCN) and state institutions responsible for the implementation of the Normative Instruction and for control of certifying agencies. The National Organ has five members nominated by the Government (Ministry of Agriculture and Supply) and five representatives of NGOs;
- Certifying agencies must be non-profit organizations, recognized by the OCN, and must have legal representation in Brazil.

There are a number of certifying agencies for organic products in Brazil.¹⁰⁵

Export promotion

Brazil's major exports of organic products, that is soybeans, sugar and frozen concentrated orange juice, are carried out by a small number of large companies. Brazil is very active in international trade fairs, and is to host a BioFach Conference in 2003. Organic products are also offered through the Internet. At this stage, no information is available on export promotion measures.

Costa Rica

In Costa Rica several factors have led to the formation of small farmers' groups to produce organic vegetables and other products, which have been successfully marketed nationally over the last 10 to 15 years. This movement has been stimulated by agricultural policies that withdrew credit preferences to small producers, and by the decline in food prices due to surpluses of imported products on the national market. Costa Rica now produces a range of organically grown products. Organic bananas, organic coffee and other products have been exported for the last 10 years to countries in Europe and, to a lesser extent, to countries in the Americas. Banana exports include ECO-OK bananas (an ecologically sound production scheme) that were reportedly sold without a premium.¹⁰⁶

¹⁰⁵ See, for example, <http://www.planetaorganico.com.br/indexeng.htm>

¹⁰⁶ El-Hage Scialabba N and Hattam C, 2002, *op. cit.*

Costa Rica has developed national legislation and standards and has a good inspection and certification system. In early 2003 the country was included in the third-country list under European Union Regulation 2092/91.¹⁰⁷ A paper on the promotion of organic agriculture in Costa Rica and its export experience is presented later in this publication.

Cuba

In the Havana workshop, Cuba expressed considerable interest in organic agriculture. It was mentioned that Cuba has well-developed plans to convert one mill and estate to exclusively organic sugar production. (See also the paper by Llorente, Pérez, Berenguer and Garrido in this publication.)

When the trade relationship between Cuba and the former Soviet Union was severed in 1990, pesticide imports dropped by more than 60 per cent and fertilizers by 77 per cent.¹⁰⁸ Pushed by economic necessity, and in response to the shortage of agricultural inputs, Cuba adopted organic agriculture as part of its official agricultural policy. The Ministry of Agriculture and the Cuban Association of Organic Agriculture took far-reaching steps to promote organic agricultural systems and establish research programmes for food self-sufficiency (namely fruits and vegetables) through organic management. Among the sophisticated experiments undertaken were the use of bio-fertilizers, bio-pesticides and fermentation and tissue culture. Investments are now being made to increase the knowledge and technology for organic agriculture through higher education curricula, with a view to creating a new generation of agronomists.

Cuba is, perhaps, the best example of large-scale government support to organic agriculture. It is an integral part of agricultural policy. Hence, organic agricultural development does not suffer from the disincentives that typically result from conventional agricultural policies. In government-supported organic production, financial assistance means that organic farmers do not have to compete with cheaper imported food, farmers are not subject to

¹⁰⁷European Commission, *Organic Farming in Costa Rica*. DG(SANCO)/1252/2000 – MR Final

¹⁰⁸This and the next paragraph are taken from El-Hage Scialabba N and Hattam C, 2002, *op. cit.*

pressures to use synthetic agricultural inputs, and, often, government programmes ensure that proper research and extension services are in place.

India

Background

The Government, NGOs, private companies and farmers in India are showing increased interest in identifying policies to promote ecologically sound agriculture. Two developments in the 1990s that have strongly influenced the current interest in organic farming are: (a) social awareness about environmental and health concerns; and (b) increased demand for organic exports.¹⁰⁹

However, policies towards organic farming are still in the making and information is scarce. Farmers and NGOs are almost the only source of information on the current nature and extent of organic farming in India, with very limited information being available from Government agencies or certification bodies. Primary information has been collected under UNCTAD projects.

Case studies

The preliminary results of a number of studies commissioned by UNCTAD were presented at the Havana seminar,¹¹⁰ covering pepper, coffee and Darjeeling tea. The analysis was largely based on interviews with growers, focusing on issues such as supply factors (yields, costs), availability of price premiums and profitability. Interviews were also conducted with industry associations and the Government of India, focusing on policies aimed at promoting production and exports of organic food. More details can be found in a later chapter in this volume.

Price premiums

Experience from the case studies seems to indicate that price premiums for growers are uncertain and difficult to secure. This is

¹⁰⁹ Kaushik Aand Saqib M, *op. cit.*

¹¹⁰ Jha V, *Trading opportunities for organic food products from India and Viet Nam. Paper prepared for this project, 2001. An updated version, on India, is included in this publication.*

in part due to the fact that marketing chains tend to be complex.¹¹¹ Thus, even where consumers and retailers are willing to pay a price premium, in many cases such premiums do not seem to have benefited producers.

In the case of pepper, it had been difficult to obtain price premiums. In fact, since the prices of conventional pepper had been steadily rising since 1997, advance contracts for the supply of organic pepper were seen to offer no advantages over the sales of conventionally grown pepper. In the case of Darjeeling tea, market premiums of over 80 per cent obtained for organic tea in the early 1990s had prompted many growers to begin exporting organic tea. However, only 10 of the gardens that had converted to organic tea production were able to realize a profit. These had directly established export contracts with their buyers in Germany, Japan and the United States. Most of the profitable enterprises had invested a substantial portion of their profits in marketing tea in their main markets.

Lack of market information and marketing strategies is a major constraint to market development. For example, export channels for organic coffee from India are not fully established. Marketing policies to promote the use of brand names and other mechanisms, including electronic commerce, to move organic products out of commodities markets and auctions, are needed to increase premiums.

Standards and certification

The Government of India has created a committee to develop National Guidelines for Organic Production. The National Programme for Organic Production (NPOP) provides an institutional mechanism for the production and export of organic food products, taking into account the requirements of international markets.

Support and export promotion

Along with the efforts of IFOAM members, NGOs and private bodies, the Government of India has initiated programmes to

¹¹¹ *Marketing of organic products is a major problem for Indian farmers. There is no critical mass of producers in many sectors to enable economies of scale for processing, servicing, research and market development.*

encourage organic agriculture. For example, the Research Department of the Coffee Board initiated a research and development project entitled Promotion of Organic Coffee Production in India. In addition, the Agricultural and Processed Food Export Development Authority (APEDA) and certain commodity boards are promoting the export of organic agricultural products. The Tea Board of India¹¹² is actively supporting exports of organic tea, while the Spices Board,¹¹³ a government organization, has been actively promoting exports of organic spices. It employs inspectors trained by the Association of Member Organizations of IFOAM in India and the Association for the Promotion of Organic Food.

The major organic crops identified in India for export promotion are:¹¹⁴

- Spices and herbs;
- Nuts, including cashew nuts;
- Processed tropical fruit, dried concentrated or aseptically bottled or packed;
- Cocoa, coffee, coconut and tea;
- Cotton, soya, rice and other edible crops; and
- Processed vegetables such as gherkins and pickles.

Recently, the Peermade Development Society (PDS) set up a consortium for organic agricultural production and exports in support of small farmers.¹¹⁵ PDS, with certification by SKAL-International, a Dutch based certification organization, brought a number of crops under organic production, including spices, coffee, fruit and *ayurvedic* (indigenous treatment) medicines.

The Philippines

The Philippines is a net importer of organic food products. Currently, the Philippine organic sector is relatively small. Industry

¹¹² <http://tea.nic.in/>

¹¹³ <http://www.indianspices.com/>

¹¹⁴ Jha, *op. cit.*

¹¹⁵ *Organics Newsletter*, 2 (12), 29 March 2001.

estimates set the overall value of the market for organic products in 2001 at about 250 million Philippine pesos (US\$ 6.15 million), of which about 60 per cent consist of imported processed products. Domestic production is growing at 10 to 20 per cent annually. Major domestic output includes fresh and processed fruits and vegetables, herbs and spices, rice, sugar, soybeans, honey, livestock and poultry, dairy products and fertilizers. Growing demand for organic products is expected to outpace local production.¹¹⁶

At present, organic products cater to a niche market supported by higher-income, health-conscious local people and tourists. Major market constraints include lack of awareness among mainstream shoppers, limited availability, and prices that average 20 to 30 per cent higher than those for conventional products.

The Philippines reportedly is producing about 400 tonnes of organic sugar per year on the island of Negros, and this is exported mainly to Japan.¹¹⁷

The major force behind the development of the Philippine organic industry is the Organic Producers' Trade Association. NGOs and interested parties from Europe are also helping expand the sector. In addition, the Department of Agriculture (DA) is forming a Council to coordinate Government efforts to promote organic production and exports. The DA is planning to establish a certification and inspection programme, which would involve the Department of Trade and Industry (DTI), the Center for International Expositions and Missions (CITEM) and the University of the Philippines at Los Baños.¹¹⁸

South Africa

Organic agriculture has good potential and could appeal to the sophisticated, health-conscious end of the domestic market.

South Africa exports a range of organic products, such as wine, avocado, herbs, sugar, fruit and vegetables and tea (e.g. Rooibos

¹¹⁶ USDA, *Horticultural & Tropical Products Division, Organic Perspectives Newsletter*, March 2000. <http://www.fas.usda.gov/http/organics/2000/mar00.htm>

¹¹⁷ Buzzanell, PJ, *op. cit.*

¹¹⁸ *Organics Newsletter*, 2 (12) 29 March 2001.

and Honeybush teas). Organic farmers are concentrating on high-value crops such as vegetables, fruit and wine. For example, between 200 and 250 large-scale wine and fruit farmers in the Western Cape are exporting to the EU.

Africa's Farms Certified Organic (AFRISCO) is a driving force behind local organic certification. Its interim organic standards are based on the second draft (published in October 2001) of the South African National Department of Agriculture's new regulations under the Agricultural Product Standards Act of 1990.¹¹⁹ The regulations are based on IFOAM standards and EU regulations, and cover crops, livestock, products from bee-keeping and processed products for human consumption.

United Republic of Tanzania

The United Republic of Tanzania has some certified organic agriculture, but the sector is very small. Cotton, cocoa, coffee, spices and tea have been exported in small amounts. Export Promotion of Organic Products from Africa (EPOPA), a programme of the Swedish International Development Agency (SIDA) is supporting two projects (see box III.1). In addition, the Mufindi Tea Company Ltd., for example, produces organic tea at its Luponde Tea Estates and is certified by ECOCERT. The company began organic tea production in 1989.

The ITC, in cooperation with the Board of External Trade (BET), organized a seminar on organic agriculture in February 1999. According to the report of the seminar, four enterprises, producing tea, essential oils and spices, were certified according to EU standards. Organic spices were produced on around 300 hectares through land-lease and contracts with smallholders.¹²⁰ The report also stated that there are no official standards for organic farming in the United Republic of Tanzania; certification is conducted by European certification bodies such as the IMO (Institute of Marketecology in Switzerland) and the British Soil Association. NGOs are supporting organic cultivation practices through the provision of

¹¹⁹ See <http://www.afrisco.net/>

¹²⁰ *Report of seminar on Export Development of Organic Food and Beverages in Africa (United Republic of Tanzania). ITC/DPMD/99/305, 15 April 1999.*

training services for smallholders and extension workers. The Tanzanian Society of Organic Farming (KIHATA) has been established as an umbrella organization for NGOs supporting organic agriculture.

There is a growing interest in organic agriculture, as was expressed at the UNCTAD workshop (Dar es Salaam, 4–6 April 2000), and in a follow-up project for the promotion of organic production in the United Republic of Tanzania.

Box III.1. SIDA's EPOPA programme in the United Republic of Tanzania

Following a successful project on organic cotton and oilseeds in Uganda, SIDA started its EPOPA (Export Promotion of Organic Products from Africa) Programme in 1995, to help develop exports of organic products from Africa.¹²¹ EPOPA is a sub-programme of SIDA's Private Sector Development initiative. Its execution has been commissioned to Agro Eco Consultancy in the Netherlands. Projects can be initiated in all countries in Africa where Sweden is engaged in private sector development.

In each country a local coordinator is employed. EPOPA requires a close working relationship between exporter(s) and (an) importer(s). When African exporters offer products, the local coordinator (country manager) and Agro Eco help find importers. Support is available for sending samples, testing residue, exchanging product specifications and other services. EPOPA provides assistance in project organization, research and marketing, and can finance the feasibility study, consultancies, training and initial certification.

EPOPA is now active in Uganda and the United Republic of Tanzania, and projects are under way in other countries as well. In the United Republic of Tanzania, the *Kyela* project produces organic cocoa beans. As the potential production of this project, together with a similar project in Uganda, is larger than the existing organic market can absorb, new markets are sought in the conventional channels. Conventional processors can be

¹²¹ <http://www.sida.se/Sida/jsp/Crosslink.jsp?d=293>

supported in processing according to organic guidelines, sourcing different cocoa for blending and in finding producers. Following a slow start, the project reportedly exceeded initial targets.

Another project is located on the southwest shore of Lake Victoria for Robusta coffee to be grown according to both organic and fair-trade standards. The partner is Kagera Cooperative Union (KCU), a registered fair trade farmers' union, which plans to export green beans and instant coffee. In December 1999, KCU obtained organic certification.

Source: Internet, at <http://www.sida.se/Sida/articles/4300-4399/4317/pdf/utv00-23.pdf>

Tunisia

Tunisia is exporting organic herbs, olive oil and vegetables to the European market. The proximity of this market has triggered a relatively quick policy response from the Government of Tunisia.¹²² Measures are being taken to encourage farmers to convert to organic production while remaining competitive. In 1999, measures were taken to comply with EU regulations, and a National Commission for Organic Agriculture was established to encourage and stimulate the organic sector. A budget was allocated by the Ministry of Agriculture, including subsidies to cover 30 per cent of the investments of organic farmers and to cover 70 per cent of certification costs over five years. A certification authority (BIOCERT Tunisia) was created, connected to the Institut National de la Normalisation et de la Propriété Industrielle. As there is no organized source for the supply of organic fertilizer, the Tunisian Institute of Appropriate Technologies is engaged in studies for composting the organic waste of food industries and in developing techniques to recycle olive water residues. A Technical Centre for Organic Agriculture is being created to support training and research.

Uganda

Uganda exports a relatively large range of organic agricultural products, such as avocados, coffee, dried fruit, sesame, sweet

¹²² This section is copied from Scialabba N, 2000, *op.cit.*

bananas and cocoa. At the time of the project, in the case of sesame, about 4,000 hectares were under organic production. Uganda is a relatively important producer and exporter of organic cotton and sesame. There were approximately 5,500 farmers with 4,500 hectares under organic cotton production.¹²³ (See the detailed study by Waniale in this publication.)

3.2 Asia

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Overview

The bulk of the world's population (58 per cent) lives in Asia, as does the bulk of the world's poor (73 per cent). High population growth, widespread poverty and illiteracy characterize the social landscape of the lower-income countries of Asia. The region is afflicted by both urban and rural poverty; however, rural poverty accounts for three-quarters of the total. The majority of the rural poor depend on agriculture for employment and income; hence, the poorest of the poor are the landless farm workers, who constitute 45 per cent of the rural population in India and 40 per cent in Bangladesh. Across Asia illiteracy is a major factor contributing to poverty. It is most pronounced in South Asia where the rate of illiteracy still exceeds 50 per cent, with higher rates amongst women. More than 70 per cent of women, 25 years of age and older, are illiterate.¹²⁵ Countries in other regions have higher literacy rates (simple reading and writing), but the phenomenon of globalization today demands more functional literacy, including the ability to read, write, compute and comprehend.¹²⁶ The extent and intensity of these social problems contribute to other extensive problems in Asia – environmental degradation, primarily soil erosion and loss of biodiversity. As a motor for sustainable development, organic

¹²³ http://www.grolink.se/org_agriculture.htm

¹²⁴ Adapted from the paper prepared for the Workshop on Strengthening Research and Policy-Making Capability on Trade and Environment in Developing Countries, held in Havana, Cuba, May 26-29, 2000.

¹²⁵ Bardhan P, *Efficiency, equity and poverty alleviation: Policy issues in less developed countries*, *The Economic Journal*, 1996, 106: 1344-1356.

¹²⁶ Briones A and Ramos C, *Market forces and food security*. In: Chasek PS (ed). *The Global Environment in the Twenty-First Century: Prospects for International Cooperation*. New York, New York, United Nations University Press, 2000.

agriculture has a role to play in the areas of poverty alleviation, human development, gender equality and environmental protection.

