

CERTIFICATION IN THE VALUE CHAIN FOR FRESH FRUITS

The example of banana industry



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The example of banana industry

by
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FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
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ACRONYMS AND ABBREVIATIONS

ACP	African, Caribbean and Pacific Group of States
AEBE	Asociación de Exportadores de Banano del Ecuador
ALVESA	Alma Verde Sociedad Anonima
AMS	Agricultural Marketing Service of USDA
APOQ	Asociación de Pequeños Productores Orgánicos de Querecotillo
APPBOSA	Asociación de Pequeños Productores de Banano Orgánico Samán y Anexos
ASOBANU	Asociación de Bananeros Unidos
ATJ	Alter Trade Japan
ATO	alternative trade organization
BANELINO	Bananos Ecológicos de la Línea Noroeste
BÖLW	Bund Ökologische Lebensmittelwirtschaft
BRC	British Retail Consortium
CAFTA	Central America Free Trade Agreement
CB	certification body
CEI-RD	Centro de Exportación e Inversión de la República Dominicana
CIESTAAM	Centro de Investigaciones Económicas, Sociales y Tecnológicas de la Agroindustria y la Agricultura Mundial
CIF	cost, insurance, freight
CIMS	Centro de Inteligencia sobre Mercados Sostenibles (Sustainable Markets Intelligence Center)
CIRAD	International Cooperation Centre of Agricultural Research for Development
COLSIBA	Coordinadora Latinoamericana de Sindicatos Bananeros
CORBANA	Corporación Bananera Nacional
ECBTA	European Community Banana Trade Association
EFTA	European Fair Trade Association
EPA	Economic Partnership Agreement
ERS	Economic Research Service of USDA
EU	European Union
EurepGAP	See GlobalGAP
FAO	Food and Agriculture Organization of the United Nations
FAS	Foreign Agricultural Service of USDA
FLO	Fairtrade Labelling Organizations International
FOB	free on board
FTAANZ	Fair Trade Association of Australia and New Zealand
GAP	good agricultural practice
GATT	General Agreement on Tariffs and Trade
GDP	gross domestic product
GlobalGAP	Global Partnership for Safe and Sustainable Agriculture
ha	hectare
HACCP	Hazard Analysis and Critical Control Point
IFAT	International Fair Trade Association
IFOAM	International Federation of Organic Agriculture Movements
IFS	International Food Standard
ILO	International Labour Organization
INIBAP	International Network for the Improvement of Banana and Plantain
IPPM	integrated production and pest management
ISO	International Organization for Standardization

ITC	International Trade Centre
IUF	International Union of Food, Agricultural, Hotel, Restaurant, Catering, Tobacco and Allied Workers Associations
JAS	Japanese Agricultural Standard
kg	kilogram
lb	pound
LDC	least developed country
MFN	most-favoured nation
MT	metric tonne
NAFTA	North American Free Trade Agreement
NEWS!	Network of European Worldshops
NGO	Non-governmental Organization
NOP	National Organic Program
OCIA	Organic Crop Improvement Association
OTA	Organic Trade Association
PROMPEX	Comisión de Promoción del Perú para la Exportación y el Turismo
RA	Rainforest Alliance
REPEBAN	Red de Productores de Banano Orgánico Comercio Justo
RUTA	Regional Unit for Technical Assistance (Central America)
SA8000	Social Accountability Series 8000
SAI	Social Accountability International
SAN	Sustainable Agriculture Network
SESA	Servicio Ecuatoriano de Sanidad Agropecuaria
SÖL	Stiftung Ökologie & Landbau (Foundation Ecology & Agriculture)
SQF	Safe Quality Food
TransFair Canada	
TransFair USA	
UBESA	Unión de Bananeros Ecuatorianos
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
USA	United States of America
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
VREL	Volta River Estates Limited
WB	World Bank
WIBDECO	Windward Islands Banana Development and Exporting Company
WINFA	Windward Islands Farmers' Association
WTO	World Trade Organization
ZMP	Zentrale Markt- und Preisberichtsstelle GmbH

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Introduction

BANANAS: ECONOMIC SIGNIFICANCE AND CHALLENGES FOR EXPORTING COUNTRIES

Bananas¹ are the world's most exported fresh fruit both in volume and value. In volume, world exports of fresh bananas exceeded 14.1 million metric tonnes in 2006. Global imports were estimated at 12.6 million metric tonnes². In the fresh fruit industry, bananas have the highest export ratio, since approximately one quarter of global banana production is exported as opposed to 11 percent for apples and less than 3 percent for mangoes. Bananas are exported primarily from developing countries to industrialized countries, the latter accounting for close to 90 percent of world net imports. With global exports worth some US\$5 billion in 2006, bananas are an essential source of income and employment for hundreds of thousands of households in developing countries, notably in Latin American, the Caribbean, Southeast Asia and West Africa. Yet, the livelihoods of banana producers, workers and their families have been threatened by two phenomena. First, the banana industry has suffered from global oversupply, which has resulted in recurrent price falls. The latest episode of price collapse in the late 1990s - early 2000s was very severe. Although prices picked up in 2005, this rebound was mainly due to temporary factors such as unusually-violent hurricanes, strong economic growth in emerging markets and market liberalization in the European Union (EU). Prices are expected to contract again in the medium term as these demand factors recede and recently-established plantations enter full production. The second threat is the use of unsustainable production and trade methods. These methods have contributed to the depletion of natural resources and have had adverse impacts on the health of farmers, workers, their families and local communities. Media reports on the negative environmental and social effects of intensive production may have even slowed the growth of banana consumption in some major markets. These two phenomena are mutually reinforcing. When prices collapse, producers are pressured into using methods that are cheaper in the short term but unsustainable. In turn, the use of unsustainable methods depresses prices. Several commentators have argued that fierce competition in an oversupplied global banana market has led to a 'race to the bottom' that is detrimental to farmers, workers, the environment and eventually the entire economy of the producing countries.

Some officials in banana exporting countries and development agencies consider that certification³ to specific voluntary standards may be one of the instruments available to mitigate these threats. They reckon that certain standards have the potential to add value, enhance market access and reduce the adverse environmental and social impacts of banana production. In order to make informed decision on whether to invest in certification, they need to address the following questions:

- How widespread is certification in the export banana sector?
- What are the advantages of certification schemes from the producers' perspective?

¹ In this report the term "banana" only refers to sweet bananas and excludes plantains.

² The difference between exports and imports is mainly due to fruit shrinkage and loss in transit, in addition to possible under reporting by some importing countries.

³ For definitions of certification and standards see Chapter I.

- What are the markets for organic and fair-trade bananas and their growth prospects?
- Who are the main players in the organic and fair-trade banana industries?
- Do certified bananas fetch higher prices than conventional bananas?
- Does the export chain allow producing countries to reap the full benefits of certification?
- What are the main challenges ahead for producers of certified bananas?