Organic agriculture enables Asian smallholders to achieve household food security and gain modest incomes while regenerating the land, enhancing biodiversity, and supplying quality food to local communities. Benefits have been demonstrated by diversified and integrated organic farm systems that are economically viable, environmentally sound and supportive of cultural traditions. These environmental, economic and social objectives are essential to rural development in Asia, where poverty is the major cause of chronic food shortage and unabated environmental stress such as soil degradation, soil loss, biodiversity loss, and soil/water pollution. This chapter presents particular details about the situation in China, Japan, the Republic of Korea and some other Asian countries.

Background

China

The Environmental Protection Agency of China created the Organic Food and Development Center (OFDC) in late 1994 to build the foundation for a competitive organic food industry. The OFDC was given the functions of inspection, certification, research, education, and training for organic agriculture and organic food development. Its aggressive strategies made it popular among farmers and processors. By 1997, the Centre, along with the Chinese National Chapter of the United States Organic Crop Improvement Association (OCIA) had certified 10,000 farmers and 10 processors.¹²⁷ And by late 1998, almost 45,000 hectares of organic land had been certified. A large project on Organic Farming Development in China was jointly initiated by OFDC and the German technical cooperation agency, GTZ.¹²⁸ In addition to the wide-ranging activities of this project (technology development, scaling up of organic production from farmers' groups to pilot villages, information and advisory services, inspection and certification capability at the national level), OFDC has also concentrated on education and training.

¹²⁷ Li Z, *Organic agriculture movement in China. Paper submitted to IFOAM-Asia Board Meeting, Hanoi, Viet Nam, 30 October 1997.*

¹²⁸ Xi Y, *Organic farming in China: The strategy for training and extension, IFOAM Ecology and Farming, 2000, 23: 12-13.*

In response to the regulation, ISO 65, in 1999 OFDC separated its technology, research, consulting and information service from its inspection and certifying functions. This resulted in the creation of a new organization, the Nanjing Global Organic Food Research and Consulting Center (OFRC), which is China's first formal and registered centre for organic consulting and extension services. It plays a vital role in training and educating farmers. Trained farmers were encouraged to form cooperatives and to assist in developing a broad-based agricultural conversion plan.

In 2001, over 300,000 hectares of farmland and almost 3,000 farmers were certified in China (SOEL, 2003). Major products certified were: soybeans, various teas, sunflower seeds, pine nut kernels, buckwheat, peanuts, wheat, barley, ginkgo, bamboo shoots, rice, vegetables and honey. In addition, approximately 10,000 square kilometres were set aside for certified collection of wild plants.

In China, there are four types of payment for certification, as small farmers cannot afford to pay the certification fee themselves: (i) fees paid by foreign importers or traders, (ii) fees paid by Chinese traders, (iii) fees shared by trading companies, both local and abroad, and (iv) fees paid by farmers (applicable to some farmers contracted to cultivate large farms).

There are also three types of certified small farmers in China: (i) farmers undertaking organic cultivation in contracted land used by other farmers; (ii) local farmers organized by local governments to go into organic production and apply for community grower certification; and (iii) farmers on State-run farms applying for certification.¹²⁹

Japan

In the past, retail sales of organic products in Japan were estimated to amount to over US\$ 2 billion. However, recently this figure has been revised downwards. Environmentally friendly agriculture (EFA) in Japan encompasses more than organic agriculture,

¹²⁹ Zhenfang L, *Local inspection and certification: A key point of organic marketing in Asia. Paper presented at the 4th IFOAM-Asia Conference, Tagaytay, Philippines, 18-20 November 1999.*

and it comprises 22 per cent of all farm households in Japan. In 2002, organic farmers accredited under the Japan Agricultural Standard law (JAS law) (see below) represented only 0.7 per cent of EFA farmers, though 6.5 per cent of EFA farmers expressed the wish to obtain "JAS organic" accreditation. At present, ITC estimates organic retail sales in Japan (as defined under the JAS labelling) to be around US\$ 300 million (see table II.2).

Organic products are available in supermarkets, apart from food shops that sell exclusively organic products. The development of organic agriculture was greatly assisted with the advance of a producer-consumer partnership (*teikei*) in the 1970s (discussed below).

Republic of Korea

The Korea Organic Farmers Association (KOFA) was formed in 1978, and in 1987, KOFA was officially recognized by the Ministry of Environment. In 1990 the National Agricultural Co-operative Federation (NACF) enlisted KOFA to handle its training on organic farming for members nationwide. More recently, the Government of Korea, through the NACF's Rural Development Office (RDO) and universities, initiated research, education, training and other support services for organic agriculture.

The Government has supported the establishment of hundreds of automated composting plants and provided long-term, low-interest loans to farmers who converted to organic farming. Because of restrictive by-laws on water supply, the NACF campaigned for organic farming within 1,380 square kilometres (138,000 hectares) of the Poldang Water Supply Zone. The municipality of Seoul in the area further subsidized the farmers' conversion by providing low-interest-rate loans to organic farmers. Universities further supported the organic movement by founding the Korea Society of Organic Agriculture Association (KSOA) in 1991. Finally in 1994, KOFA received official recognition from the Ministry of Agriculture, Forestry and Fishery (MAFF) and was allocated a sizeable budget for R&D in organic agriculture.¹³⁰ Also in 1994, the National Agriculture

¹³⁰ Jung J, *Organic agriculture in Korea. Paper submitted to IFOAM-Asia Board Meeting, Hanoi, Viet Nam, 30 October, 1997.*

Produce Inspection Office (NAPIO) started certifying organic produce. To generate more consumer confidence, KOFA was able to negotiate with NAPIO that applicants for certification would require recommendation by KOFA.

According to *the Agricultural Census of 2000*, the number of organic producers is 3,327 households, or 4.5 per cent of farm households practising environmentally friendly agriculture. This is 0.2 per cent of the total farm households. The figures imply that most organic farmers are not certified.¹³¹ The number of farms under the certified organic system has been increasing rapidly since the late 1990s, from a low base. In 2000, the number of organic farms was 669, with an area of 667 hectare, producing about 0.1 per cent of the total quantity of production. In 2001, these figures had risen to 899 households, 962 hectares and 0.2 per cent of total production.

The Korean organic movement adopted an ecological village approach as a development strategy for environmentally sound agriculture in rural areas. The Research Institute of Organic Agriculture of Dan Kook University (Cheonan, Republic of Korea) initiated development of the eco-village for three years with funds from the Korean Agricultural Cooperative Agency (KACA). The eco-village follows the principles of organic farming in the context of integrated renewable energy systems, ecological buildings, composting facilities, methane gas generation, green economics, partial self-sufficiency, farm businesses and ecotourism.¹³²

Other Asian countries

For many other Asian countries, including India, Indonesia, Malaysia, Nepal, Pakistan, the Philippines, Sri Lanka, Thailand and Viet Nam, organic agriculture has begun to expand.

In the context of science-based and market-influenced organic agriculture, the organic sector in Asia is said to be at the infant

¹³¹ Kim C, *Economic perspectives for Korean organic agriculture. Paper presented at the OECD Workshop on Organic Agriculture, Washington DC, 23–26 September 2002.*

¹³² Sang Mok Sohn, *New strategy of Korean organic agriculture for the 21st century with the basic concepts of eco-village. Paper presented at the 4th IFOAM-Asia Conference, Tagaytay City, Philippines, 18–20 November 1999.*

stage. For instance, inspection and certification capabilities are still being developed, and distinct market channels for significant volumes of organic produce are not yet in place. However, some enterprises are exporting organic products that have been certified by foreign certifiers. As of 2003, one organisation in Thailand, Japan and China each were IFOAM accredited. (For India, see the next section.)

Standards, certification and harmonization

Certification in Asia started only after 1994. IFOAM members in Asia have used the IFOAM Basic Standards as a model for national basic standards, incorporating local resources, processes, and practices.

In China, the Organic Food Development Center formulated standards (based on IFOAM Basic Standards), created a certification committee, registered its logo and carried out training of inspectors. As mentioned previously, China has already created another agency, whose specific responsibility is to conduct inspection and certification.

Under pressure from producers and consumers who wished to have national legal standards, the Japanese Ministry of Agriculture, Forestry and Fisheries (MAFF) developed standards for organic agricultural products and organic agricultural processed products, and established an organic inspection and accreditation scheme. In April 2001, for a product to be labelled “organic” it was required by law to comply with the standards. JAS-organic-accredited farm households are estimated to represent less than 0.2 per cent of total farm households in commercial farming, and it is estimated that the ratio of planted areas of the farm households practising organic agriculture is less than 0.1 per cent.

In 1995 Green Net of Thailand spearheaded the development of a certification programme – Agriculture Certification Thailand (ACT) – and in 1999 ACT applied for IFOAM accreditation – awarded since. Also in 1999, Humus of Malaysia announced the establishment of its certification services. The Republic of Korea has its certification system that was devised by a government agency, although only members of the Korea Organic Farmers Association do inspection. In other countries of Asia, including the Philippines, national basic standards are being worked out (involving validation, evaluation

and improvement) and plans for establishing certification programmes are under way. The most immediate need in the Philippines is training for inspection and certification.

Production and exports

China

For Asia's low-income countries, China's experience may offer a good model for trade in organic products. In 1994, the Government initiated ambitious programmes for organic production, research, development and extension (RDE), inspection and certification with the creation of the Organic Food Development Center. Good results were achieved in a very short time span: exports of organic products reached approximately US\$6 to US\$8 million in 1997, and more recently this increased to US\$10 to US\$12 million.¹³³ Asia produces 90 per cent of the world's organic tea, of which China is the leading producer. This is largely due to its establishment of an organic tea certification programme in the Organic Tea Research and Development Center (OTRDC) in 1996. The OTRDC has three sections: certification management, quality testing and inspection, and technical support. This brief account demonstrates how China undertook capacity building through RDE to initiate organic trade not only for the foreign market but for its domestic market as well.

China's strategy to find a niche in organic trade reflects its experience in introducing "green food" to the market as part of its campaign for environmental regeneration. Green food is a product of ecological agriculture (using ecological principles with a notable reduction in the use of synthetic pesticides). Establishment of the Green Food Development Center (GFDC) in 1992 for RDE and certification of green food products laid the foundation for the development of green foods (fresh and processed). Today, the processing facilities for "green foods" have become even more developed than similar ones for organic foods. There is a registered logo for green food and over 700 kinds of foods have been certified. One of the country's development programmes under Agenda 21, "green food" has become a big business in China.

¹³³ Li Z, *Organic certification for small farmers in China. Paper presented at the 4th IFOAM-Asia Conference, Tagaytay, Philippines, 18–20 November 1999.*

In hindsight, the country's support of both green food and organic food did not create a perception that the Government was diverting much needed development funds into organic agriculture. The organic business in China had an eye on the domestic market with a view to increasing farm income by catering to the higher income urban population. China has about 335 million people in urban centres. Even if only 5 per cent of them preferred to buy organic products, production would need to meet the demand of over 16 million people. Such a high level of demand for organic products could certainly stimulate the rural economy.

Japan

The organic market in the countryside is dominated by *teikei*, which does not entail third-party certification. Based on a survey conducted by the Japan Consumer Information Center in 1991, there were already about 1,000 *teikei* groups across the country. At that time, the survey by the Ministry of Agriculture, Forestry and Fishery showed that about 25,000 farmers were farming according to the principles of ecological agriculture. Of these, about 8,000 were organic farmers. In contrast to the amount of government support for the promotion of organic agriculture and food in China, the Government of Japan has given little attention to organic production. The strength of the organic movement in Japan lies with organic producers and consumers. In the late 1990s, the magnitude of organic trade was reflected in the percentage of the total population consuming organic foods: 3 to 5 per cent.

To further boost the campaign for organic foods, an organization called Organic Bank of Japan (an information and data bank) started a consumers' campaign dubbed Organic 1 per cent Campaign, which aimed at a steady growth of the organic sector to capture 1 per cent share of the retail sector. This campaign was directed at organic farmers, processors, distributors and consumers.

Republic of Korea

Production of organic food in the Republic of Korea is for domestic consumption. As early as 1978, Korean farmers formed the Korea Organic Farming Association (KOFA), and within 17 years KOFA had 9 provincial branches and 114 city/county branches with a total membership of 17,063. Sales of organic products were less

than 1 per cent of the total sales of farm products, but their presence in the market was visible. There was direct trading between producers and consumers and trading through big department stores. Total sales averaged US\$120 million per year, but growth rates had been substantial, at 30 to 40 per cent.

It was only in the early 1990s that the Ministry of Agriculture, Forestry and Fishery (MAFF) began to provide development assistance to organic producers in response to real needs of the industry. More than 200 cooperative compost factories were established, with 50 per cent of the cost paid by the Government and 30 per cent financed through 10-year loans at 5 per cent interest. In 1995, MAFF created the Department of Environmental Agriculture to hasten the development of organic agriculture in the country. Among the initial goals of this department was to develop 1,000 organic farming areas by 2004. Each organic farming area was to consist of 10 farm households. With the aim of minimizing pollution from agricultural land near Seoul's water supply source, the municipal authorities of Seoul and the National Agricultural Cooperative Federation have assisted 3,000 farm households to convert to organic production. Seoul's local authorities have provided additional assistance in the form of an organic farm products centre in the city's wholesale market.

Thailand

The development of organic food marketing in Thailand has been different from that of many other countries. When the Alternative Agriculture Network (AAN) was founded in 1984, the main themes consisted of policy advocacy and development of an alternative market for organic agriculture. Around the mid-1990s, three important developments in AAN took place: (i) the incorporation of a marketing venture into its programme; (ii) the establishment of a national organic certification body; and (iii) increasing interest in biodiversity issues. The first two gave rise to the establishment of organic shops in Bangkok and in the provinces, most of which were managed by local NGOs who are active members of AAN.¹³⁴ Although the organic market is still small, the

¹³⁴ Panyakul V, *Green Net's half a decade of experiences. Paper presented at the 4th IFOAM-Asia Conference, Tagaytay City, Philippines, 18-20 November 1999.*

establishment of a certifying body may spur sales, which in turn could encourage production.

Other Asian countries

Countries in South Asia (Bangladesh, India, Nepal and Pakistan) and South-East Asia (Cambodia, Lao People's Democratic Republic and Myanmar) are assumed to have significant volumes of organic food products consumed locally, although no formal data is available. It is not identified as organic food, but simply as people's traditional food.

The importance accorded to soil and human health by organic farmers in India is quite evident from a study on the motives for conversion and continuing adoption of organic farming.¹³⁵ Of the total respondents, 53 per cent indicated "consideration of soil fertility and physical conditions" and 37 per cent indicated "concern over family's health." Likewise, case studies on households with well-established organic farms in the Philippines indicated the high value placed on soil fertility and family health.

Promotion

For the promotion of organic agriculture, target groups may be divided into seven categories: (i) farmers; (ii) processors; (iii) consumers; (iv) retailers, traders, distributors and other service providers; (v) development workers; (vi) the science community, academia, and educators; and (vii) policy makers. For all groups, promoting organic agriculture must begin with a clear understanding of organic practices and market prospects, as well as a recognition of its benefits to society and the environment. In other words, the target groups should have a holistic perspective. In Asia, there are several models for its promotion, involving alliances between these different groups.

Government-led and farmer-supported promotion

The Chinese model of promotion of organic agriculture – led by the Government and supported by farmers – was conceived by

¹³⁵ Anandkumar S, *Motivating farmers to convert to organic farming and strategies for organic extension. IFOAM Ecology and Farming, 1998, 18: 21.*

the National Environmental Protection Agency (NEPA). The Agency decided that organic food development provided a practical and multipurpose programme that had the potential for expanding its outreach and sustainable benefits. It enabled farmers to have access to diverse sources of food and income by depending more on on-farm and local resources. Organic agriculture regenerates the land, avoids pollution of soil and water from harmful pesticides, sustains the fertility and quality of soils, and restores biodiversity.

Realizing the Government's neglect of RDE for organic agriculture, the Agency created the Organic Food Development Center (OFDC) in 1994 to take care of the immediate development needs of the various sectors, particularly those in production (farmers and processors) and marketing. Concerns about the market led the OFDC to become responsible also for standard setting, inspection and certification. Overall, OFDC's programmes were designed to be of practical use to the organic industry. Much of the R&D was conducted with farmers in the villages. All these activities were accompanied by a training programme that introduced the principles of organic agriculture. OFDC's study on training methods showed that farmers who appreciate the principles take the initiative to contribute towards practical innovations in organic farming. Farmers' support for training encouraged trainers to move on from working with small groups of farmers to village-level training.

The Chinese model of promotion of organic agriculture provides a concrete example of how a development programme can address producers, the environment and the market, and at the same time bring benefits (social, economic and environmental) within a few years. In addition to the many organic products for the domestic market, China has secured markets for organic tea in Europe and organic soybean in Japan.

Farmer-led and government-supported promotion

The Republic of Korea's model demonstrates persistent promotion of organic agriculture by a national organization of organic farmers in order to draw in government support. For 17 years, KOFA persisted until the Government expressed support for nationwide coverage, and focused on aspects that required financial capital. Promotion of organic production simultaneously addressed producers, the environment and markets. Notable in the Korean

experience is the recognition given by the Government to KOFA in the field of education, training and organic inspection, for which it has received financial support from the Government. Although the Government has created an agency to handle certification, only KOFA-inspected organic farms can qualify for certification.

Producer-consumer partnerships for promotion

The *teikei* in Japan deserves a special category because it is the oldest form of producer-consumer partnership, which was promoted beyond the typical village culture of rural Asia.

Teikei is an alternative marketing channel for organic products based on an ecological production and consumption system linking producers and consumers in a dynamic and creative relationship:

Under the *teikei* system, all products are distributed directly from producers to consumers. There are no middlemen or costly inspection bodies so the pricing is very competitive compared with conventional distribution systems. *Teikei* is not merely an alternative distribution system of organic products, but rather an ecological production and consumption system that places the producers and consumers in dynamic and creative relationship. Its stress is on ecological way of life rather than an emphasis on technical aspects of sustainable agriculture...".¹³⁶

In 1972, the Japan Organic Agriculture Association (JOAA) was formed for the purpose of introducing *teikei* into more communities in the country, as many of the consumer groups live in urban centres. *Teikei* is not merely a unique marketing arrangement; it is a cultural bonding between farmers and urban dwellers, based on friendship and trust. Both farmers and consumer groups are involved in promoting organic agriculture and the extent to which they value nature and land is reflected in their lifestyle.

The close relationship between producers and consumers eliminates the need for expensive packaging and attractive marketing. Reusable packaging materials are usually returned by the consumers

¹³⁶ Hashimoto S, *Teikei system: An alternative marketing system in Japan. IFOAM Ecology and Farming, 2000, 23: 9-11.*

for recycling. The close relationship between producers and consumers makes it easier to practise reducing, reusing and recycling. The following 10 principles form the basis of *teikei*:

- (i) To build friendly and creative relationships, not merely trading partnerships;
- (ii) To produce according to prearranged plans as agreed between the producers and consumers;
- (iii) To accept all the produce delivered from the producers;
- (iv) To set prices in a spirit of mutual benefit;
- (v) To deepen communication for mutual respect and trust;
- (vi) To manage self-distribution, either by the producers or by the consumers;
- (vii) To be democratic in all activities;
- (viii) To take an interest in studying issues related to organic agriculture;
- (ix) To keep an appropriate number of members in each group;
- (x) To continue to make steady progress, even if it is slow, towards the final goal of management of organic agriculture and an ecologically sound life.

The *teikei* system is an important contribution to the advancement of socio-ecological awareness, but it is being threatened. The newly amended JAS law made the inspection and certification of organic farm products mandatory.¹³⁷ However, the JOAA created a committee to draft its own basic standards, which were approved by its members in 1999.

¹³⁷ Sawanbori S, *Current situation regarding national standard setting, mandatory certification programme and labelling for organic farm products in Japan. Paper presented at the 4th IFOAM-Asia Conference, Tagaytay City, Philippines, 18-20 November 1999.*

Consumer-led promotion

In Japan, consumer groups and environmentalists organized themselves for the purpose of convincing people to consume organic foods and other organic or natural products. The challenge was to encourage people to eat quality food and at the same time help protect the environment. These consumer organizations had no business connections and worked voluntarily (conducting seminars, conferences, symposia, food fairs, and preparing and distributing brochures and pamphlets). Their success led to a rapidly growing organic business that reached the level of trading by big corporations. Multitudes of organic seals also appeared in the market, but this gradually eroded consumer confidence, which resulted in the need for legislative action. Therefore the JAS Law was quite timely.

Consumers' organizations are also active in the Republic of Korea. They work closely with KOFA, which has gained considerably from their support.

Civil society-farmer partnership promotion

Promotion of organic agriculture by NGOs, church-based organizations (CBOs), and environmentalist groups in many countries of Asia generally started with education and training on sustainable agriculture (SA) for farmer organizations (or farmer-partners in development). Some organizations subsequently shifted their programmes to organic agriculture when a growing number of SA farmers continued to use pesticides. Their projects focus on education and training, research, crop production, crop/livestock production and marketing.

Village-based promotion

This is an emerging field of social transformation in rural Asia, where whole villages purposefully transform their means of production, ways of consumption, and lifestyle in accordance with ecological principles. These are called ecological villages. Existing ecological villages in China are not considered as "organic villages" because the many production systems do not fully conform to the standards of organic production. However, they are known to produce green foods and some organic foods. The ecological village concept is not limited to farming operations alone; it includes village-based food processing and various other enterprises (non-agricultural),

as long as they do not cause environmental pollution. Ecological villages have also been set up in Viet Nam in areas with marginal lands and problem soils. In the Republic of Korea, a more sophisticated version of an ecological village is being initiated, where even houses are designed to be built with eco-friendly materials.

Recommendations

The realities in rural Asia that provide the basis of the recommended development goals for organic agriculture are:

- Predominance of smallholder agriculture with low productivity;
- Prevalence of landlessness, particularly in South Asia and in the Philippines;
- Extensive occurrence of marginal lands left idle;
- More than 40 per cent illiteracy in South Asia;
- Widespread deprivation of basic services (health, education, water and electricity); and
- Inadequacy of roads, transport facilities, communication facilities, markets and credit sources.

Given these realities, recommendations for a development agenda are as follows.

Smallholders have remained impoverished despite modern farming technologies. Their practice of mono-cropping (usually with rice or corn) makes them vulnerable to price manipulations, and, at times, vulnerable to losses of entire crops due to natural calamities. Farms in suitable agro-environments should shift into diversified, integrated, and ecological farming systems that can provide the family with adequate food and modest and staggered surplus for the market, as well as cushioning the impact of natural disasters. These ecological farms could be transformed into diversified and integrated organic farm systems (DIOFS) that are largely dependent on renewable and local resources. Considering the knowledge-intensive nature of DIOFS, development should be based on a participatory and holistic approach to DIOFS development.

Basic social policy addresses people's needs for education and health. There should be a concomitant social policy that complements the development of smallholder agriculture. This would include the provision of education and training for farmers and rural workers to make them functionally literate with respect to operations of their farm systems.

Economic policy should promote the development and expansion of smallholder agriculture, as such growth could help achieve equity and poverty reduction. This is not a challenge only to policy makers; the biggest challenge is for implementers to have the political will to carry out the appropriate policies. Economic policy should give priority to the landless, and to the near landless, to sufficiently utilize land. It should also give them legal security to retain the land for sufficient periods of time. Through this policy, marginal lands can be converted into productive DIOFS, organic orchards and organic livestock farms. It can thus turn idle lands and communities into a combined economic force for food production. This redistribution of idle assets should be accompanied by investment in infrastructure and development of rural credit and saving institutions.

The bulk of research and extension for the development of smallholder agriculture should address the problems and needs of the grassroots in various agro-environments through mutual consultations in seeking solutions. By working on problems in the field and directly with the local population, in their socio-cultural milieu, researchers could develop approaches to make their field experiments relevant and successful for targeted communities and other areas with similar agro-environments where experimental results are applicable. At the same time, an economic policy that directs development efforts in smallholder agriculture to achieve growth, equity and poverty reduction, should be coupled with RDE objectives that are working towards the same goal.

Agricultural schools are usually dispersed throughout major agricultural regions in a country. Each school has programmes designed to serve the needs of local agriculture in its geographic area. These programmes should be directed towards the development of smallholder agriculture in the area, and should complement the requirements of the social and economic policies and RDE. Efficient coordinated actions among concerned institutions are needed.

Programmes focusing on ecological principles and practices of crop and livestock production can best offer options for the development of organic farming systems and processing methodologies.

From a technical viewpoint, processes in organic farming systems are location-specific. Knowledge and skills for this location-specificity should be the schools' contribution to the development agenda. Aside from technical matters, location-specificity also applies to market dynamics. Objective studies by the schools on the behaviour of local markets can be used to help farmers and rural communities to improve their farming systems for better economic returns.

3.3 India

Veena Jha, UNCTAD project coordinator

Overview

Countries such as India have traditionally practised organic agriculture, yet its export possibilities remain uncertain. The process of modernization has changed attitudes towards organic agriculture. Certainly, the green revolution in India led to the increased use of chemicals. In recent years, the limitations of chemical and high irrigation agriculture are being felt, and experiments with organic agriculture have increased. Movements such as LEISA (Low External Input Sustainable Agriculture) have provided funding and other types of assistance, including assistance for pilot projects in organic agriculture. The scope of such programmes, however, has been relatively limited. In addition, it is not clear to what extent such projects will be successful in the long term, and to what extent organic agricultural products will continue to be exported if market distortions grow or if donor support is withdrawn. Therefore, the overall economic, social and environmental effects have so far been limited. The reality in India and in several other developing countries, however, is that 60 to 80 per cent of its agricultural production still uses small amounts of chemicals (here taken as including both synthetic fertilizers and pesticides) and could easily be converted to organic agriculture. However market premiums are relatively limited in the domestic markets, and organic food export markets entail high costs of entry.

The emphasis of developing country governments on organic agriculture originates from two basic concerns. First, the use of hybrids and their seeds, excessive irrigation and the use of pesticides and fertilizers have now led to diminishing returns by lowering agricultural yields. This implies that in order to make agriculture economically viable, it is necessary to revert to a different form of farming. Second, from an environmental point of view, the excessive use of fertilizers and pesticides is proving to be extremely harmful. In addition, for the large proportion of agriculture that does not use pesticides and fertilizers, it would be useful to upgrade from non-chemical agriculture to organic agriculture and to use modern and well-known methods of organic and biodynamic cultivation to increase agricultural yields.

Recent analysis appears to indicate that niche markets for “organic agricultural” products continue to hold promise for developing country producers. ITC estimates indicate that though the market share of organic products is, on average, no more than 2.5 per cent of total food sales in most developed countries, the rate of growth is between 5 and 20 per cent (see table II.2).

The challenge is now to ensure that (i) a larger number of producers in developing countries can take advantage of organic agricultural markets; and (ii) that production and exports can be maintained and expanded in the long term, independent of continued donor support. Export opportunities exist both in niche markets, where organic food labels are required for product certification and differentiation, and in mainstream markets, where self-certification under particular corporate brands increasingly influences green consumerism. An example of the latter is the marketing of organic Darjeeling tea by Starbucks of the United States.

This paper draws on work carried out under UNCTAD/UNDP projects in India.¹³⁸ Under the project on The Role of Business Partnerships in Promoting Sustainable Development (IND/99/965), UNCTAD commissioned studies on organic Darjeeling tea,¹³⁹

¹³⁸ Kaushik A and Saqib M, *op. cit.*

¹³⁹ Kaushik A and Saqib M, *op. cit.*; and Damodaran A (Indian Institute of Plantation Management), *Constraints and prospects of organic tea farming in India. Paper prepared for UNCTAD.*

pepper,¹⁴⁰ coffee,¹⁴¹ and rice. A workshop on organic tea was held in Darjeeling in May 2000. In addition, workshops on organic spices and organic coffee were organized in cooperation with the Spices Board and the Coffee Board, in Cochin in August 2000.¹⁴²

Liberalization of international trade in agriculture, in particular the elimination of export subsidies and reduction of domestic support, could shift comparative advantage to countries such as India. However, developing countries' ability to capture markets for organic foods will depend on the supply situation in developed countries. For example, liberalization is not likely to be of particular relevance for tea, spices and coffee, as little, if any, of these are grown in EU countries. Moreover, costs such as certification, meeting sanitary and phytosanitary (SPS) requirements and other marketing requirements need to be factored into the calculations of costs of exporting organic food. In addition, promotion of local consumption in developed countries has long been a feature of the organic agriculture philosophy,¹⁴³ which restricts the possibilities for developing countries to penetrate their markets. Lastly, organic food markets are significantly influenced by policy. Thus policies for increasing imports of organic food from developing countries need to be put in place if trade from developing countries is to be encouraged.

One of the major deterrents to producers converting to organic agriculture has been the lack of assured markets and market premiums. The capacity and costs of exporting organic food from India are examined below, including the tradeoffs with food security. This is supported by primary evidence gathered from field surveys in India for particular crops, followed by conclusions and recommendations.

Production and exports

Three types of farming characterize the economic structure of organic farming. The first is that of traditional farmers who are using

¹⁴⁰ Damodaran A, *op. cit.*

¹⁴¹ Damodaran, A, *op. cit.*

¹⁴² A publication containing the results of this project is under preparation.

¹⁴³ Wynen, E. 2002, *op. cit.*

organic methods but are not aware of it. This applies to about 70 per cent of the farming in India and several other Asian and African developing countries. The second is of traditional organic farmers who generally use mixed farming practices and supply to the domestic market. In India, as in other countries, many of these producers are motivated to adopt organic production techniques by a concern for the environment or because of a lifestyle decision, and certainly not because of any strong financial incentives. The third type of farming, generally aimed at production for export, has grown since the early 1990s. In this category, there are those producing permanent crops and those adopting broadacre production systems, where the export crop is rotated with other crops. A major challenge for the latter is to find organic markets for these other crops.

Promotion¹⁴⁴

In recent years, the members and associates of IFOAM in Asian developing countries have been leading the organic agriculture movement. IFOAM membership in India includes a spectrum of NGOs, farmers' organizations, promotional bodies, corporate units and institutions.

Apart from IFOAM members, other institutions and movements involved in promoting organic agriculture in the country are making concerted efforts to bring about a change in policies in favour of ecological agriculture. In January 1994, farmers and institutions committed to organic agriculture came together through the efforts of PRAKRUTI (an IFOAM member organization) at Mahatma Gandhi's Ashram in Sevagram and made the Sevagram Declaration. This declaration contained several recommendations for promoting organic agriculture in the country. During a national conference organized at Cochin in April 1994, over 400 participants presented their vision of organic agriculture. In April 1995 the Institute for Integrated Rural Development (IIRD) at Aurangabad organized the first networking workshop for Indian members of IFOAM. The main recommendations of this workshop included promotion of training and education, development of standards, market development, lobbying and image-building for organic agriculture.

¹⁴⁴ This section draws upon Kaushik A and Saqib M, *op. cit.*

In different parts of the country, NGOs and people's organizations are now spearheading the movement for organic agriculture in India. For example, the Society for Equitable Voluntary Actions (SEVA) in West Bengal, is promoting organic agriculture in 24 *parganas* (group of villages or a district subdivision) through training programmes for farmers and through field action programmes. PRAKRUTI is also playing an important role in mobilizing public opinion for organic agriculture by facilitating marketing of organic agricultural products and organizing organic cotton growers in western India.

In central India, the IIRD is involved in training women's groups in organic agriculture, and networks at the national level with NGOs and other groups in organic agriculture. The organization has also set up a school for organic agriculture, the first of its kind in the country. The Sangvi farm and Mr. Save are promoting natural farming techniques in western India. The LEISA network is making headway in different parts of the country by strengthening its network through Agriculture Man Ecology (AME), based in Bangalore. Gloria farms and Auroville in Pondicherry are also contributing towards strengthening the organic agriculture movement in the country. The Society for Organic Agriculture (SOA) of Secunderabad, Andhra Pradesh, is involved in developing marketing strategies for organic products. The Society for Employment Welfare and Agricultural Knowledge (SEWAK) in Nainital is involved in training programmes and documentation of indigenous agricultural practices in Uttar Pradesh. The Bombay Burma Trading Corporation Limited (BBTC) is the first corporate leader to have demonstrated the feasibility of organic agriculture by producing and marketing organic tea from southern India. Sampad Vikas Limited, in northeast India, has become a unique organization with almost all its acreage under tea devoted to organic production, making it the largest area under organic tea in the country. A number of other tea estates are also involved in converting to organic production. The India Bio-Organic Tea Association has already been formed to promote organic and biodynamic tea production, and biodynamic practitioners in different parts of India are consolidating their efforts by forming the Association of Biodynamic Movements. The biodynamic movement thus has considerable scope in India.

Alongside the efforts of NGOs and private bodies, the Government has recently introduced some programmes to encourage organic agriculture. These include the awarding of prizes

to individual farmers practising organic farming and promoting the export of organic agricultural products through the Agricultural and Processed Food Export Development Authority (APEDA), Commodity Boards and others.