This report intends to provide key elements for answering these questions. Before starting the analysis, it is necessary to introduce the factors that have fuelled the adoption of certification in the banana industry and the main categories of schemes used.

THE RATIONALE FOR CERTIFICATION IN THE BANANA INDUSTRY

An increasing proportion of the bananas that are traded internationally are certified to voluntary standards. This is partly due to the highly concentrated and integrated nature of the industry, but is also a consequence of its recent history. The banana export sector came under considerable pressure from the late 1990s when prices dropped severely in the main import markets, reaching an all-time low in 2000. Although they recovered in 2001, they fell again in 2002 and remained low until early 2005. The crisis was partly caused by the surplus production in the face of a relatively inelastic demand in the principal developed markets and the financial crisis in Asia and the former USSR countries. In addition, large-scale banana producers and traders, in particular multinational companies, had to face growing criticism by non-governmental organizations (NGOs) and consumers over their handling of labour rights and the environmental and social damage caused by agrochemical intensive cultivation methods. The trade disputes over the EU banana import systems in the 1990s further exacerbated the pressure. Finally, a succession of highly publicized food poisoning cases in several developed countries caused widespread concern over the safety of food in general. The banana industry has responded to these multiple challenges with a variety of strategies. One of them is product differentiation through certification.

SCOPE OF THE REPORT

This report only deals with certification to voluntary standards, which producers are free to adopt or not. Certification to mandatory governmental standards (officially named 'technical regulations') such as phytosanitary certification programmes that may be imposed by importing countries is outside its scope. Since the early 1990s, a variety of voluntary standards and certification programmes have become available to the banana industry. Broadly speaking, the standards used in the industry can be classified into two categories depending on the type of organizations that developed them. The first category includes environmental and social standards developed by not-for-profit NGOs. It covers a wide range of issues such as environmental protection, labour rights, safety and health at work, social equity and the welfare of local communities. Among these standards the most common in the banana industry are organic agriculture, Rainforest Alliance, fair-trade, SA8000 and ISO 14001⁴. A growing number of banana producers and traders have sought to obtain certification against one or more of these standards for a variety of reasons. Some of the schemes use a label targeting consumers that may lead to a price premium. Other possible benefits lie in improved

⁴ ISO-14001 is a standard of the International Organization for Standardization (ISO), an international body in which governmental and private standardizing bodies are represented.

market access and stability. Some schemes help rationalize production, reduce costs, improve labour management and enhance the morale and participation of workers. Others help preserve productive natural resources. Sometimes the main reason for adoption is the need for improving the company's image and showing its commitment to social responsibility.

The second category includes standards aiming at food safety, quality, traceability and good agricultural practices mainly developed by large firms in major markets, notably food retailers and processors. Most of these certification programmes emerged in the late 1990s in the wake of a series of food crises. In many developed countries changes in legislation putting the liability for food poisoning on distributors and retailers prompted industry groups to design certification programmes oriented towards their suppliers to ensure the safety and traceability of the products they purchase. Retailers and processors are increasingly demanding that their suppliers be certified to these standards as a condition for continuing the business relation. Among this category, the most common standards are GlobalGAP (formerly named EurepGAP, a standard for good agricultural practices developed by a group of European supermarket chains), ISO-22000, BRC (British Retail Consortium), SQF and IFS. Most of the large banana producing and trading companies have now obtained certification against at least one of these. In general, this decision is prompted by the demand of their clients (in particular supermarket chains). From the producer's perspective, the main advantage of this type of certification is to maintain market access. These certification schemes are usually oriented towards corporate clients and therefore certified products seldom bear a label that it is aimed at consumers. There is generally no price premium. This may create problems, especially for small-scale banana growers, as complying with new standards usually entails additional costs. Investments are often necessary to upgrade the production facility. Obtaining and maintaining certification is costly, as suppliers have to pay registration and inspection fees. Although certification benefits the entire food chain, the costs of private food safety and GAP certification are almost always entirely borne by suppliers (farmers, processors and exporters). Small suppliers may not be able to afford such costs and run the risk of being excluded from international markets.

For these reasons, this report deals with the first category of certification schemes, with a particular focus on those that use an on-product label targeting consumers and have the potential to generate a price premium. It focuses on the economic dimension of trade in certified bananas. The environmental and social dimensions are also essential, but other authors have already addressed them.

REPORT OUTLINE

The first chapter of this report introduces the main voluntary environmental and social certification programmes that are used in the banana sector. It goes on to describe the main patterns of international trade in certified bananas. Chapter II examines the market situation and prospects of certified organic bananas. Chapter III offers a similar analysis for fair-trade bananas. Chapter IV reviews the various types of benefits and challenges associated with organic and fair-trade bananas from the perspective of producing countries. Export prices for certified bananas are analysed and compared to those of conventional fruit for a selection of producing countries. The chapter goes on to analyse the distribution of prices along selected value chains and seeks to determine whether producing countries reap the full benefits of certified banana exports. Finally, Chapter V offers a summary of the report findings, examines their policy implications and suggests areas for further research and action.

CHAPTER I: OVERVIEW OF INTERNATIONAL TRADE IN CERTIFIED BANANAS

I. BACKGROUND: ENVIRONMENTAL AND SOCIAL ISSUES IN BANANA PRODUCTION AND TRADE

The rise of certification schemes aiming at sustainable agriculture in the banana industry results to a large extent from the adverse environmental and social effects that arose from short-term profit-maximizing management strategies in large plantations. The expansion and intensification of production in large plantations in the 1980s and early 1990s gave rise to a series of environmental problems. The expansion of banana cultivation was sometimes done at the expense of forest or other natural vegetation. For example, in Costa Rica the area under cultivation increased from 20 000 hectares to 50 000 hectares in just five years (Bendell, 2001). More importantly, banana production for export is generally intensive, with high levels of external inputs, and often takes place in monoculture plantations organized along agro-industrial lines. Most farms rely on the frequent use of agrochemicals to maintain fertility and limit losses caused by pests. Because large monoculture crops are prone to increased attacks by pests and diseases, growing quantities of pesticides are generally needed. In turn, the extensive use of agrochemicals has given rise to the emergence of pest strains that are resistant to pesticides. Pollution was also caused by inadequate disposal of waste such as pesticide-impregnated plastic bags or rejected fruit. Inappropriate production practices have often led to pollution of land, watercourses and aquifers, and a reduction in biological diversity.