A number of universities and scientists have also started playing key roles for strengthening the organic agricultural movement. Bidhan Chandra Krishi Vidyalaya in West Bengal and the University of Agricultural Sciences (UAS), Bangalore have organized national workshops on organic agriculture. UAS has also initiated a correspondence course on organic agriculture so as to reach a large number of farmers.

Government policy

In order to encourage the organic agriculture movement in India, the Government of India has launched the National Programme for Organic Production (NPOP) with the following declared objectives:¹⁴⁵

- Declaring standards for organic production;
- Recognizing specific bodies for preparing an approved package of practices for specified products and for approving certification programmes;
- Allowing the recognized bodies to accredit agencies to inspect and certify those products;
- Seeking recognition from, and according reciprocal recognition to, standards of other nations and trading blocs;
- Instituting a logo and prescribing its award by accrediting bodies to products that qualify for bearing the Indian Organic Label.

Under the NPOP, National Standards were published in March 2000. These are based on IFOAM's Basic Standards of Organic

¹⁴⁵ Bhatia U. *Promotion of organic agricultural exports in India: Opportunities, constraints and policy issues. Paper presented at a workshop on A New WTO Round on Agriculture, SPS, and the Environment: Capturing the Benefits for South Asia, sponsored by UNCTAD and the World Bank in New Delhi, India, 11-13 January 2001.*

Agriculture and Food Processing, with suitable modifications, taking into account the agricultural and climatic conditions prevailing in India. The first initiative for drafting the National Standards was taken by IFOAM members in India. A National Steering Committee has been established with representatives from the Government and trade to function as the apex advisory body for assisting the Government in shaping the growth and development of organic agriculture. It has designated the Tea Board, Coffee Board, Spices Board & APEDA as accreditation agencies for the products being dealt with by them. The mandate of the accreditation agencies includes, among others, the prescription of a package of practices for organic products within their jurisdiction and accreditation of certification agencies. The inspection and certification charges to be levied by the certification agencies are to be fixed by the accreditation agencies.

On the basis of the mandate given to them by the NPOP, the accreditation agencies have issued detailed regulations covering, among others, standards, packages of practices and procedures for accreditation of certification agencies for their mandated products. For more details, see box III.2.

Box III.2 Standards and certification in India

The IFOAM members in India constituted a National Standards Committee in January 1996 comprising scientists and experts from 13 organizations located in different parts of India. They entrusted the Committee with the task of preparing basic national standards for organic agriculture in India. After a detailed examination of the basic standards of organic agriculture developed by IFOAM and other organizations, the committee drafted the national standards and got them ratified by the IFOAM membership in India and by a cross-section of farmers and policy makers drawn from different parts of India, at the Water and Land Management Institute (WALMI), Aurangabad. The basic standards have been submitted to the Government, universities and other organizations and are subject to review every year on the basis of developments in the national organic agricultural movement. These standards are expected to provide a broad framework for the systematic promotion of organic agriculture in India and a basis for certification agencies in drafting their detailed standards for domestic and international markets.

SKAL International has been authorized as an international inspection and certification organization in the EU member States under Regulation (EEC) No. 2092/91. Many operators who import organic produce from developing countries use SKAL International's guarantee. This organization has been active in India since 1990, providing inspection and certification services for coffee, tea and other sundry agricultural export products. Since it is an EU recognized inspection body, its product certification gives good access to the European market. It also helps Indian prospective exporters to identify importers of organic foods in Europe.

Source: <http://www.skalint.com/>

The basic infrastructure for regulating the growth of organic agriculture in India has thus been established. However, much remains to be done such as obtaining recognition for the Indian standards by international standards organizations, including those in important markets; involving producers to ensure that the standards adequately reflect field situations; and accrediting credible certification agencies.

Agricultural inputs

Only 30 per cent of the total cultivable area is fertilized where irrigation facilities are available, while the remaining 70 per cent of the arable land – mainly rain-fed area – generally does not receive synthetic fertilizers.

According to a conservative estimate, although 600 to 700 million tonnes of agricultural waste are available in the country every year, most of it is not properly utilized. Several options are available to increase the biomass to meet the requirements of minimum plant nutrients. For example, a portion of cropland may be made available for growing green manure along with regular crops, or social forestry could be planned to augment the biomass available, in addition to fodder and fuel now being supplied.

Another challenge is to make dry-land (that is, rain-fed) agriculture sustainable, through adequate supplies of organic matter and soil nutrients, such as compost, which is well suited to tropical conditions. However, compost requires large quantities of biomass,

and often lacks sufficient or the right balance of nutrients needed for crops, a drawback that can be overcome with ingenuity and proven techniques for enhancing the capacity of the biomass to supply the requisite nutrients. For example, supplements such as mineral rocks and animal manure can be provided. Without this, it is difficult to achieve sustainable production.

Bio-pesticides and bio-fertilizers play an important role in sustainable agriculture; and a reduction of nitrogenous fertilizers may itself be able to reduce the incidence of pest and disease in crops. There are organizations such as Terra Farma in Bangalore and Organic Pesticides in Belgaum that produce organic fertilizers and pesticides on a commercial basis. Manure is mainly produced locally. There are three kinds of technologies available to manufacture organic fertilizer: aerobic reduction, microbial reduction and wormi-composting. This last one is very popular in India because the cost of production and investment is very low, it does not require a large site for set-up, and can be produced in small farms. Technologies have been developed to produce large quantities of wormi-compost. In addition, there are specific bio-fertilizers for cereals, millet, pulses and oilseeds.

However, bio-fertilizers and bio-pesticides are not very popular in India for two reasons. The first is the lack of a marketing and distribution network. Retailers are not interested in selling bio-inputs because their demand is low, supply is erratic and farmers are ignorant about them. The second reason is intensive advertising of chemical fertilizers and higher margins for retailers of chemical fertilizers. However, some big firms have started marketing bio-inputs.

Products

Darjeeling Tea

The Darjeeling organic tea industry shows some interesting findings. First of all, one of the major reasons for tea gardens to turn organic was because yields were declining. For example, the total Darjeeling tea production was approximately 14 million tonnes in 1980, but had fallen to 7 million tonnes in the early 1990s. The decrease in yield was not only due to the fact that most of the tea bushes are over 140 years old and in need of replanting, but also to excessive use of synthetic pesticides and fertilizers. Secondly, in

the early 1990s, owing to export market restrictions on pesticide residues most of the tea gardens had to substantially reduce their use of pesticides. Hence, moving from reduced use of pesticides and synthetic fertilizers to organic tea was not seen as a large additional effort. Thirdly, in the early 1990s organic tea benefited from market premiums of over 80 per cent, which prompted many growers to begin exporting organic tea. Most importantly, "chemical cultivation" (with the help of herbicides) was leading to soil erosion and landslides in Darjeeling district. This led to considerable destruction of property, prompting some farmers to convert to organic agriculture as a response to these environmental problems.

There are 87 tea gardens in Darjeeling, most of which are entirely export oriented. Only 20 of these have converted to organic tea production, and of these 20, only 10 are able to make profits. These 10 have direct export contracts with their buyers and export mainly to Germany, Japan and the United States. Most of the profitable enterprises have invested a substantial portion of their profits in marketing tea in their main markets for over 10 years. As the owner of a very successful tea garden put it: "A legend has to be created" in the minds of buyers.

All 20 gardens reported that when converting to organic management, a decrease in yield of about 20 per cent from the original yields occurred. The pre-conversion yield has only been reached by some gardens, and most are still experiencing declining yields. The length of time taken to recover to the original yield depends on the condition of the garden before conversion. If the bushes are old and the soil is degraded it takes much longer to restore to pre-conversion yield levels.

Also, changes in variable costs differ according to the condition of the garden. In converting to organic agriculture, labour inputs increase by about 30 per cent per year. Other costs, such as manure, organic pesticides and bio-fertilizers, depend upon the extent to which integrated farming can be practised. If there is sufficient livestock in the garden, adequate supplies of manure are available, and actual declines in variable costs are realized. As bio-pesticides, citronella plants were planted in tea gardens to act as an insect repellent. In most cases, herbicides were replaced by manual weeding.

One of the reasons reported by non-organic tea growers to not convert to organic management was the steady narrowing of price margins between good quality non-organic and organic tea. This is because even non-organic gardens use relatively low levels of pesticides. Moreover, most non-organic tea growers claimed that, as tea was just an infusion, there was not much difference between the taste of organic and non-organic tea. In addition, apart from yield declines depending on the condition of the garden, variable costs increased by about 50 per cent. Research and development in organic agriculture to improve productivity is relatively scarce. In order to truly benefit from organic farming of tea, diversification into other products such as herb tea, ecotourism, and green tea is required. Only then does integrated management of the tea gardens become profitable. In most cases, organic cultivation also implies reducing the acreage under tea in order to promote naturally grown herbicides.

Most organic growers agreed that before converting, a lead-time of two years was required, and that the period of conversion should be preferably stretched to three years. This time is required, first of all, to begin the task of planting grasses and other bio-pest repellents around the garden. Secondly, to ensure enough manure, it is necessary to keep adequate livestock. Thirdly, a number of herbs should be grown along with tea to ensure adequate mulching and to fertilize the soil. Thus an integrated approach is needed. In fact the most successful organic tea gardens are not only exporting organic tea, but also herb teas. In addition, they have started opening their gardens to ecotourism. Community management is evident in some tea gardens.

Biodynamic agriculture is a step beyond organic agriculture, and is being practised in some tea gardens. This practice, prevalent in ancient India, involves planting and harvesting according to the cycles of the moon, which is supposed to lead to higher productivity. The few producers who practise it claim that they do indeed obtain higher yields, and Swiss and German buyers have shown considerable interest in procuring bio-dynamic tea.

Spices

India produces an impressive variety of spices under diverse agro-climatic conditions. Of the nearly 75 products generally listed as spices and condiments, 52 are listed under the Spices Act 1986.

These are cultivated in 64 agro-climatic conditions, often as integral crops in polyculture, micro-farming units. Four categories of spices can be identified:

- Major spices (pepper, chilli, ginger, turmeric and cardamom);
- Minor spices (coriander, fennel, cumin, fenugreek, garlic, celery, aniseed, bishops weed, caraway, dill, mint and vanilla);
- Tree spices (cinnamon, cassia, *tejpet*, *kokkam*, pomegranate, nutmeg, clove, pimento and *garcinia*);
- Herbal spices (rosemary, sage, thyme, oregano, tarragon, basil, bay leaves, marjoram and parsley).

India has a substantially high production base for spices. During the period 1993–1994 India accounted for 33 per cent of the world market for spices, producing about five times more than the world demand. By the year 2001 world demand for spices was anticipated to rise by 50 per cent, but was still expected to be well below India's production and export capacity. This affords considerable scope for India to increase its share of the world spice market, but its ability to do so will depend on several factors, marketing possibilities being the most important.

The Spices Board instituted guidelines for the production of organic spices in April 1998. It started a scheme for training organic farmers on wormi-composting, manuring, weeding and other cultural practices required for successful cultivation of such spices. The Board has institutionalized a scheme for covering 50 per cent of the cost of inspection and certification by accredited certification agencies up to an annual monetary limit of 75,000 Indian rupees for farmers associations, though not for individual farmers. It has implemented, with assistance from the United Nations Development Programme (UNDP), the training of farmers on organic cultivation in four villages, and is offering support to associations for procuring farm machinery required for the cultivation of spices. As a market promotional measure, the Spices Board has also arranged for participation in the BioFach fair where organic spices are displayed.

NGOs such as Peermade Development Society (PDS) established in 1980 in Kerala have been in the forefront of the organic spice movement. PDS was set up in Sahyadri Farmer

Consortium in 1997 to work for marketing of farm products for export, including organic farm products. In addition, the consortium provides support for technical assistance and training in organic spice cultivation. The PDS has promoted 45 certified products including spices, coffee, fruits and *ayurvedic* preparations. During the period 1998–1999 the PDS exported nearly 61 tonnes of organic black pepper, 30 tonnes of organic white pepper and 3.9 tonnes of organic sliced ginger. This was, however, substantially below the amount of certified spices available. About three-quarters of certified organic black pepper had to be sold at non-organic prices in open market auctions, owing to lack of sufficient demand for this product. PDS's experience shows that it is demand, rather than certification, that constitutes a major problem.

A survey was conducted in Idukki district (Kerala) of 28 organic spice growers, both members and non-members of PDS (see annex III.3, table AIII.3.1). The results of the survey indicate the following:

- The costs of certification of farmers under PDS were met for 12 growers (details regarding certification costs were not available), while 16 growers were not certified;
- Organic spices were sold to importers in the United States, Germany and the Netherlands, in addition to the domestic market;
- Growers in general felt that they were able to demand higher prices than they had obtained previously;¹⁴⁶
- 18 of the 28 farmers reported a decline in output of 30 per cent or more in the post-conversion period, and 10 reported a decline of 10 to 20 per cent;
- The cost of production was seen to have fallen in the post-conversion period (considerably so in the case of cardamom), as compared with the pre-conversion period, for all spices.

For the non-PDS farmers (annex III.3, table AIII.3.2) the output prices were disappointing. Growers of cardamom reported zero

¹⁴⁶ *At a multi-stakeholder meeting in Idukki, Kerala (April 2000), growers in general felt that they deserved to get higher prices because of higher costs of production and declining yields.*

improvement; two of the six surveyed ginger growers indicated an improvement of between 4 and 7 per cent; and all nine pepper growers reported higher prices, though an increase was also experienced by conventional growers.

The above results indicate an interesting pattern with regard to the production of organic spices in Kerala. The fall in production costs for organic spices serves to indicate that small spice growers, who inherently avoid non-organic production techniques, find organic production systems to be a blessing in disguise, as they are able to reduce their outlay on inputs and use their family labour to a greater extent. The market promotion efforts of the Spices Board have strengthened the ability of such associations as the PDS to enter into the export market of organic products. A good proportion of surveyed farmers indicated awareness about the ultimate destination of their products in the international market. This was not the case for organic coffee growers, as discussed next.

Coffee

Coffee enterprises (or estates) in India occupy a place of strategic importance in the biodiversity-rich western Ghat zones of Karnataka, Kerala and Tamil Nadu. It is worthy of note that coffee plantations in these states are characterized by a preponderance of small holdings (of 10 hectares or less) which account for 95 per cent of the total holdings. Coffee micro-enterprises are polyculture entities, where inter-crops of pepper and areca nut are also cultivated. Pepper, in particular, is a significant inter-crop since its cultivation complements the system of shaded trees that are a prerequisite for coffee growing. However, the significance of pepper in high altitude coffee producing zones such as Upper Giris in Chikmagalur is limited, given the limited growth potential of this crop there. Since coffee has been a major export crop, with 75 per cent of the annual production being exported, the significance of the micro-enterprises in the foreign exchange earnings of the country is considerable. India produces some of the best quality arabica coffee.¹⁴⁷

In India the propensity to cultivate organic coffee is much higher for robusta coffee than for arabica coffee. This is because

¹⁴⁷ For details, see Damodaran A, 2000, *op. cit.*

arabica coffee is susceptible to a variety of diseases and pest attacks, including leaf rust and white stem borer, which creates a bias in favour of using pesticides and insecticides. Nevertheless, there are cases reported from Koppa on the cultivation of arabica coffee under organic conditions.

A survey was conducted of small coffee growers belonging to two groups (see annex III.3, table AIII.3.3 for details). The Brahmagiri Organic Plantation Products Association in Koppa grew organic coffee in a total area of 80 hectares, with inter-crops of pepper, cardamom and ginger. The Arogya Self-Help Group in Kodagu had a total area of 66 hectares under organic coffee cultivation and also cultivated pepper, cardamom, vanilla, clove, nutmeg and areca as inter-crops.

The survey revealed the following facts:

- The organic farmers had been certified by SKAL International (based in the Netherlands), using a group approach to certification;
- The costs of certification (both the initial inspection costs and the licensing costs) amounted to US\$ 1,800 a year. For the Koppa-based organic farmers, the costs of certification were borne by Megason Exports Pvt. Ltd. of Sulia;
- The growers of Kodagu had not sold their produce in the previous season and were still looking for good buyers in the hope of getting higher prices. The organic coffee growers of Koppa sold their produce to local traders without a premium;
- The average cost of production increased in the period between pre-conversion and post-conversion by more than 100 per cent for the Kodagu coffee growers, while for Koppa growers it increased by more than 133 per cent. A large part of this increase in costs was due to labour costs for weeding and berry picking to avoid pests.
- The reduction in output during the post-conversion period was reported to be in the range of 20 per cent for both groups of growers.

The results of the survey point to the fact that the economics of organic coffee cultivation is not overly attractive. While the costs

of production have risen in the post-conversion phase, the yield has decreased and there has been no increase in farm-gate prices. The Koppa farmers incurred no extra marketing costs, as an export agency absorbed the costs of certification. The Kodagu farmers, on the other hand, had not yet sold their produce.

It is difficult to see how farmers who incur higher costs, lower output and no premium prices, can manage to undertake organic farming. However, those who went into organic management hoped and expected that they would be able to realize premiums in a market where coffee prices in general were falling. One of the problems for these farmers is that, even if there were a premium for organic coffee, they have no means of verifying the final prices obtained by the exporters. In other words, they do not know whether there is a premium or not, and whether it is being retained by the exporter or retailer.

The surveyed organic coffee growers have requested the Government's support in terms of:

- Promoting organic farming technology through increased extension efforts;
- Making information available to growers regarding certification procedures and marketing;
- Fixing the purchasing price (determination of floor price) for organic coffee according to established quality standards;
- Providing a special financial package to improve the infrastructure for production of quality coffee; and
- Providing Internet facilities to growers.

The Coffee Board of India is now moving towards setting standards for organic production of coffee. It is hoped that these standards will be acceptable to consuming countries.

Conclusions and recommendations

Indian traditional agriculture resembles organic agriculture in many ways. For example, some products from the mountainous regions are purely organic. They are likely to meet IFOAM standards

and be able to pass certification for western organic markets. For various reasons, mostly increasing population pressures, much of the indigenous knowledge and traditional organic agricultural practices have been neglected, or are no longer suitable, leaving the way open for the rapid development of non-organic production.

The advantages of organic agriculture have been proved, especially the health and safety aspects, its sustainability and its visible role in environmental protection. The markets for organic products are increasing over time. To improve the supply of organic products from India, the following suggestions are offered:

- Review traditional agricultural practices to document useful techniques and resources, including: rare and precious species and varieties; specialty varieties; cultivation practices such as sowing and planting; soil preparation and protection; and organic fertilizers that have been used by farmers for thousands of years;
- Explore and apply local traditional varieties in adapting organic agriculture to various niches of the ecological and socio-economic conditions of each locality;
- Develop microbiological technologies, combining modern technologies and indigenous knowledge and practices;
- Combine the use of appropriate crop varieties with integrated pesticide management (IPM) and integrated nitrogen fertilizer management (INM), thereby promoting utilization of such locally available resources as alluvial soil, alluvial water, green biomass and legumes.
- Select and breed crops for pest and disease resistance, and for tolerance to adverse agro-ecological conditions. Promote high-quality products to meet export requirements; and
- Select and protect areas that are ecologically-safe (no pollution, little soil degradation), so that certified organic agriculture can be practised there;

Those interviewees who had not converted to organic agriculture at the time of the interview stated that their main concern was the lack of markets and difficulties in obtaining market premiums.

For certain markets, such as those involving local consumption, a way of creating demand is to put the potential buyers directly in contact with the growers, so that they can satisfy themselves about the veracity of organic production. However, when goods are marketed further away from the farm, such as for export, organic certification becomes necessary. As the cost of certification by foreign organizations often is exorbitant, national certification agencies could be established if this curtails costs in the long run. Donors, especially from the EU, could help by assisting with the accreditation of national bodies.

Although traders perform a function, such as locating a market, transporting, insuring, storing, and taking a risk of no-sale, some producers may be able to capture more of the profit by taking on some of these functions. Encouragement to progressive and high-technology absorbing cooperative entities such as the PDS for online trading and e-commerce could be one way to reduce the role of middlemen in the market chain, particularly those across borders.

Packaging could also be done in an eco-friendly way on the farm itself, to enable producers to retail their own products themselves. In cases where this is possible, it could improve the margins for organic producers. Tea is an example where this is already happening and it could be encouraged, with appropriate policies, for other products.

A final issue is donor assistance for the development of some of the farms as ecotourism sites.

The following “golden rules” for exporting organic products should be followed:

- Products must be certified as organic;
- Knowledge of foreign markets should be built up on the basis of customer requirements when and where the product is to be sold;
- The distribution channels, whether exporter, importer or distributor, should be selected carefully;
- Close contacts and prompt communication with importers should be established;

- When price premiums are falling, assured markets should be given priority over price premiums;
- Working in collaboration with other producers or in cooperatives is advantageous for promoting R&D and for the production of marketable quantities at economic costs;
- Products should be selected which are in demand, either domestically or internationally, and exports of high-value traditional products such as aromatic rice, upland rice, fruits and medicinal materials should be promoted; and
- Domestic markets should not be ignored, even though exports may yield higher premiums.

Trade policies have an important role to play in stimulating organic exports from developing countries; developed countries could consider the following:

- Interpreting the EU's new Generalized System of Preferences (GSP) scheme for the years 2002–2004 as including the import of organic agricultural products;
- Ensuring that subsidies for organic agriculture do not adversely affect the trade interests of developing countries, by including these subsidies in the targeted reductions in the Agreement on Agriculture;
- Extending the same conditions of certification to imported products as to domestic products, under national treatment rules. For example, the United States regulation on organic standards exempts small producers (with sales of less than US\$5,000 per annum) from certification. The same privilege could be extended to developing country producers exporting to United States markets;
- Providing special tariff concessions for organic products from small farms;
- Examining whether technical assistance provisions available under the SPS Agreement in the WTO could be extended to organic exports from developing countries.

Annex 3.3 – Survey results in India**Table A3.3.1 Organic spice growers**

<i>Is your production certified?</i>	Response	Number of growers
	Yes	12
	No	16
	Total	28
<i>Initial cost of certification</i>	Response	Number of growers
	All costs met by Peermade Development Society (PDS)	12
	Not applicable	16
	Total	28
<i>Recurrent cost of certification</i>	No responses	—
<i>Where are your organic spices sold?</i>	Market	Number of growers
	Unites States, Germany, Netherlands	8
	Local market	8
	Peermade Development Society (PDS)	12
	Total	28
<i>Who buys from you?</i>	Source	Number of growers
	Importer's agent	15
	Local dealers	2
	No response	11
	Total	28
<i>Do you think you can get higher prices for your organic products?</i>	Response	Number of growers
	Yes	20
	No	8
	Total	28

<i>Change in output in post-conversion period</i>	Percentage of reduction	Number of growers
	10	7
	20	3
	30	14
	40	4
	Total	28

<i>How have costs of production changed in the post-conversion period (Rs)?</i>	Crop	Pre-conversion average costs/hectare (Rs.)	Conversion average costs/hectare (Rs.)	Post-conversion average costs/hectare (Rs.)
	Ginger	26 000	23 250	25 250
	Cardamom	79 680	40 250	49 500
	Turmeric	34 300	28 100	32 700
	Pepper	38 700	29 100	34 300

Table A3.3.2 Certified organic spice growers

Spice category	Pre-conversion	Conversion	Post-conversion	Number of growers
<i>Price realized for small cardamom (Rs/kg)</i>	340	340	340	4
	368	368	368	2
		Total		6
<i>Price realized for ginger (Rs/kg)</i>	13	13	13	1
	9	9	9	1
	15	15	15	2
	45	45	48	1
	48	48	50	1
		Total		6
<i>Price realized for pepper (Rs/kg)</i>	40	—	50	1
	130	—	140	4
	n.a	n.a	n.a	4
		Total		9

Table A3.3.3 Organic coffee growers

<i>Price realized Rs/kg</i>	District	Response	Number of growers	
	Kodagu	Not yet sold	20	
	Koppa	No premium	16	
		Total	26	
<i>Sale of coffee produce</i>	District	Source	Number of growers	
	Kodagu	Not yet sold	20	
	Koppa	Local agents	16	
		Total	28	
<i>Change in cost of production (Rs/acre)</i>	District	Pre- conversion	Conversion	Post- conversion
	Kodagu	17 000	37 000	38 250
	Koppa	9 765	16 015	22 760
<i>Change in coffee output in post-conversion period</i>	District	Per cent reduction		
	Kodagu	20		
	Koppa	20		

3.4 Cuba

Belsis Llorente, Nestor Pérez and Guillermo Berenguer, Ministry of Foreign Trade; Raül Garrido, Ministry of Science, Technology and Environment¹⁴⁸

Overview

Many farmers in Cuba are involved in organic farming. Few individual growers, agricultural production cooperatives, and “basic units of cooperative production” use methods of intensive agriculture. Over the past decade, many plantations have been cultivated without using agrochemical products. However, most producers do not have an organic farming culture, nor has organic farming been an objective for them until very recently. Favourable conditions now exist for the development of certified organic production in Cuba; the following developments are noteworthy:

- A programme for biological control of pests and bio-fertilization was implemented in the 1980s;
- Imports of agro-chemicals have declined considerably as a result of the economic crisis in the 1990s;
- The Urban Agriculture movement aimed at supplying vegetables and fresh products to city populations, using non-polluting production methods;
- A Group for the Promotion of Organic Agriculture aimed at demonstrating the benefits of this kind of production to producers;
- In 2000, a programme aimed at promoting exports of organic food ingredients for industrial use was initiated, in cooperation with CBI (Centre for Import Promotion) in the Netherlands.

The National Certification Office is the official organ for certification in Cuba. This office, along with the Ministry of Foreign Trade and the Ministry of Science Technology and Environment, is

¹⁴⁸ This paper was prepared for the workshop in Dar-es-Salaam, Tanzania in April 2001.

responsible for authorizing foreign certifiers to carry out certification. At present, international certifiers do not have offices in Cuba.

Products

Cuba produces organic sugar, coconut, cocoa, coffee, vegetables, oranges and grapefruit. Of these products, organic sugar cane is the most developed in terms of production, certification and exports.

Sugar

In 1998, the Cuban sugar industry decided to start production and export of organic sugar, based on the results of a research project carried out by the Central University of Villa Clara. The research project started in 1996 on a 50-hectare project plot, and exports began at the end of the necessary conversion period in 2000.

Cuban sugar production is concentrated in Villa Clara Province. Organic sugar is processed at the Carlos Baliño Mill that started with the conversion of 790 hectares to obtain more than 3,500 tonnes of organic sugar for export in 2001. The Mill plans to increase the plantation area to around 6,300 hectares in 2005. The University's sugar mill and the Baliño Mill are certified organic by ECOCERT for export to the EU.

Other products

The status of organic production of other products is as follows:

- *Fruit:* Several companies are converting plantations of citrus and other fruit to organic, in particular in the provinces of Cienfuegos, Villa Clara, Ciego de Avila, and Isla de la Juventud. One project is being developed for the conversion of 530 hectares for the production of Valencia oranges and Marsh grapefruit for fresh organic fruit juice. Another project involves converting 300 hectares for the organic production of concentrated organic fruit juice and 100 hectares for the production of fresh fruit. In these areas all of the practices and standards of organic farming are being applied. Regarding industrial processing, since production is still limited, for the time being the fruit continue to be processed in conventional

installations. However, increased organic production will allow the installation of one process line for fresh organic fruit juice, and the rapid development of tourism will create an attractive market for fresh organic fruit;

- *Coconut*: The central and eastern parts of the country produce organic coconut. The Baracoa Company alone has a production capacity of 300 tonnes of organic coconut;
- *Coffee*: Several producers in the eastern part of the country are farming 3,000 hectares according to standards set for organic gourmet coffee. They expect to rapidly increase production from 200 tonnes in 2001 to 2,000 tonnes in 2005. At the same time, measures will be taken to reduce or eliminate the pollution of coffee processing plants, using organic disposal methods to prepare bio-fertilizers.
- *Cocoa*: Conditions have been established for the production of organic cocoa on 1,500 hectares; and
- *Vegetables*: There are now 900 hectares under organic vegetable production as part of the Urban Agriculture Programme.

Challenges and opportunities

The following problems have been identified:

- Lack of information on technical and market requirements;
- Lack of knowledge of the commercial and environmental benefits of organic farming;
- The certification process is still an unsolved problem for producers and exporters due to limited infrastructure and financial resources to establish essential components of the certification process – such as certified laboratories, certified personnel and national standards. This necessitates the use of expensive foreign certifiers; and
- Lack of qualified personnel in the production and commercialization of organic products.

The following conclusions can be drawn:

- Organic products may open new trading opportunities for developing countries. However, in most developing countries the development of organic production is inhibited by lack of domestic demand;
- International collaboration in the area of organic production, apart from supporting capacity building in developing countries, should aim at identifying win-win solutions, especially in the certification process.

3.5 Costa Rica

Ministry of Foreign Trade of Costa Rica

Overview

Small farmers in Costa Rica have been converting to organic agriculture during the past 15 years, mainly on their own initiative and based on their own efforts. This has been motivated by (not necessarily in order of importance):

- Economic difficulties (high costs of synthetic agrochemicals in contrast with low market prices of agricultural produce);
- A search for alternative markets in response to globalization;
- Decline in effectiveness of synthetic agro-chemicals;
- Adverse health impacts of pesticides and fertilizers (e.g. intoxication, sterility and cancer);
- Concern for the environment and biodiversity.

The area in Costa Rica under organic production is approximately 9,000 hectares (certified, or in conversion),¹⁴⁹ which represents 2.0 per cent of the total arable land area under permanent cultivation. In 1999 there were almost 2,400 certified organic

¹⁴⁹ This was 9,400 ha at the time of writing, but it was adjusted to 8,974 ha in SOEL, 2003, *op. cit.*

holdings, farming about 3,200 hectares. As much as 94 per cent of certified farms are smaller than 5 hectares. Currently, there are more than 3,500 organic producers and approximately 135 organic producer organizations, as well as a number of independent organizations. For the most part, the organic producers are organized according to regions and products. The largest group is made up of 1,600 producers. Some provinces have local projects that bring together small producers, including indigenous communities, in sectors such as bananas, cocoa and coffee. A number of local fairs take place across the country where organic products are sold directly to consumers.

NGOs, some cooperation agencies and universities supported the initial development of organic agriculture in Costa Rica. The National Programme for Organic Agriculture (or PNAO, Programa Nacional de Agricultura Organics) was initiated in 1994 with the support of the Inter-American Institute for Cooperation on Agriculture (IICA). Through the PNAO, the public agricultural sector has become more actively involved in this form of production. Organic agriculture is also supported by the National Production Council and the Ministry of Agriculture and Livestock (MAL).

The PNAO promotes policy development within both public and private sectors, in particular by:

- Conducting awareness-raising activities for farmers and consumers through the media, and providing specialized information services to facilitate decision-making processes;
- Promoting training programmes for farmers and technicians in the field of organic agriculture;
- Supporting and giving orientation to organic agriculture research;
- Facilitating joint initiatives and coordination among civil society and governmental institutions; and
- Helping to identify and consolidate national and international market opportunities.

Furthermore, the PNAO has established general procedures for accreditation of certification agencies, as well as rules and

regulations for the inspection of organic agriculture. There are also specific laws and regulations covering organic agricultural production. The competent authority dealing with issues relating to the inspection of organic agriculture in Costa Rica is the Directorate of Plant Protection of the Ministry of Agriculture and Livestock. Within this Directorate, the Department of Accreditation and Registry in Organic Agriculture (DARAO) is in charge of implementing legislation, creating a registry of operators, accreditation and certification, and approving and supervising different private and public inspection bodies and their inspectors.

Costa Rica has three authorized inspection bodies, two of which have the authority to both inspect and certify. The two national certification agencies that have been accredited are the EcoLogica Agency and the AIMCOPOP Agency. The German agency BCS has offices in Costa Rica, and has also been accredited by the national authorities. This agency has its base in the EU and undertakes inspection in Costa Rica, but certification takes place in the EU.

Apart from the PNAO, institutional support is provided by 15 to 20 NGOs, church-based organizations, universities and the National Extension Directorate (with 85 agencies in 8 regions) of the Ministry of Agriculture and Livestock. The National Research and Technology Transfer Programme in Organic Agriculture (PITTA-PO) also plays an important role.

Certain financial resources are available, in particular through international aid agencies and NGOs. Although not specifically aimed at organic farming, the Productive Reconversion Fund and other government trusts are sources of funding. National banks are starting to show some interest in organic agriculture, but the interest rates and requirements they apply to organic agricultural producers remain the same as those for conventional agricultural producers.

Institutions that promote national and international trade of organic products include NGOs (at national level). In addition, PROCOMER of the Ministry of External Commerce has been providing information and partial support to attend BioFach Trade Fairs. The National Council of Production (CNP) has also been supporting organic agriculture in the areas of marketing, product development, quality standards and market information.