The 1980s and 1990s witnessed rising public awareness of environmental issues. This evolution was reflected at the 1992 United Nations Conference on the Environment and Development in Rio de Janeiro, when governments recognized the importance of good stewardship of natural resources in achieving sustainable development. As consumers have become increasingly sensitive to environmental issues, the intensive mode of agricultural production has attracted growing attention. Due to the high concentration of production and trade in large transnational companies, the banana sector came under close scrutiny in the 1990s. Strong pressure from NGOs, negative media coverage and a shift in consumer preference towards 'ecofriendly' products led some companies to take measures to reduce the adverse impacts of banana cultivation on the environment.

Solutions have been sought to the most pressing problems. The management of input and output flows has been rationalized in many farms. Waste disposal has improved considerably over the past ten years. Collection of plastics, composting of organic rejects and filtering of wastewater have become common practices on many plantations.

In the meantime, the world banana market became oversupplied and prices declined, thus reducing the incentive to increase banana production. The area cultivated in bananas has stabilized in the main producing countries (except in the Philippines) and it is expected that future production increases will primarily derive from yield increases in existing farms rather than expansion to new land. As a result, banana production has become less of a threat to primary forests.

However, the pollution caused by the intensive use of agrochemicals in monoculture production remains a challenge, as changes in input use may directly affect productivity. Banana monoculture attracts a wide range of pests and diseases, notably fungal diseases, which are difficult to combat in tropical climate. The main fungal disease, Black Sigatoka, is able to mutate and develop resistance to fungicides, posing a problem to plantation

managers seeking to reduce agrochemical use. Biological techniques to control this fungus have not proved conclusive so far and further research is needed in this area.

Part of the solution to Black Sigatoka may be found in integrated production and pest management (IPPM) methods. These include a careful management of fertilization levels to sustain production but avoid leaching out of surplus fertilizer. IPPM methods manage pests by mechanical and biological means as much as possible and only use chemical pesticides as a last resort. When pesticides have to be used, those that are less toxic and persistent are favoured. The focus of IPPM shifts away from the eradication of pests towards limiting their population to a level where the damage they cause is economically acceptable.

In addition to its negative environmental impacts the use of pesticides may also have adverse effects on the health of plantation workers and neighbouring communities. Although related to practices of many years ago, the health problems caused by the use of a nematicide (*nemagon*) containing dibromochloropropane are still a reality for many workers today. Some of them sued banana and agrochemical companies and obtained compensation, while others are still engaged in lawsuits.

Even authorized pesticides may cause health problems if the recommended safety measures are not strictly followed. These may include the wearing of facial masks, boots and gloves, or even impermeable clothes. However, such clothes are extremely uncomfortable in the hot and humid conditions of banana cultivation. For this reason, the International Code of Conduct on the Distribution and Use of Pesticides states in Article 3: "Pesticides whose handling and application require the use of personal protective equipment that is uncomfortable, expensive or not readily available should be avoided, especially in the case of small-scale users in tropical climates." (FAO, 2002). Further, the long-term toxicity of an authorized pesticide may be discovered only many years after its approval was granted. Various cases of soil contamination by the indiscriminate use of pesticides that were legal for long periods have been reported in a number of producing countries.

In addition, the banana industry has often faced social problems related to the non-respect of labour rights on plantations. In several instances the conventions of the International Labour Organization (ILO) and even national labour laws were not enforced, leading to abuses such as child work, excessive working hours, discrimination, sexual harassment, non-respect of health and safety regulations and absence of provision of medical assurance. Another frequently debated social issue in banana production is the right to freedom of association and collective bargaining, as formulated in ILO conventions No. 87 (1948) and No. 98 (1949). In many cases plantation management resisted independent worker unions. Over time, the relationship between unions and banana companies became extremely contentious.

Some of these conflicts and several cases of labour rights abuse were taken to the ILO and publicized in the major banana importing countries. They coincided with growing consumer awareness of the "ethics" of food production and trade due in part to the sensitization campaigns launched by various NGOs working in areas such as human rights, social development and "fair-trade". Issues such as conditions of work, wages of farm labour or the price paid to small producers in developing countries attracted the attention of public opinion in developed countries. Consumer associations and other groups now want guarantees that workers' health is not put at risk by the lack of adequate safety measures on the farm or the use of pesticides known to be hazardous. They are increasingly interested in labour rights issues such as freedom of association or the right to join an independent trade union, as well as in "fair" remuneration of farm workers and small producers.

Under pressure from NGO campaigns, retailer demands and increased consumer awareness of ethical trade in the importing countries, companies have taken steps to improve the situation of their work force. This tendency was first apparent in the marketing of imported handicraft products, as exemplified by shops guaranteeing their customers that their rugs were not produced using child or forced labour. More recently, the movement has reached larger manufacturers of consumer goods, demanding that they exert a closer monitoring of the working conditions in their subsidiaries worldwide (e.g. garments and sport shoes). Social concerns have also reached the agricultural sector in general and the banana sector in particular.

Some progress has been observed in recent years. In general, relations with trade unions have improved gradually in many countries. For example, Chiquita Brands signed in 2001 an agreement with the International Union of Food, Agricultural, Hotel, Restaurant, Catering, Tobacco and Allied Workers Associations (IUF, an international federation of trade unions) and COLSIBA, the Central American federation of banana worker unions, in the presence of the Director General of the ILO (IUF, 2001). However, tensions remain in some producing countries, as exemplified by the killing of a trade unionist at the Yuma plantation belonging to Fresh Del Monte's Guatemalan subsidiary Bandegua in 2007. The SITRABI trade union reported that at least five banana workers were killed between February and April 2008 (Banana Link, 2008).

2. CERTIFICATION IN THE BANANA INDUSTRY

2.1 Basic principles of certification

Certification is a written guarantee by an independent certification agency that a production process or a product meets the criteria or requirements contained in a certain standard. The basic elements of a certification system (also called certification 'programme' or 'scheme') are the standard and the system to control the compliance of the certified entity with the standard. The object of certification can be a product or a process. Environmental and social standards are generally aimed at the production process (and sometimes also the trading process, as in fair-trade standards). These standards can focus on environmental issues such as soil conservation, water protection, pesticide use, or waste management; social issues (such as worker rights, occupational health and safety); or on other issues such as food safety. The improvements can result in the protection of local resources, healthier workers, and other benefits for producers, consumers and local communities. The certification is voluntary when producers freely decide whether or not they want to certify their production methods.

Certification can differentiate a product from other products, which can be helpful to promote the product in different markets, improve its market access, and in some cases, result in a better price paid to the producer. Certification is mainly used when the producer and the consumer are not in direct contact, as in the international market. In those cases where there are doubts on the effectiveness of the regulatory system of the exporting country, certification may be used to create trust (FAO, 2007). Producers can choose among many different types of certification. The decision on whether or not to seek certification and what type of certification to choose, are important decisions that influence farm management, investments and marketing strategies.