Products

In Costa Rica there is great interest in the production and commercialization of organic products, and this is undertaken by PNAO at the national and international levels (table III.5.1 shows a list of organic products exported from Costa Rica). Moreover, for the past four years, the Foreign Trade Promotion Office of Costa Rica has participated in the Biotech Trade Fair held in Germany.

Table 3.5.1. Costa Rica: Exports of organic products, 2000

Product	Quantity(tonnes)
Bananas	84 964
Cacao	613
Coffee	12 000
Blackberries	964
Raw sugar	15 692
Mangoes	1 297
Pineapples	54
Roots and tubers	69
Hot peppers	0.2

Source: Foreign Trade Promotion Office of Costa Rica

However, there are some major constraints to access to international markets:¹⁵⁰

- Organic markets are usually very exigent with regard to quality, packaging and certification;
- Organic farms are usually small and considerably dispersed throughout the country, making it difficult to achieve economies of scale;

¹⁵⁰ Echeverria Hermoso F, *Desarrollo de Politicas y Acciones Institucionales para Apoyar la Produccion y Comercializacion de Productos Organicos en Costa Rica. Paper presented at the UNCTAD Expert Meeting on Ways to Enhance the Production and Export Capacities of Developing Countries of Agriculture and Food Products, Including Niche Products, such as Environmentally Preferable Products. Geneva, 16-18 July 2001.*

- International markets usually demand large quantities of organic produce at short notice;
- Most small farmer organizations lack the knowledge, financial and/or administrative capacity to interpret and implement market requirements;
- Farmers lack appropriate support in research, technology transfer and financial resources (there is therefore a need to re-educate extension workers and other agriculture-related professionals);
- The transition period and the certification process are usually expensive, which discourages farmers from converting to organic agriculture;
- Many organic farmers who could potentially increase their production levels are reluctant to do so owing to lack of access to market information; and
- Many organic farmer associations that are able to access international markets are required to pay for several certifications for different export markets.

Organic products from Costa Rica are exported mainly to the EU (notably processed foods, such as, banana purée, oranges, mango juice and coffee) and to the United States (mainly coffee). A number of national companies have had successful experiences with organic agriculture, particularly with organic coffee and bananas, both at the national and international levels.

Recommendations

In the light of lessons learned so far, the PNAO has identified the following priorities:

- Strengthening alliances with media and consumers:
 - To deepen awareness and knowledge of institutions and farmers; and
 - To promote consumption and support from consumers.

- Providing training for extension workers:
 - To provide farmers with appropriate advice and technological support; and
 - To trigger the involvement of government agriculture institutions.
- Developing incentives:
 - To support farmers in the process of transition to organic agriculture;
 - To provide favourable credit conditions; and
 - To provide low-cost certification alternatives.
- Building a national strategy through a participatory process:
 - To develop long-term concerted policies; and
 - To consolidate the National Organic Agriculture Movement and build private-public sector alliances.

3.6 Uganda

Nimrod Waniała

Overview

Uganda has good natural conditions for organic agriculture, which means that many crops can be grown using this approach. Smallholders cultivate much of the land without recourse to agro-chemicals, and traditional mixed farming systems remain prevalent. A combination of lack of adequate funds and the abundance of land has meant that farmers in Uganda can conveniently practise most of the organic principles; shifting cultivation, crop rotation and inter-cropping are practised in most parts of the country. At the same time, a sizeable portion of the land is fallow. Livestock graze on natural pastures and by-products (such as peelings) are fed to the animals, while animal manure is in turn used to enrich the soils.

Uganda is endowed with good agricultural land, which represents a considerable source of organic matter. The main sources of organic matter that could be utilized include internal resources such as crop residues, leaf litter, mulch, dung and urine from animal

waste, deliberate production of organic matter from tree shrubs and some annuals. Agro-industrial wastes, including molasses (sugar factories), spent malt (beer brewing), peels (juice factories) and cakes (oil pressing), can be fed to livestock or used as fertilizer.

Probably 80 to 90 per cent of the methods of production in Uganda comply with the basics of organic principles, but certified organic agriculture is only a recent development. For most of the crops and livestock produced, agro-chemicals (e.g. fertilizers and pesticides) are not applied. This is due to a number of factors, including a low income base and an abundance of arable land.

However, despite near compliance with the principles of organic agriculture, lack of organization has prevented its promotion, implementation and monitoring. It was only in January 2001 that a national movement was launched. In terms of area under production, barely 5 per cent of cultivated land is under certified organic production. According to Outspan Enterprises, in Lira and Soroti the area under organic cotton and sesame production is limited, accounting for only 5 and 3 per cent of the total area under these crops respectively. In horticulture, African Organics has only 400 hectares under certified organic production.

Only a few companies are involved in organic exports. The exporters conduct their business mainly through transnational corporations (TNCs) based in Europe. For instance, Outspan sold 460 tonnes of sesame in 2000, of which about 90 per cent was sold through the TNCs, Boweevil Mavisa (in South Africa), Sweet and CCL. Only 10 per cent was sold directly to final consumers. Cotton worth 130 bales (24 tonnes) was sold to DIBB, a firm in Sweden.

At present, producers/out-growers do not pay certification costs; these are borne by the exporter/promoter, who has to arrange for inspections by foreign certifying bodies. The exporter pays not only the certification fee, but also for the certifiers' stay in Uganda. Thus, due to the high associated costs, certified organic agriculture is currently practised only on a limited scale.

Uganda produces and exports (to a limited extent) the following organic products:

- Fresh fruits and vegetables (pineapples, passion fruit, bananas and avocados);

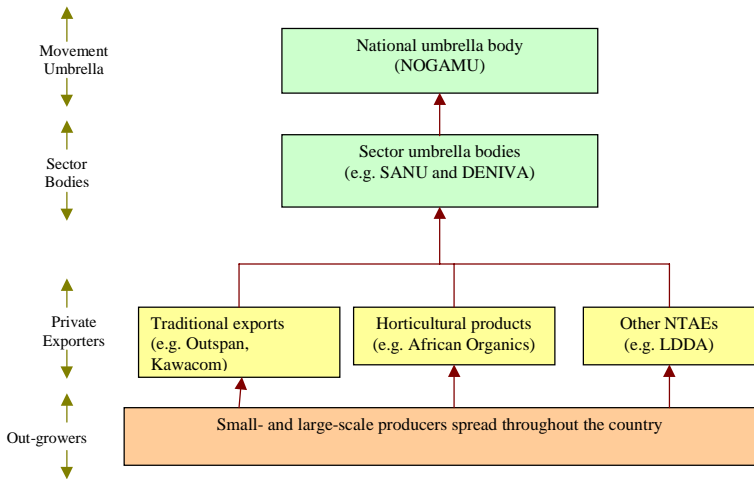
- Dried fruits (pineapples);
- Oil seeds (sesame and sunflower);
- Traditional cash crops (coffee and cotton);
- Spices (vanilla, ginger and chilli).

Basic information on production, certification, yields and prices for selected commodities exported under certified organic production is presented in the next section. Costs of production and profitability (for organic cotton and sesame produced in northern Uganda) are given in annex III.6.1.

Organic farming has not been managed in a coordinated manner. Individual exporters and local NGOs have, of their own accord, initiated out-grower arrangements for organic production and certification. More than 30 organizations and associations promote organic production of a variety of products, including the Sustainable Agriculture Network of Uganda (SANU), the Development Network of Indigenous Voluntary Association (DENIVA), and the Lira District Development Agency (LDDA).

The organization of organic agriculture production and marketing in Uganda is presented in figure III.6.1 below. To date, the most nationally oriented promotional body has been the National Organic Agricultural Movement of Uganda (NOGAMU). A summary of its rationale, aims and outputs is presented in annex III.6.2.

Figure III.6.1 National organic production and coordination flow chart



Products

Coffee

Uganda’s first large-scale organic coffee production was not started until 1997/98 by Kyagalanyi Coffee company in Paidha, Nebbi district. In 1998, another company, Outspan Commodities (later renamed Kawacom), started an organic coffee project in Bushenyi district. An additional organic trade endeavour was initiated at the end of 2000 as a joint venture between Twin Trading Ltd of the United Kingdom and Bugisu Cooperative Union.

Although the performance of these companies can be described as “on and off”, Uganda exports about 1,500 tonnes of coffee annually. About half of it is the robusta type in Bushenyi and the other is the arabica type in Nebbi and Kapchorwa (around Sipi area). Kawacom transacts most of the organic coffee exports. The Bugisu Cooperative Union sent out two test containers in 2000 and was making arrangements for more substantial shipments in 2001.

A 20 per cent premium over the conventional price is offered to farmers. A total of 5,300 coffee farmers are beneficiaries of the

programme in these areas. Most of the sales are made to the EU and some to the United States. The price offered in London is generally US\$ 300–400/tonne more than the conventional price, which was about US\$ 1,500 per tonne in 1999.

Cotton and sesame

Initial efforts towards certified organic crop production and marketing in the Lango area were started in 1994 with the support of the Swedish International Development Agency (SIDA) and the Government of Uganda. Agroeco, a Dutch-based consultancy, and KRAV, a Swedish certification organization, requested support from SIDA to initiate registration, certification and marketing of these products. Cotton was the first crop targeted.

Lango Cooperative Union undertook this pilot venture because of its network of cooperative societies in the region. A survey was initially made around the sub-counties of Aromo, Otwal, Aloji, where chemical pesticides are generally not used. Their use of natural predators for pest control was found to be quite extensive but there was no formal system of recognizing these farmers' "home-grown" system.

The Lira District Development Agency (LDDA) funded by the Government of the Netherlands continues to support organic production and certification as a way of raising rural incomes. A locally based NGO was set up to handle field operations and enforcement of requirements in preparation for external inspectors. Currently, HIVOS Bank of the Netherlands is supporting field operations as part of its humanitarian outreach programme.

The major certifying firms in the field of cotton and sesame (a crop used in rotation with cotton) have been SKAL of the Netherlands and KRAV of Sweden. SKAL has trained and appointed a local agriculturalist as their inspector and representative. Its operations in the Lango area are with the BOWEEVIL company, a Dutch trading firm that buys and markets organic cotton and sesame from Lira and Apac. KRAV currently certifies produce handled by Outspan enterprises, a Uganda-based company.

Steps involved in certification. The following steps are involved in certification of cotton and sesame in the Lango area:

- Any company interested in certification makes an application to SKAL, providing details of the products it wants certified. The company requesting certification currently pays 45 million Uganda shilling (about US\$ 25,000) per season. A company can only afford to pay this fee if it considers that there is a sufficient amount of product and an associated market outlet to support the investment.
- In Lira and Apac, Booweevil has, in the last five years, engaged Lango Organic Promotion as the body to undertake the groundwork for it. Lango Organic Promotion undertakes the following activities on Booweevil's behalf:
 - The area intended for production is mapped;
 - Each area is divided into catchments, comprising 12-15 villages each;
 - Each catchment is mapped in detail;
 - Each farmer in the catchment is registered, as is the acreage of cotton and sesame the farmer is cultivating. This is particularly important when it comes to marketing in order to maintain a check on farmers smuggling in products from elsewhere;
 - The key item checked is ensuring that no chemical infiltration has occurred in the village – the whole village needs to be chemical-free. For an area that has previously used chemicals, a two-year conversion period is required (i.e. 2 years of no chemical use before an area can be certified);
 - Each catchment area has a store and samples are taken from each catchment store as well as from the central store of the area;
 - A portion of the sample is retained for control purposes, while the other is sent to SKAL laboratories in Europe. In case of any problem, reference can be made to the retained sample.
- Three inspections for certification are made, the first during the registration of farmers, the second at planting and the third at marketing. A certificate is issued each year following successful inspection.

Inspection procedures. The following steps are followed in order to ensure effective inspection and supervision:

- At the time of registration, each farmer is assigned a code number. An inspector visiting an area, picks a code number, and with a map of the area, makes a visit to ascertain that the farmer is actively working the farm and is complying with all certification requirements;
- At the end of each inspection, the inspector discusses his findings with Lango Organic Promotion, giving reasons for approval or rejection of an area.

Production system and yield levels. Yield levels vary, depending on soils, rainfall and other factors. In poor areas, cotton yields are about 0.45 tonne per hectare. The upper limit tends to be about 0.875 tonne per hectare. On average farmers realize 0.75 tonne per hectare. Farmers are encouraged to operate in areas of good natural fertility, with sufficient plant diversity. Sesame yields are generally 0.45-0.625 tonne/hectare and on average most farmers realize 0.50 tonne/hectare.

Crop rotation is an essential ingredient of the cropping cycle. Preferably, an interval of 2 to 3 years is recommended before the planting of another cotton crop. Where possible, "resting" a field for two years is encouraged. In any case, cotton needs to come first in any production cycle. It is the initial and major crop seeking certification, after which certification for other crops grown in the area will be sought.

Output, prices and marketing. There are 12,000 farmers registered for production of organic cotton and sesame. During 2000/01, these farmers were able to produce an estimated 3,600 tonnes of sesame and 6,000 bales of cotton. Of these, only about 700 tonnes of sesame and 1,100 bales of cotton were purchased as organic products. The remainder was sold as conventional crop.

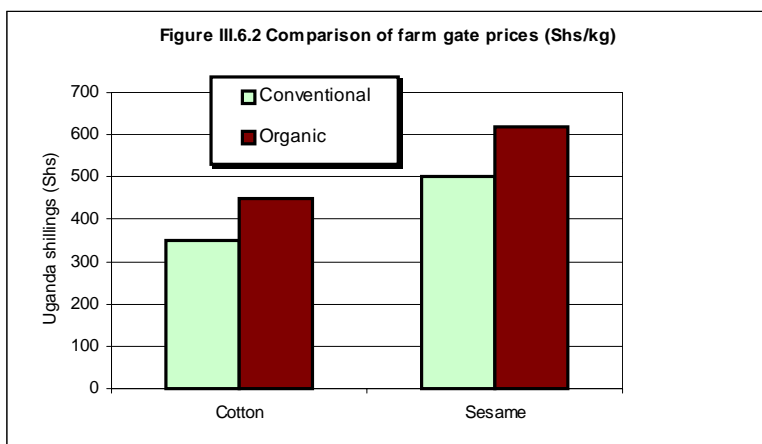
For cotton, the indicative price to farmers during 2000/01 was U Sh 350/kg. Organic cotton farmers received a price premium of as much as 25 per cent, plus compensation in recognition of the fact that they do not receive insecticides from the Cotton Development Organization (CDO), which provided cotton farmers with free pesticides. It is thus an incentive to not apply pesticides.

As a result, during the 2000/01, certain organic cotton farmers were able to receive a price of around U Sh 450–470/kg, well above the indicative price of U Sh 350 Uganda/kg.

Outspan exported 132 bales (each weighing 185 kg), from 71 tonnes of seed cotton in 2001. These were purchased by DIBB, a Swedish company. The company offered farmers U Sh 450 (US\$ 0.26) per kg, compared with conventional cotton that was procured from farmers for U Sh 300–350 (US\$ 0.17–0.20) per kg.

Outspan plans to procure and export up to 1,000 bales of organic cotton from the 2001- production-season crop. The cost of a bale of organic cotton ex-warehouse ready for shipment was US\$ 0.40-0.45 per pound. The price currently offered by buyers for organic cotton delivered in London is US\$ 0.70 per pound.

For sesame as well, farmers have been able to receive a premium. While the conventional sesame crop fetched U Sh 500 (US\$ 0.29) per kg, organic sesame farmers were able to receive U Sh 620 (US\$ 0.36) per kg of organic sesame. Recently, even when the price of conventional sesame fell to U Sh 450 (US\$ 0.26) per kg, the organic crop was still purchased at U Sh 620 (US\$ 0.36) per kg (figure III.6.2).



A crop of 460 tonnes of organic sesame, procured in December 2000 from the Adigo area in Apac and Ocheru in Soroti (bordering the Kyoga area of Lira) was exported in 2001. A total of 4,500

farmers were registered for organic production in these two areas. The price offered to farmers was U Sh 620 (US\$ 0.36) per kg compared with U Sh 500 (US\$0.29) per kg offered for the conventional crop. The cost of the product ex-warehouse ready for shipping was US\$ 470 per tonne. In addition, the cost of freight and handling to Mombasa was US\$ 88 and the cost of shipping to a European port was US\$ 56. The price of sesame being offered in Europe in 2001 ranged between US\$ 700 and US\$ 800 per tonne. In order to cover its field costs, Lango Organic Promotion, charges the trading company Boweevil U Sh 25 per kg of cotton and U Sh 20 per kg of sesame purchased from farmers.