Each certification programme has different objectives and thus different requirements that the producer must comply with in order to be certified. The cost of complying with the standard and of certification depends on the types of changes the producer will have to make and on the type of certification programme chosen. In general, the cost of certification

is based on the time spent by the inspector(s) doing the farm inspection (farm audit) and on their travel expenses.

2.2 Certification programmes frequently used in the banana industry

There is a number of certification programmes that apply to fruit and vegetables produced for export, including bananas. The bulk of bananas that enter international trade are certified to one or more standards. This report covers those environmental and/or social standards which are the most significant to banana trade in terms of quantities certified, namely organic agriculture, fair-trade, Rainforest Alliance, SA8000 and ISO 14001. For the reasons explained in the previous section it does not deal with other certification schemes, such as those aiming primarily at food safety or good agricultural practices⁵. It should be noted that the selected certification schemes are all voluntary, i.e. producers and traders are free to choose whether to adopt them or not. However, these schemes differ widely in terms of ownership, objectives, scope, requirements, criteria, indicators and monitoring procedures (FAO, 2001a). All are privately-owned standards, except for organic agriculture. The Rainforest Alliance standard, SA8000 and ISO 14001 are single standard, each one owned by one non-governmental organization, while there are several fair-trade standards. Similarly, there is a wide array of organic agriculture standards, some privately-owned, some governmental, some intergovernmental (Table 1).

Organic agriculture is a production method which manages the farm and its environment as a single system. It utilizes both traditional and scientific knowledge to enhance the health of the agro-ecosystem in which the farm operates. Organic farms rely on the use of local natural resources and the management of the ecosystem rather than external agricultural inputs such as mineral fertilizers and agrochemicals. Organic agriculture therefore rejects synthetic chemicals and genetically modified inputs. It promotes sustainable traditional farming practices that maintain soil fertility such as fallow and nutrient recycling (e.g. compost and crop litter). Most developed countries have adopted mandatory standards and regulations governing the production, marketing and labelling of organic products.

As indicated above, there is a variety of organic agriculture standards. Historically, the first standards were developed by non-governmental organizations (e.g. organic farmer associations, trade associations, certification bodies). Then, as the market for organics grew governments started to regulate organic labelling and develop national standards. France was among the first governments to adopt a regulation on organic farming. Finally, some intergovernmental entities have adopted laws and standards. The European Union adopted it in 1991 (Regulation EEC 2092/91). In 1999 the Committee on Food Labelling of the Codex Alimentarius Commission adopted Guidelines for the Production, Processing, Labelling and Marketing of Organically Produced Foods. According to the Codex definition, *“organic agriculture is a holistic production management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles, and soil biological activity. It emphasises the use of management practices in preference to the use of off-farm inputs, taking into account that regional conditions require locally adapted systems. This is accomplished by using, where possible, agronomic, biological, and mechanical methods, as opposed to using synthetic materials, to fulfil any specific function within the system.”*

Organic agriculture is one of several approaches to sustainable agriculture and many of the techniques used (e.g. inter-cropping, rotation of crops, double-digging, mulching, integration of crops and livestock) are practised under various agricultural systems. What

⁵ Although some of these schemes claim that they also aim at environmental and social improvements, these are not their priority objective and have yet to be demonstrated by more systematic evidence

Table 1. Main characteristics of selected certification schemes

	Organic	Fair-trade	Rainforest Alliance	SA8000	ISO 14001
Number of standards	> 10	> 4	1	1	1
Ownership	NGOs, governments	NGOs, Certification bodies	RA-SAN (NGO)	SAI (NGO)	ISO (International organization)
Focus of standard	Environmental	Social equity	Environmental	Working conditions and labour rights	Environmental management system
Countries where it applies	All	Developing countries	Developing countries	All	All
Certification by	Accredited certification bodies (CB)	FLO-Cert for FLO standard. CB for their own standards	Sustainable farm certification	Accredited certification bodies (CB)	Accredited certification bodies (CB)
Main beneficiaries	All types of farms	Small farmers	Large farms	Large farms and agro-industries	Large farms and agro-industries

makes organic agriculture unique, as regulated under various laws and certification programmes, is that: (1) almost all synthetic inputs are prohibited, and (2) 'soil building' crop rotations are mandated.

The basic rules of organic production are that natural inputs are approved and synthetic inputs are prohibited. But there are exceptions in both cases. Certain natural inputs determined by the various certification programmes to be harmful to human health or the environment are prohibited (e.g. arsenic). As well, certain synthetic inputs determined to be essential and consistent with organic farming philosophy, are allowed (e.g. insect pheromones). Lists of specific approved synthetic inputs and prohibited natural inputs are maintained by all certification programmes. Many certification programmes require additional environmental protection measures in addition to these two requirements. While many farmers in the developing world do not use synthetic inputs, this alone is not sufficient to classify their operations as organic.

Fair-trade

According to the major four international NGOs involved in fair-trade⁶, fair-trade is a trading partnership, based on dialogue, transparency and respect, which seeks greater equity in international trade. It contributes to sustainable development by offering better trading conditions to, and securing the rights of, marginalized producers and workers – especially in the South. Fair-trade organizations are engaged actively in supporting producers, awareness raising and in campaigning for changes in the rules and practice of conventional international trade.

There is a variety of fair-trade standards developed by a number of NGOs. In the agricultural sector, the most widespread system is that of the Fairtrade Labelling

⁶ The International Fair Trade Association (IFAT), FLO (Fair Trade Labeling Organizations International), NEWS! (Network of European Worldshops) and EFTA (European Fair Trade Association).

Organizations International (FLO), an international NGO based in Germany. FLO gathers 20 national fair-trade labelling NGOs, mostly from developed countries in Europe, North America, Asia and Oceania and 3 regional producer networks. FLO's member organizations work with small producers and farm workers to increase their security and economic self-sufficiency, and empower them in their own organizations. The FLO system relies on certification, i.e. compliance with the FLO standard is verified by a third party that has not interest in the business transaction. FLO is responsible for developing the standard and supporting producers but the fair-trade certification is carried out by a separate organization, FLO-Cert, a not-for-profit NGO. The FLO fair-trade system guarantees agricultural producers a minimum price and a price premium on product sales.

FLO has developed and regularly updates a detailed standard for bananas. To obtain certification, producer associations must function in a democratic manner. There are also rules on how the fair-trade premium has to be spent and requirements for the protection of the environment. For plantations, there are a number of requirements related to labour rights: treatment of workers, freedom of association and collective bargaining, workers' housing and sanitation; workers' health and safety; and no child or forced labour. In addition, the producer must comply with the environmental and social laws in the producing country and demonstrate continual improvement in annual inspections (audits).

Other fair-trade certification systems have emerged recently. They have been developed by private certification bodies, notably Ecocert (France) and IMO (Switzerland). However, the quantities of bananas certified to these standards were negligible at the time of writing this report. The International Organization for Standardization has debated the relevance of developing a standard for fair-trade, but no decision has been taken so far.

It should be noted that a number of alternative trading organizations (ATOs) import foods under fair-trade principles although they do not belong to the FLO system. They usually do not use certification, but instead monitor themselves the compliance of their suppliers with their standard (second-party verification). Some of these organizations have existed for several decades, well before the creation of FLO, and import significant quantities of foods. Examples include GEPA (in Germany), Oxfam VW (in Belgium) and the Alter Trade Group (in Japan). However, presently over 95 percent of fair-trade bananas are traded under the FLO system. This report uses the term "Fairtrade" created by FLO to designate those fair-trade bananas which are certified under the FLO system.

Rainforest Alliance (RA)

The Rainforest Alliance certification aims to promote good farm management practices for natural resource conservation, improve worker conditions and community relations, and environmental management. The Rainforest Alliance supports the international secretariat of the Sustainable Agriculture Network (SAN), a group of non-governmental organizations working for environmental conservation and development. In collaboration with the producers, SAN has developed standards for fruits, coffee, tea, cacao, cut flowers and fern production.

The environmental requirements of the standard include: conservation of forests, streams, and wildlife; soil and water management; storage, transport and application of agrochemicals; integrated pest management; criteria for waste management; and a farm management plan that integrates the environmental and social standards. Some of the criteria, particularly on the social aspects, require compliance with national legislation and internationally recognized conventions.

The Rainforest Alliance certification for farms is carried out by an international certification company, Sustainable Farm Certification, Intl. After the initial audit, there is an inspection

every year. All farms must achieve a minimal level of compliance with SAN standards and demonstrate continual performance improvements to maintain certification. The producer pays the cost of farm inspections and an additional annual fee to SAN that depends on the area of land to be certified. The certification mark is mostly used in promotional activities, but is increasingly being used directly on bananas as well.

The Rainforest Alliance certification generally requires higher environmental and social standards in relation to conventional production methods. An important characteristic is the use of a point system that allows for certain flexibility. Also the certification allows for the use of agrochemicals under certain guidelines. These characteristics may be important for producers in particular farming situations. Currently, the certification is limited to the production of fruits, coffee, tea, cacao, cut flowers and ferns. It has mainly been taken up by large-scale banana producers, but recently also in coffee, including some cooperatives of smaller producers. There is no clear evidence of price premium paid to the producer. Whether certification will give a financial benefit to the producer may depend on market recognition, and the negotiations between buyers and sellers. The Rainforest Alliance does not guarantee a price premium but claims that most certified producers can negotiate a price premium ranging between 0 and 30 percent because of increased quality and widespread recognition for its label. The author could not find other sources of information.

The Rainforest Alliance reported that as of May 2008, it had certified 31 727 large and small farms and cooperatives in 19 countries for a total area of 250 385 hectares. It estimates that 1 250 000 farmers, farmer workers and their family members directly benefit from the programme. As regards bananas, there were 368 RA-certified banana operations in nine countries with a total of 64 112 hectares.

RA-certified bananas are mainly sold in North America and Europe. Annual sales of RA-certified bananas in North America were estimated at 1 million metric tonnes in 2005 and in 2006 based on information received from RA and Chiquita Brands ("Chiquita"). This volume accounts for approximately 28 percent of total US banana imports. Bananas are by far the most important RA-certified product owing to the long-standing collaboration between the Rainforest Alliance and Chiquita. All Chiquita's owned banana plantations in Latin America are RA-certified. In addition, 84 percent of the bananas that Chiquita purchases from independent producers in Latin America are RA-certified. The plantations of the Favorita Fruit Company (REYBANPAC), the third largest banana exporter in Ecuador and a key Chiquita supplier are RA-certified. According to Chiquita, the company imported almost 2 million metric tonnes of RA-certified bananas worldwide in 2006, accounting for 88 percent of Chiquita's imports from Latin America (FAO, 2008a).

The Rainforest Alliance certification is best known in the US market. According to Rainforest Alliance sources, about half of the RA-certified bananas imported into North America are sold with the Rainforest Alliance label, amounting to a total retail value of approximately US\$700 million per year. Until 2006, Chiquita was the only company importing RA-certified bananas into North America. In February 2007, Dole announced that its 1 990-hectare Esperanza plantation in Costa Rica had been certified (Reefer Trends, 2007). This was the first time a Dole plantation was certified by the Rainforest Alliance.

For many years, Chiquita's policy in the European market was to sell its RA-certified bananas with its label only and without any Rainforest Alliance label. More recently, however, the "Rainforest-Alliance certified" label has been affixed on bananas sold in some European markets.

Exports of RA-certified bananas are expected to rise, as Chiquita is likely to push more suppliers to become certified (currently 84 percent of the bananas purchased from independent suppliers come from certified farms). In addition, if Dole continues seeking Rainforest Alliance certification for its other plantations, supply could increase markedly.

SA8000

Another programme that is used in the banana industry is SA8000, the Social Accountability standard. It is a workplace standard that focuses on labour rights and worker health and safety. It is based on the conventions of the International Labour Organization (ILO), the Universal Declaration of Human Rights and the United Nations Convention on the Rights of the Child. SA8000 was developed by Social Accountability International (SAI), an NGO based in the United States. SAI's accreditation services for SA8000 are managed by Social Accountability Accreditation Services (SAAS). SAAS accredits independent certification bodies to carry out inspection and certification of production facilities.

SA8000 certification has been used for bananas and pineapples, as well as other agricultural products (FAO, 2004). It is primarily used in large plantations. All Chiquita-owned plantations are certified to SA8000. In 2005, Chiquita reported approximately 500 000 metric tonnes of SA8000 certified banana imports into North America, all of which were also RA-certified. Dole also imports SA8000 certified bananas grown in Colombia (it announced in July 2007 that all its Colombian plantations were certified SA8000), Costa Rica, Ecuador, Honduras, Guatemala and the Philippines, but volume data are unavailable and the percentage of its overall production that is certified SA8000 is unknown.

The SA8000 label is not used on products and there is no differentiated retail market. Producers can, however, use certification as a sales advantage when negotiating with importers, wholesalers and retailers.

ISO 14001

The ISO 14000 series is part of the internationally recognized industry standards of the International Organization for Standardization (ISO) and concerns environmental management systems. As a management system, ISO 14001 does not specify performance targets others than those that may be included in national laws. This has led some environmentalists to criticize the standard for allowing firms to do 'green washing' without any real improvements in their environmental performance. There is no ISO 14001 labelling for products per se, but firms may advertise their ISO certification in their documents and public relation operations. While there are organizational benefits, particularly for large growers, there is no price premium for ISO 14001 certified fruits, as they are sold as conventional bananas. Due to the absence of premium, this standard is not as attractive to smaller producers because of certification costs and extensive documentation requirements (FAO, 2003a). Producers can, however, use certification as a sales advantage when negotiating with importers, wholesalers and retailers. It was not possible to obtain data on the quantities of bananas certified to the ISO 14001 standard, as these bananas do not carry a certification label and no organization tracks them.