Cocoa

Production background. Like most commodities, cocoa is a smallholder crop, grown by over 6,000 farmers countrywide. Its production covers 10 districts (3 each in central and eastern Uganda and 4 in western Uganda). On an area of over 15,300 hectares, about 3,000 tonnes of dried cocoa beans are produced annually, earning the country about US\$ 2 million.

Cocoa is marketed mainly at designated centres where farmers take their dried cocoa beans. In a few cases, buyers move from homestead to homestead and procure cocoa at the farm gate. The cocoa marketing chain is such that the farmer either sells cocoa to a local buyer (usually at the farm gate) or to agents of Kampala-based buyers (usually at the buying centre).

Organic nature of cocoa. To date, none of the cocoa exporters have been certified, and therefore Uganda's cocoa is not considered organic. The only effort at certifying was in 1998 in Bundibugyo, when a certifying body from Sweden visited Kasitu sub-county and certified its cocoa as an organic product. However, following the insecurity that ensued, the whole initiative was abandoned.

All in all, cocoa in Uganda is managed under organic principles. Small-scale farmers do not spray their cocoa and neither do they apply fertilizers. Spraying takes place only in estates (that account for less than 5 per cent of total output). Besides, cocoa operations are environmentally friendly, from production and processing through to marketing. By all standards, therefore, cocoa in Uganda is an organic product, except for the fact that there is no certifying body to verify and endorse its production, processing and packaging.

Exporters generally refrain from engaging in the organic cocoa market due mainly to high cost considerations (such as for certification), and the fact that cocoa is a relatively small foreign exchange earner for Uganda.

Vanilla

Production background. Vanilla is a smallholder crop grown by an estimated 5,400 farmers spread over 18 districts, of which 7 are in central, 6 in eastern and 5 in western Uganda. Most of the farmers (over 80 per cent) cultivate less than 0.4 hectares. The national output of green vanilla beans ranges between 280 and 350 tonnes, with Mukono district accounting for nearly 70 per cent of the total.

Over 95 per cent of the farmers intercrop vanilla with coffee and banana. The main inputs used in vanilla production within the rotation on an organic farm include grass for mulching, and cow dung and coffee husk for fertilizer. These are mainly sourced from the farmers' own fields or obtained from neighbours. No chemical fertilizers or agro-chemicals are applied. At the processing level, vanilla beans are boiled in saucepans, with no additives.

Organic nature of vanilla. By and large Ugandan vanilla is produced using organic methods. The main inputs are animal manure, coffee husk and grass. No fertilizer application and spraying take place. The processing of vanilla is also basically organic in nature. However, since none of the processors/exporters have obtained organic certification (probably due to cost considerations), Uganda's vanilla is not sold in organic markets.

Horticultural products

Exports of organic horticultural products from Uganda date as far back as 1993. During that time, the pioneer exporter, Suntrade Limited, exported about 100 tonnes of horticultural products. Since 1993, the volumes exported have steadily increased, reaching over 500 tonnes by 2000. Demand for organically produced horticultural products has been stable. The major buyers (in order of significance) are from Germany, Switzerland, the Netherlands, the United Kingdom and France.

More recently, other companies have shown interest in the horticultural business. Fresh and Organic Ltd, which started operations in October 2000, specializes in fresh fruit and vegetables. It has land in Tororo and Mpigi districts where it is engaged in fruit and vegetable farm development. There are about 30 out-growers involved, with an average of about one acre each. The main products include french beans, chillies, hot peppers, apple bananas, sugarcane, okra, *dhoodie*, passion fruit and pineapples. The company currently has over 10 acres of french beans in Tororo. Its future plan is to attract direct buyers from the United Kingdom, the Netherlands, Germany and Belgium.

African Organics – a case study. African Organics Limited evolved from Suntrade Limited. The main products exported by the firm were pineapples, fresh ginger, apple bananas, solar dried fruit (bananas and pineapples), and “other” (mainly passion fruit, papayas, okra and chillies) (figure III.6.3). With an export volume of between 8 and 15 tonnes per week (about 500 tonnes per annum), African Organics had 54 out-growers in 8 districts in 2000. The out-growers include both small- and large-scale farms (with land under production ranging from as low as 0.5 acres to about 150 acres per out-grower). The number has since increased by 39, bringing the number of out-growers in 2001 to 93. The districts and products covered are illustrated in table III.6.1.

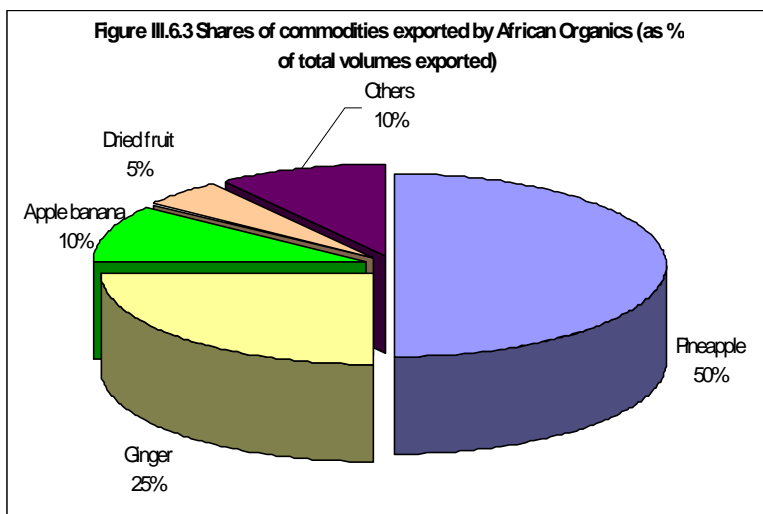


Table III.6.1 African Organics out-growers, by district and product

District	Products	Number of farmers
Jinja	Pineapple	2
Kayunga	Pineapple, apple banana, passion fruit	12
Mukono	Pineapple, apple banana, passion fruit	5
Luwero	Pineapple, apple banana	30
Mpigi	Ginger	6
Masaka	Pineapple, apple banana	5
Rakai	Pineapple, apple banana	31
Mbarara	Pineapple, apple banana	2
Total		93

Out-grower set-up. Under the out-grower arrangement, the exporter picks up products from the farmers on a weekly basis. Technical staff visit the farmers twice a month to provide assistance as required by the farmers. The farmers are also provided with technical information in the form of pamphlets.

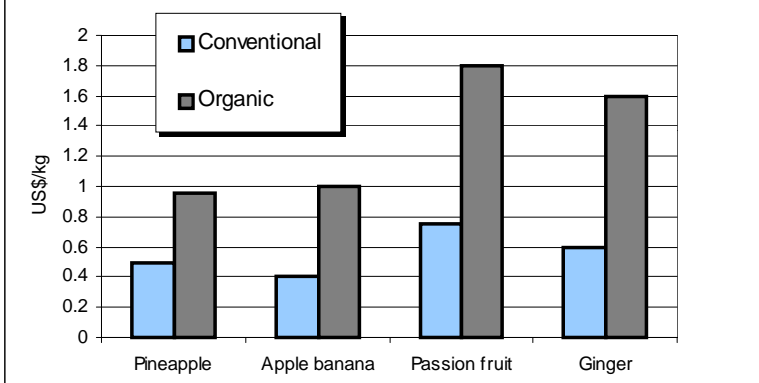
The two main certifying firms are IMO CONTROL (from Switzerland) and KRAV (from Sweden), which undertake certification of products once a year. This costs approximately US\$ 10,000 per annum. An additional cost of US\$ 5,000 is incurred annually for transaction certificates. To ensure conformity with European Standards, African Organics has an internal inspection system, whereby farmers/out-growers are visited on a monthly basis for supervision purposes.

African Organics paid its out-growers a price premium in the range of 40-80 per cent (table III.6.2 and figure III.6.4).

Table III.6.2 Comparison of farm-gate prices of conventional and organic commodities

Commodity	Price per unit (U Sh/kg)		Organic as per cent of conventional
	Conventional	Organic	
Pineapple	300	150	700
Apple banana	500	500	250
Passion fruit	1,000	900	167
Ginger	167	143	180

Figure III.6.4 Comparison of international prices for organic and conventional products



Other Products

Apart from the above commodities, a number of other products are also being promoted organically, including chillies, groundnuts, soybeans and shea nut oil. This is at different stages of development, as highlighted below:

- The trading company, Export of Organic Products from Africa (EPOPA), has also included chillies. Three containers (about 21 tonnes) were marketed in the course of 2000/01. A good premium was offered for quality produce. For example, when the price of conventional chillies was U Sh 1,500 per kg, organic chillies fetched a price of U Sh 2,000 per kg;

- Some samples of groundnuts and soybeans were sent to Europe in 2000 but no commitments for purchase had been made by July 2001;
- Certification was initiated during 2000 for shea nut oil. This required examining the farming system around the harvest trees. Unfortunately, the timing for such an inspection occurred during the flowering time of most seasonal crops.

Challenges and opportunities

Challenges

Uganda generally practises organic agriculture. Of the estimated 3 million rural households, at least 80 per cent practise subsistence agriculture, with virtually no use of synthetic fertilizers and agro-chemicals. The real challenges are how to transform this potential into reality, how to encourage a move towards organic farming, and how to penetrate the international market. There is therefore a need for awareness raising, commitment and enhanced performance to meet the expectations of the market.

Production

Like any other agricultural venture, producers of organic products face a number of constraints. The following are the major ones:

- Adoption of organic techniques may be constrained by the lack of know-how and the absence of training and extension facilities;
- The issue of small producers dispersed over a large area (making the process of supervision costly) has tended to discourage the growing of certified organic products. It cost U Sh 60,000 per month to supervise a maximum of 600 farmers. Yet these extension workers have to be maintained even in the off-season to monitor the areas under their supervision;
- Although several organic approaches are recommended for dealing with disease and pest outbreaks, organic farmers have sometimes found it difficult to respond effectively, particularly in the case of diseases which are uncommon in their areas;

- Many farmers consider labour to be expensive. Even when farmers have the means to hire additional workers, securing them is often a problem;
- Difficulty in accessing production credit is another factor, often discouraging initiatives and impeding the implementation of conversion projects;
- Acquiring sufficient crop finance is generally problematic. The current export promotion facility of the Bank of Uganda is limited to 90 days, which is too short a period of time;
- Uncertainties about ownership and access to land are in some cases real obstacles to conversion. Farmers have to be sure that they will be able to benefit from investing, for example, in improved soil fertility, in order to be willing to make such an investment;
- In some areas there has been over-registration and production. This has not been harmonized with market opportunities. For example, about 6,000 bales of organic cotton were produced in the Lango area during 2000, yet only about 1,250 bales were purchased as organic. The rest were sold as conventional cotton. This could have the effect of discouraging farmers from adhering to organic production requirements.

Marketing

The major marketing constraints include the following:

- In organic agriculture, high quality standards have to be maintained, which requires significant financing. Furthermore, certification is costly (as high as US\$ 10,000–25,000), and for promoters (with few and scattered out-growers) who make small marketable surpluses, it may not be economically feasible. As a result, the bulk of trading is being carried out with companies such as EPOPA, mainly because of the inherent high transaction costs of certification relative to the small volumes traded;
- Small-scale producers are generally scattered. This is a considerable handicap in generating sufficient volumes for export. The market for organic products is still comparatively

small and is mainly concentrated in distant markets in the EU, the United States and Japan, making access to both market information and the markets themselves difficult;

- Inadequate market information (e.g. which markets and distribution channels to choose, competition and market access). There is a lack of national bodies, which can address issues concerned with prices and early warning on market saturation;
- Penetrating the European markets has been difficult for Ugandan exporters. As a result, most of them trade through TNCs, rather than exporting directly to distributors and final consumers;
- The length of the conversion period, normally 2 to 3 years (for horticultural products), is a barrier, as products usually cannot be sold as organic during this period. According to Outspan Enterprises, it takes only one year for cotton and sesame to qualify as organic, since the common practice in the area for all products tends to conform to organic principles;
- Poor logistics (including a poor road network in rural areas and limited airport handling facilities);
- Due to limited cold storage and other handling facilities at Entebbe International Airport, maintaining quality is a serious problem;
- Absence of an organized national market and local distribution system. Local markets for organic products are, for all practical purposes, non-existent in Uganda. Certified organic commodities do not fetch a premium in markets for domestic consumers;
- Uganda's landlocked location renders it relatively uncompetitive in comparison to countries such as Senegal or the United Republic of Tanzania, which have access to the sea.

Institutions and policy

The main institutional and policy constraints may be summarized as follows:

- Lack of a national body, which can lobby for organic agriculture through negotiations and coordination;
- Lack of a locally-based certifying authority that could make the cost of certification more affordable, thereby encouraging more buyers/exporters;
- There is no clear government policy on promotion of organic products, neither is financial or other support available to entrepreneurs.

Summary

In brief, the following are among the key issues concerning organic agriculture in Uganda:

- Before getting involved in organic agriculture, adequate market outlets need to be assured;
- There is need for close supervision both during production and harvesting periods;
- To succeed in building up an export trade in organic products, exporters will find that careful selection of target markets and distribution channels is of the utmost importance. A strong and reliable relationship with importers/ distributors in the target markets is an absolute necessity in establishing a profitable business;
- Standards and certification. Certification of organic production methods is an increasingly important aspect of the international trade in organic products. Most regulations require products that are labelled organic to be certified by an independent body, thereby providing a guarantee that the goods have indeed been produced according to organic production standards;
- Ugandan farmers face growing competition from developed country farmers engaged in converting to organic farming.

Opportunities

There are good reasons to conclude that the market for organic products is growing rapidly and will continue to grow in most

countries in Western Europe, North America, Japan and Australia. Expectations of growth are underpinned not only by strong and increasing consumer awareness of health and environmental issues, but also by the more goal-oriented and aggressive marketing and promotion being undertaken by major retail groups. Product development and innovations in packaging by food processors and manufacturers, as well as supportive government policies in many countries, will also boost world supply.

From an international perspective, it may generally be concluded that with regard to organic agriculture:

- There is a growing market, particularly in the developed world (estimated to be growing at 20 per cent per annum); and
- There are relatively few competitors in the business of marketing organic products.

ITC estimated organic markets to be in the range of US\$ 16 billion in 2000, and closer to US\$ 20 billion in 2001. Forecasts for 2003 and 2005 are US\$ 23 to 25 billion and US\$ 29 to 31 billion respectively.¹⁵¹

At the local level, production practices for many commodities are virtually organic. The bulk of Uganda's leading traditional exports, particularly coffee, is grown according to organic principles. Similarly, most of the non-traditional agricultural exports such as vanilla, cocoa, fruit and vegetables are grown by small-scale producers, who use little, if any, synthetic fertilizers and agro-chemicals.

Organic farmers benefit from the premium offered; this is a major impetus for them to engage in this form of farming and to seek to be registered as organic producers. In Uganda, it is not difficult for farmers to convert to an organic system from their present production system. The potential for expansion is huge, provided farmers can be sensitized, and supportive policies and infrastructure are put in place.

¹⁵¹ <http://www.intracen.org/mds/> and Kortlech-Olesen (ITC), personal communication, December 2002.

The prospects are encouraging for Uganda to become a major player in organic agriculture. What is required is a commitment, with a national focus, through the establishment and operation of an umbrella body. The establishment of a locally based (and affordable) certifying body to advise and control quality and standards in organic production and the creation of awareness are key areas that require urgent consideration.

This is indeed a challenge for the recently initiated National Organic Agricultural Movement of Uganda (NOGAMU). The effectiveness with which this body can coordinate, network, advocate and lobby both within and outside Uganda will determine the speed at which organic agriculture will develop in Uganda.

Recommendations

Waniala makes the following recommendations:

- (i) The Government should develop a clear policy on organic agriculture and play a proactive role in designing supportive policies. Areas of support could include:
- (ii) Awareness-raising and promotion of a local market for organic products;
- (iii) If producer subsidies are deemed to be advisable, credit programmes for organic agriculture would be a possibility, as also subsidizing the establishment of local standards and a certification scheme that is internationally recognized;
- (iv) Identification of markets;
- (v) Provision of information on prices and possible market saturation.
- (vi) National bodies such as the Uganda Export Promotion Board (UEPB) could also undertake these activities. In addition, exporters could gainfully focus their out-grower initiatives in areas where they can easily realize a critical mass and accordingly reduce costs of supervision and marketing.
- (vii) International assistance could be channelled into:

- Assisting with certification costs, at least initially;
- Assisting exporters in establishing direct contacts with buyers in Europe (to obtain higher price premiums). This is especially important in immature markets (as those for organic products), where traders may receive monopoly rents.