2.3 Economic significance of certification in the banana industry

Table 2 displays estimates of the export quantities of bananas certified to the fair-trade, Rainforest Alliance and organic agriculture standards. Bananas certified to other standards are not covered in the table, as they are sold on the conventional banana market without any certification label. Exports of bananas certified to one of the above three standards were estimated at over 2 million metric tonnes in 2007, accounting for close to 15 percent of global banana exports. The exact value of retail sales is unknown due to the lack of price data, but the global value was likely to approach US\$3 billion in 2007.

The bulk of certified bananas are exported from developing countries (in particular Latin America and the Caribbean) to developed countries. Among these, Europe and North America predominate, accounting for some 90 percent of imports. Japan follows at a distance, with the Philippines and South America as its primary suppliers. Europe imports organic and fair-trade bananas from Latin America, the Caribbean and West Africa. North America imports organic bananas from Latin America.

The remainder of this report will focus on organic and fair-trade certification, two environmental and social certification programmes that apply to a substantial share of banana trade and have a potential to add value. Sales of bananas certified to these standards have expanded rapidly since the late 1990s. These programmes are of particular interest to developing economies where they may help to generate employment, raise export earnings, improve food security and resilience to climate change, preserve natural resources and diversify the local economy. Certification to organic and fair-trade standards is a strategy for banana growers and exporters to add value to their products. It can contribute to increasing the economic viability of smaller scale agriculture. Rising demand for certified bananas creates new market segments where producers may be able to demand price premiums and secure buyers for their products. Although Rainforest Alliance certified bananas account for substantial trade volumes, this standard will not be examined in the remainder of the report as it is primarily used by plantations rather than small-scale growers. The bulk of RA-certified bananas are traded by Chiquita. The author could not find data on prices and possible price premiums.

Table 2. Estimated exports and sales of bananas certified to selected sustainable agriculture standards

Standard	Estimated global exports	Estimated share of world banana exports	Estimated sales in 2007
	(MT in 2007)	(% in 2007)	(USD million)
Organic agriculture	310 000-330 000	2.2	800
Fair-trade	250 000-260 000	1.7	450
Rainforest Alliance	1 500 000-1 700 000	11	1 800
Total(*)	2 000 000-2 200 000	14.5	2 900-3 000

Author's calculation based on governmental and industry sources

(*) the total is less than the sum of the rows due to multiple certification

CHAPTER II: CERTIFIED ORGANIC BANANAS

NOTE:

National agricultural census data and official trade statistics usually do not distinguish between certified and non-certified products. Therefore, most of the figures on organic products presented in this section are estimates. Some estimates were obtained from governmental agencies, others from industry bodies, experts and specialized media. The author cross-checked them for consistency and adjusted them when discrepancies were found. When a more specific source was used, it is indicated in the text or below the figures and tables.

1. PRODUCTION AND SUPPLIERS

The production of organic bananas shows a strong concentration in the Latin America and Caribbean region. According to Kilian *et al.* (2005), the region's production accounted for nearly 50 000 tonnes in the early 1990s and reached around 250 000 tonnes in 2003-04, corresponding to an annual growth of more than 20 percent. Although no recent figures for production are available, it can be estimated based on the export quantities and certified areas that close to half a million tonnes were produced in 2007.

World exports of certified fresh organic bananas were estimated to range between 260 000 and 270 000 metric tonnes in 2006. Preliminary estimates indicate that they exceeded 300 000 metric tonnes in 2007 accounting for over 2 percent of global sweet banana exports. As can be observed in Figure 1, exports have risen ninefold since 1998, when they were estimated at 29 000 metric tonnes (Sauvé, 1998). The rise was particularly strong between 2004 and 2006 for two reasons. First, in 2005 and 2006 production in the Dominican Republic recovered from the damage caused by bad weather in 2004. Second, Ecuador and Peru raised their shipments markedly over these two years.

The world's largest exporters of organic bananas are Ecuador, the Dominican Republic, Peru and Colombia (Figure 2). Ecuador's share has soared in the past three years (Figure 3) and in 2007 it accounted for over 40 percent of global supply.

Figure 1 - World exports of fresh certified organic bananas, 1998-2007

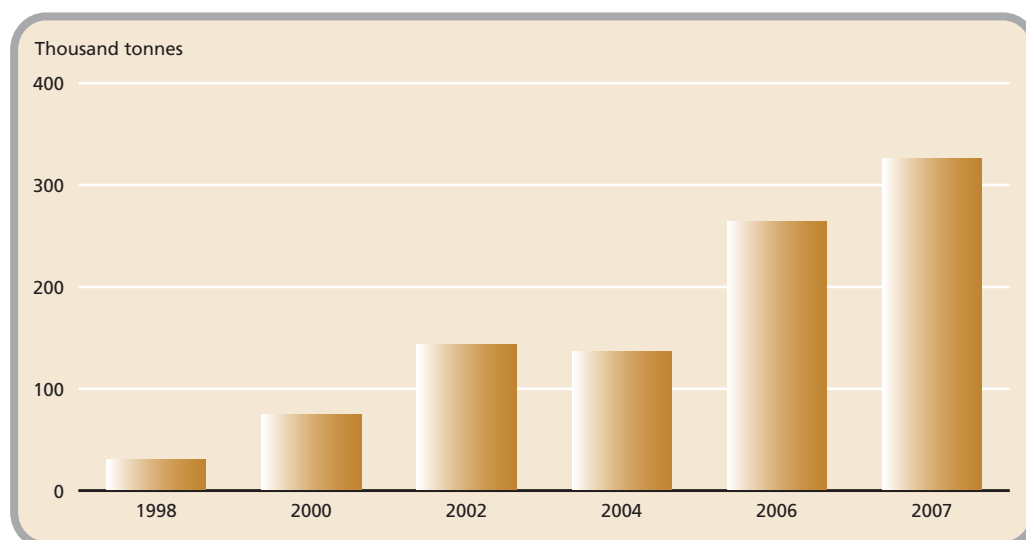
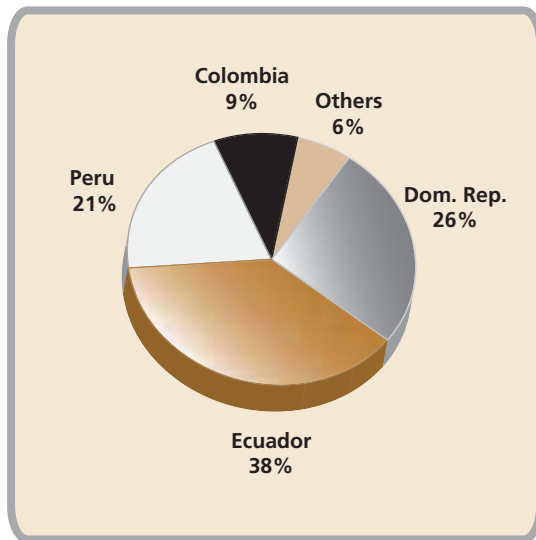


Figure 2 - Shares of the leading organic banana suppliers in world exports (in volume, average for 2006-2007)



to medium scale farms. A substantial share of the family farms is fair-trade certified. According to some industry experts, the average yield is relatively low at some 800 boxes (of 18.14kg) per hectare. The main certification bodies that are active in the banana sector are the German BCS-Öko, estimated to account for 60 percent of the market, the Swiss IMO and the Italian Suolo e Salute.

The Dominican Republic was one of the first countries to export certified organic bananas on a large scale and until 2006 it was the world's largest exporter of organic bananas, accounting for nearly one-third of global shipments. It also exports substantial quantities of conventional bananas. The share of organics in its exports varied between 32 and 58 percent over the period 1999-2007. The bulk of the harvest is exported to Europe, in particular the United Kingdom, which accounted for over half of the exports in 2006 and up to 80 percent in 2007. Other significant markets are Belgium, Sweden and Germany (Figure 4).

Figure 3 - Variations in organic banana exports by country, 1999-2007

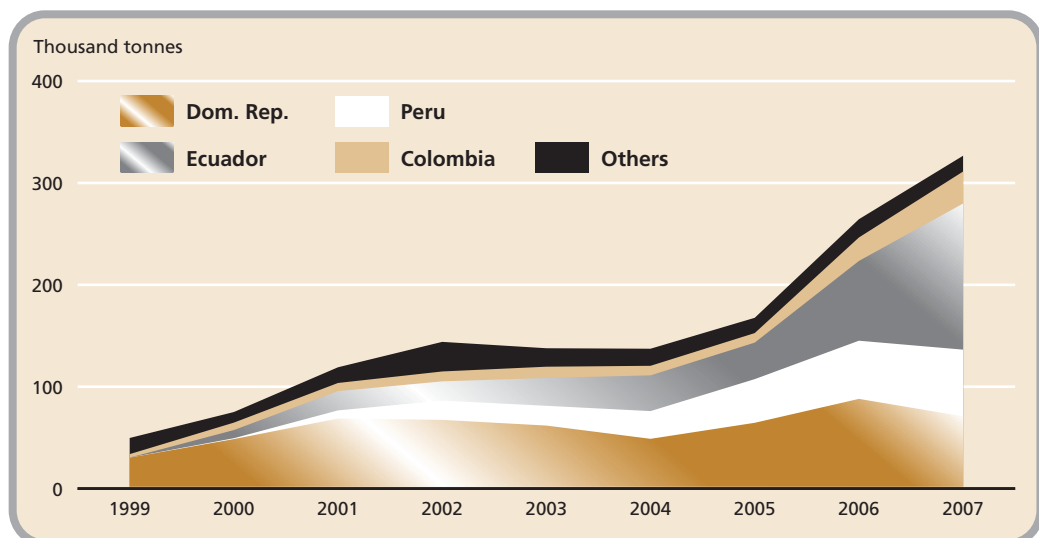


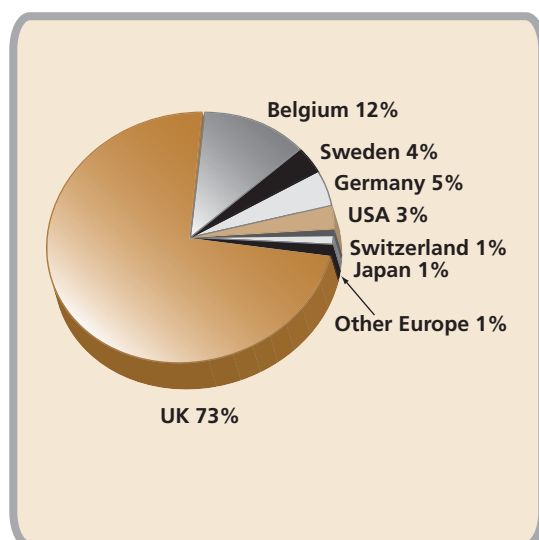
Table 3 - Exports of organic and conventional bananas from the Dominican Republic (metric tonnes)

	Conventional	Organic	Total	% organic
1999	29 350	28 650	58 000	49
2000	33 390	46 810	80 200	58
2001	63 200	67 000	130 200	51
2002	47 024	65 676	112 700	58
2003	64 909	60 091	125 000	48
2004	54 964	45 845	100 808	45
2005	104 242	61 841	166 082	37
2006	117 811	85 489	203 301	42
2007	138 758	66 777	205 535	32

Source: CEI-RD (2008)

Beside Europe the Dominican Republic exports to the United States (between 3 000 and 6 600 metric tonnes shipped annually in the period 2004-2006) and small quantities to Japan (less than 1 000 metric tonnes per year). There are two categories of exporters: specialized organic exporters (in particular SAVID SA, Horizontes Orgánicos, Cooprobata with Agrofair) and conventional banana producer-exporters that also produce organically such as Plantaciones del Norte.

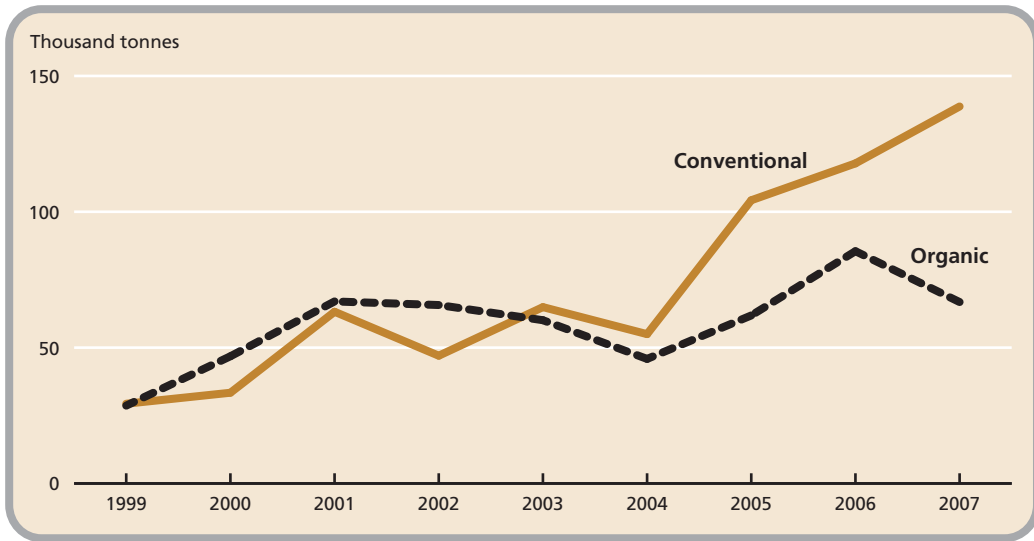
Dominican exports of organic bananas have been on a rising long-term trend but the increase has not been steady. The country's geographical location in the Caribbean makes it particularly vulnerable to hurricanes. Production was severely disrupted by hurricanes that struck the island in late 1998 and in November 2003 and 2004, causing severe drops in shipments in the years 1999 and 2004 (Figure 5). Exports recovered markedly in 2005 and a further rise was observed in 2006. Production was disrupted again in 2007. Floods