Annex III.6.1 Cost of production and profitability: cotton and sesame

With a view to comparing the cost of production and profitability of organic and conventional products, a case study was conducted of a few farmers growing cotton and sesame in Lira district in northern Uganda. Their cost of production and levels of profitability are shown below:

Cost of production of cotton and sesame (U Sh/hectare)				
Expenditure/ Profitability	Cotton		Sesame	
	Traditional	Organic	Traditional	Organic
A: Cost items				
Seeds	0	0	4 500	4 500
Chemicals	20 000	0	0	0
Land preparation	100 000	100 000	100 000	100 000
Planting	25 000	25 000	25 000	25 000
Spraying	5 000	0	0	0
Weeding	75 000	75 000	50 000	50 000
Harvesting	50 000	50 000	60 000	60 000
Post-harvest operations	25 000	25 000	60 000	60 000
Total cost of production (Ush/hectare)	300 000	275 000	299 500	299 500
Yield (kg/hectare)	850	850	625	650
Unit cost of production (USh/kg)	353	324	479	461

Farm-gate price (U Sh/kg)	350	450	500	600
B: Profitability				
Gross value of output (U Sh/hectare)	288 750	382 500	312 500	390 000
Benefit: Cost ratio	0.99	1.39	1.04	1.30
Net profits (U Sh/hectare)	-11 250	107 500	13 000	90 500
Note:				
U Sh = Uganda shillings				
Cottonseed is given free of charge to farmers, while the majority of sesame farmers used home-saved seed.				
Yields used are those close to the upper limits attained under good management.				

It is clear from the above table that organic products are more profitable per hectare. This is basically due to the premium paid. It is also worth pointing out that organic farmers generally realized slightly higher yields than did those practising traditional agriculture. The main reason cited was the close supervision and technical advice provided by extension staff. This leads to the unit costs of production under organic management being lower for cotton, and somewhat higher for sesame than under traditional management. Net profit per hectare is then considerably higher for organic cotton-sesame farming than for traditional farming of the same crops. If this type of farming has the same rotation timing under traditional and organic management the profitability of organic farming, under the conditions shown in the table above, are considerably higher for an organic farm.

In summary therefore, organic agriculture offers an opportunity for farmers to improve on farm efficiency and profitability to a greater extent than is possible under traditional management. Apart from the advantages that organic agriculture has over conventional farming (notably health and environment related), it also offers a production method that the majority of small-scale producers can afford.

Annex III.6.2 National organic agricultural movement of Uganda

Background. Agriculture is the backbone of the Ugandan economy, and it can play a vital role in the eradication of poverty through its modernization. However, many farmers, extension workers and marketers have found that the high cost of inputs of the “green revolution” is not affordable or even appropriate to the many small-scale producers in Uganda, and at times it is even harmful to the environment and the sustainability of farming.

Organic farming seems to offer a much more appropriate and sustainable approach to the majority of Uganda’s farmers as it focuses on production and marketing systems that are economically viable, socially equitable and environmentally sound.

Although the market for organic products is highly competitive, with very strict quality controls, it is nevertheless a market that is already being tapped by some Ugandan marketing companies. If the supply chain were to be developed, starting from the farmers through to the exporters, there is a strong likelihood that incomes of farm families could be improved.

Encouraged by the favourable prospects for organic agriculture, over 80 interested stakeholders unanimously agreed to establish the National Organic Agricultural Movement of Uganda (NOGAMU) to unite producers, processors, marketers and trainers interested in promoting organic production and export in Uganda. NOGAMU was launched at an open meeting in the City Hall, Kampala on the 15 January 2001.

Aims and objectives of NOGAMU. NOGAMU aims to coordinate and promote sustainable organic agricultural development, networking, advocacy, lobbying, marketing and standardization.

Its major objectives are to:

- (i) Promote organic agriculture systems (e.g. agro-forestry, permaculture and biodynamic farming) and certified organic production and marketing in Uganda;
- (ii) Standardize the principles and practices of organic farming following recommendations from acknowledged bodies (e.g. IFOAM);

- (iii) Promote networking amongst members;
- (iv) Promote research, education, training and extension in organic production systems;
- (v) Create a database and resource centre in organic production and marketing; and
- (vi) Lobby and advocate organic agriculture and marketing nationwide.

Outputs of NOGAMU. NOGAMU is a non-profit organization; income generated by it is used to cover its operational costs and to enhance its expected outputs listed below:

- (i) To set up a funding mechanism for sustaining NOGAMU on an ongoing basis;
- (ii) To set a standard for organic production, processing and marketing in Uganda;
- (iii) To organize seminars, workshops and extension activities on organic farming in response to members' requirements;
- (iv) To assemble and produce training guides;
- (v) To establish a certifying body to advise and control quality and standards in organic production;
- (vi) To maintain a list of approved members to increase local production of organic produce;
- (vii) To work with the Government of Uganda and exporters to increase Uganda's exports in the organic sector; and
- (viii) To publicize the activities of NOGAMU and increase general awareness of organic agriculture through the media and through increased promotion of organic agriculture among policy makers.

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Sustainable Agriculture Network of Uganda (SANU).

Uganda Export Promotion Board (UEPB): e-mail: uepc@starcom.co.ug; P.O.Box 5045, Plot 22, Entebbe Road, Conrad Plaza, 5th Floor; Tel: 041-230250/230233; fax: 041-259779.

[www.ugandaexportsonline.com](http://www.ugandaexportsonline.com;);

Uganda Coffee Development Authority (UCDA): P.O. Box 7267, Coffee House, Jinja Road; Tel: 041-256198/256940; Fax: 041-256994/232912.

<http://www.transafrica.org/ucda/>

4. Possible future technical cooperation activities

At the final project workshop, under the project, Strengthening Research and Policy-Making Capacity on Trade and Environment in Developing Countries, four working groups were created around the main clusters of issues that had been addressed in order to draw conclusions and make recommendations. They also recommended follow-up actions at the national and multilateral levels, identified main lessons learned from the project, including aspects to be taken into account in future projects. The theme, Promoting Trade in Environmentally Preferable Products: in Particular Organic Product, was discussed by a working group on market access. This working group presented the following conclusions concerning organic agriculture:

- Producing organically-grown food may not be a major problem for many farmers in developing countries, as the majority of farmers do not use pesticides or chemical fertilizers; this would facilitate conversion. However, marketing, transporting and handling may pose more of a problem;
- Certification is an important constraint, due to factors such as cost, lack of information and lack of infrastructure;
- For export products, market premiums may be difficult to obtain, due to certification and marketing problems;
- Mechanisms for adapting existing standards and practices in developing countries to international standards need to be explored;
- Subsidies for organic agriculture in several developed countries may adversely affect the competitiveness of organic products from developing countries, which is a matter of concern;
- Designing and implementing appropriate government support is a major challenge in developing countries;
- Developing countries need to explore options that provide flexibility for products from small farms, for example exemption from certification or group certification; and

- Identifying demand-supply gaps for specific products and anticipating where such gaps may emerge, require detailed market surveys. These are generally lacking in developing countries and, if available through developed countries' aid agencies, tend to be expensive.

In February 2002, the European Commission (DG-Environment) funded a Policy Dialogue, organized jointly by the United Nations Environment Programme (UNEP) and UNCTAD Capacity Building Task Force on Trade, Environment and Development (CBTF). It was hosted by the secretariat of the African Caribbean and Pacific (ACP) countries. In addition, the UNCTAD Trust Fund for the Least Developed Countries provided support to enable experts from selected least developed countries (LDCs) to attend this meeting. For details in English, French and Spanish, see <http://www.unep-unctad.org/cbtf/cbtf2/meetings/brussels.htm>.

Several experts expressed the view that organic farming can contribute to food security objectives, as it tends to be more efficient than traditional farming. A view was also expressed that, because of food security concerns, organic farming may not be an effective short-term option for all agricultural areas, or perhaps in some cases not a viable large-scale option for some countries. In such cases, priority should be given to substantially reducing chemical inputs in certain areas while aiming for fully organic production in others.

Organic agriculture, whether certified or not, has important advantages. However, certification is key to promoting consumption and international trade as well as to taking advantage of price premiums, where they exist. Certification has to be made affordable, including to smallholders in developing countries. It is therefore important to reduce certification costs. Group certification, based on internal control systems (ICS), is a promising avenue for smallholders. In this context, experts exchanged views on the advantages of internal and external controls and certification and exchanged national experiences.

Experts stressed the need to promote training and capacity-building for organic agriculture. Several experts proposed to build on farmers' knowledge of traditional agriculture practices and to further improve such knowledge through appropriate training (for example through farmers' field schools). Concerning official support to the organic sector, one of the major challenges is to develop a

framework for the organic sector, which integrates the development agenda with the economic agenda. A national authority could link up with other institutes, NGOs, farmer organizations and the private sector in designing strategies to support and energize the organic sector, particularly in the fields of research, extension, post-harvest handling and marketing. Government assistance in terms of micro-credit and micro-enterprises for self-help groups of landless agricultural families, particularly women, was considered essential; such assistance would provide for organic seed preparation, organic compost, bio-pesticides and bio-fertilizers (accessing usufruct rights of common property resources like waste lands exclusively for the resource-poor). Government assistance in providing facilities for soil and water testing and pesticide residue testing of organic products was also stressed.

Several experts stressed the need to develop national legislation, standards and certification infrastructure to encourage the development of the organic sector in developing countries. Others felt that this was not necessarily the first priority in developing countries with a very small organic sector, and that government intervention should give priority to extension service research and inclusion of organic agriculture in government policies and plans. Where appropriate, regional certification bodies should be set up for those countries where national bodies do not prove to be cost-effective. Government support is one option for making certification affordable to small producers.

Multi-stakeholder dialogues in developing countries can play a key role in raising awareness about organic agriculture and in designing appropriate holistic policies, as well as generating government support. Many participants stressed the importance of multi-stakeholder processes for developing fair and effective national policies and certification programmes. CBTF, in cooperation with IFOAM, ITC and FAO, can play a positive role in helping to set in motion national and regional processes, including those relating to standards and certification (in particular on group certification) at the regional level, as well as in promoting pilot studies aimed at identifying ways in which certification costs can be reduced.

In the area of trade, the fact that major markets for organic products are growing at rates of 10–15 per cent per year creates opportunities for developing countries. However, preferences for local or regional – rather than imported – products, and pressures

to reduce “food miles”,¹⁵² invoking environmental concerns, may have adverse implications for certain categories of organic products from developing countries. In addition, the proliferation of public and private sector standards, as well as complex government regulations and import procedures, can pose problems to developing country producers.

Participants emphasized the need for mutual recognition and equivalency and have welcomed efforts by IFOAM, UNCTAD and FAO to explore a framework for harmonization, including between public and private guarantee systems. Both developed and developing countries should participate in such a process.

Experts also engaged in an open and constructive discussion concerning steps developed countries could undertake to promote trading opportunities for organic products from developing countries. These include:

- Appropriate recognition of group certification in the importing country’s regulations;
- Appropriate recognition of the special conditions of developing countries, by certifiers, traders and importing country governments;
- Transparent and easily understood rules and procedures governing imports;
- Promotion of consumption of organic products, including from developing countries, for example by providing market information; and
- Non-discriminatory use of labels, for example, the use of official organic labels in the EU should be open to non-EU producers

Several experts stressed that in the context of WTO negotiations on the reduction or elimination of trade obstacles to environmental goods and services, attention should also be paid to enhancing

¹⁵² The term “food miles” refers to the cost in terms of air pollution and carbon dioxide emissions of long-distance transport of food products.

trading opportunities for organic agricultural products, in particular from developing countries. Some experts also proposed that ways to enhance market access for organic agricultural products should be explored, including through tariff preferences and fair trade. However, the difficulties of such an approach were also discussed. It was pointed out that a reduction of agricultural subsidies would favour the competitiveness of organic products, in particular from developing countries. Some experts emphasized the need to consider possible implications of subsidies for organic agriculture in developed countries on trading opportunities of developing countries.

At around the same time IFOAM, in cooperation with UNCTAD and FAO, organized the Conference on International Harmonization and Equivalence in Organic Agriculture (Nuremberg, 18 and 19 February 2002). The Trust Fund for the Least Developed Countries provided support to enable experts from LDCs to attend. The meeting addressed some of the difficulties arising from the fact that the organic sector is faced with hundreds of private standards and government regulations, two international standards and a number of accreditation systems.

As a follow-up to the recommendations of the Conference, IFOAM, FAO and UNCTAD launched the International Task Force on Harmonization and Equivalence in Organic Agriculture on 18 February 2003 in Nuremberg, Germany. The task force will serve as an open-ended platform for dialogue between public, private and civil society bodies involved in trade and regulatory activities in the organic agriculture sector, in order to facilitate international trade. At its first meeting, representatives of 10 countries (governments and certifiers), six international organizations, and civil society agreed on the Task Force's terms of reference and a work plan for 2003. Following a review of the existing standards, regulations and conformity assessment systems, it will aim to formulate concrete proposals on mechanisms for achieving harmonization and equivalence in the organic sector and seek means of facilitating access to organic markets, particularly by developing countries and smallholders.

Under a follow-up project on Building Capacity for Improved Policy-Making and Negotiation on Key Trade and Environment Issues, funded by the Department for International Development (DFID) of the United Kingdom, UNCTAD and FIELD are assisting selected developing countries to build national and regional capacities to

deal with trade, environment and development issues, both domestically and in the WTO. The new project has a strong regional focus; it involves Central America and Spanish-speaking countries in the Caribbean (Costa Rica, Cuba, Dominican Republic, Guatemala, Honduras, Nicaragua, and Panama) and South-East Asia (Bangladesh, Cambodia, China, the Philippines, Thailand and Viet Nam).

At an interregional planning meeting held in Geneva, on 30 September and 1 October 2002, countries identified, on a preliminary basis, issues to be addressed in each region. Experts from all three regions showed strong interest in trading opportunities for organic agricultural products. According to the work plan finalized in early 2003, organic agriculture will be addressed in the Central American region, with a particular focus on identifying appropriate national and regional policies and exploring ways to reduce certification costs, including regional certification and accreditation infrastructure. The project will be implemented over two years (2003-2004).

Experts proposed further dialogue amongst developed and developing country officials, farmers, certifiers, traders and retailers, and the organizing of follow-up meetings at the regional level. The ACP Secretariat also expressed a strong interest in further CBTF work in this area, which could be organized in the context of the UNCTAD-ACP Memorandum of Understanding. An offer has been made to host a regional meeting for Africa. The UNCTAD and UNEP secretariats are following up on these proposals.

Based on the conclusions and recommendations of the working group and of subsequent meetings, the contributions in this volume and recommendations by the UNCTAD Expert Meetings presented in this volume, future UNCTAD-FIELD technical cooperation activities are suggested. These should be carried out in cooperation with ITC, FAO, IFOAM and the UNEP-UNCTAD Capacity Building Task Force on Trade, Environment and Development (CBTF). They could focus on further research and policy dialogues with the following objectives:

- (1) Assisting interested developing countries in designing and implementing appropriate government support for organic agricultural production. This requires empirical studies as well as the promotion of policy dialogues at the national level.

- (a) Promoting studies, which could focus on the identification of:
 - (i) At the production level, yields, total production, costs and profitability of organic production as compared with conventional agricultural production;
 - (ii) Other costs/benefits from a change in production system, in terms of such aspects as environment and gender.
 - (iii) Products with promising market prospects;
 - (iv) Ways to reduce certification costs to organic producers in developing countries;
 - (v) Production, marketing and institutional constraints, and options for overcoming these constraints; and
 - (vi) Dynamic trends, especially growing demand-supply gaps.
- (b) Policy dialogues, could focus on:
 - (i) Creating awareness of the potential commercial, environmental and other benefits of organic agriculture;
 - (ii) Promoting multi-stakeholder committees; and
 - (iii) Determining desirable policy changes to effect changes in farm management practices, and prioritizing these changes.
- (2) In cooperation with IFOAM, FAO and other relevant institutions, exploring mechanisms for recognition of guarantee systems of developing countries through, in particular through the International Task Force on Harmonisation and Equivalence in Organic Agriculture referred to above.
- (3) In cooperation with ITC, examining market strategies focusing on:
 - (a) The dissemination of the results of market research to interested developing countries;
 - (b) The promotion of studies and training in interested developing countries;

- (c) The possibilities of using e-commerce to promote exports of organic products from developing countries; and
- (d) The facilitation and promotion of partnerships:
 - (i) With donors and fair-trade organizations;

Between developing country exporters and institutional buyers in importing countries.