Figure 4 - Main markets for Dominican organic banana exports (in percentage of export value 2004-2007)

and strong winds in Spring hit the Azua region in the southwest where the bulk of bananas are produced organically. Then, in December 2007 hurricanes Noel and Olga destroyed 4 905 hectares out of the 10 062 hectares of land planted to bananas. This was considered as the worst natural disaster hitting the Dominican Republic in many years. As a result of the extensive damage, exports contracted in 2007 and are forecast to drop markedly in 2008. According to industry sources, total banana exports (both conventional and organic) may fall by up to 80 000 metric tonnes (Notifax, 2008), but will pick up in 2009 due to the renewal of plantations and crop expansion.

Exports of conventional bananas have been rising even faster than those

Figure 5 - Exports of organic and conventional bananas from the Dominican Republic, 1999-2007

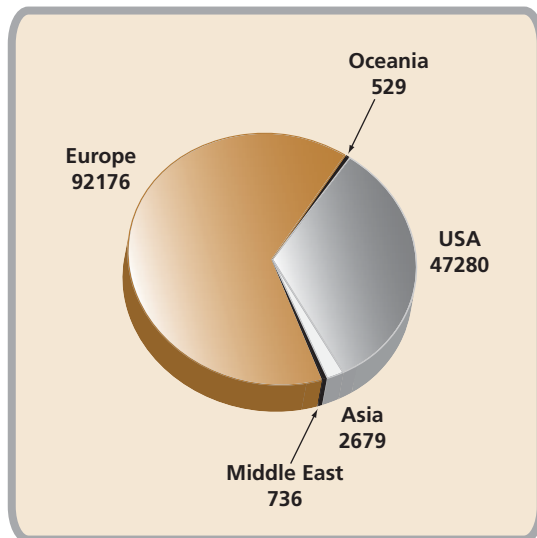


of organic bananas in the past four years. This can be partly explained by the attractiveness of the EU market for conventional bananas, where prices have been high, and recent changes in the EU banana import system. Until the early 2000s the Dominican Republic could only export a limited quantity of bananas duty free. Following the latest reform of the import system in 2006 and the signature of an Economic Partnership Agreement with the European Union at the end of 2007, the Dominican Republic can now export bananas duty free without any quantitative restrictions. Organic bananas enjoy the same advantages but their production is more difficult and costly, which explains why they have benefited comparatively less from the liberalization of the EU import system.

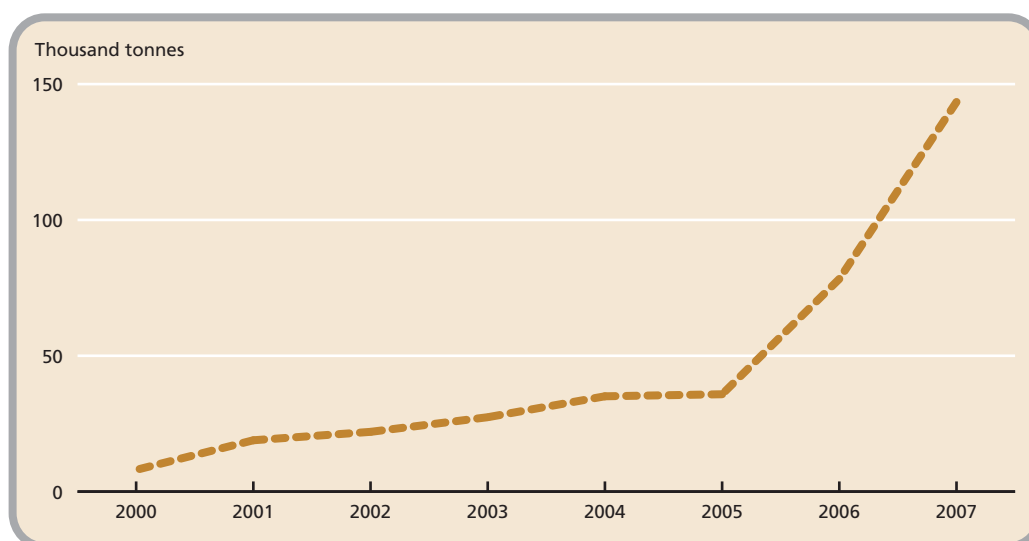
1.2 Ecuador

Ecuador is the world’s largest banana exporter and the fourth largest producer behind India, Brazil and China. It shipped an estimated 4.5 million tonnes worldwide in 2007. Although it

Figure 6 - Ecuador’s exports of organic bananas by destination (metric tonnes in 2007)



entered the organic industry relatively late, Ecuador’s organic banana output has risen fast since 2004. In 2007, Ecuador became the world’s largest supplier, accounting for almost half of world exports with over 140 000 metric tonnes shipped abroad. Some 64 percent of these exports were destined for Europe and about one third went to the United States. The remainder was shipped to Asia and the Middle East (Figure 6). Ecuador more than trebled its exports over the period 2005-2007, as new farm land obtained organic certification (Figure 7). According to its Ministry of Agriculture, the certified area planted to bananas rose nearly threefold from 4 700 hectares in 2004 to 13 800 hectares in 2007 (Notifax, 2007). Despite this, organics still account for a fraction of Ecuadorian banana exports (3 percent in 2007, Table 4).

Figure 7. Organic banana exports from Ecuador, 2000-2007**Table 4 - Share of organic banana exports in total banana exports from Ecuador**

	Exports (MT)	Organic share (%)
2004	35 085	0.8
2005	35 837	0.7
2006	78 284	1.7
2007	143 420	3.1

Source: AEBE

Ecuadorian organic bananas are mainly produced by relatively small-scale farms (from 1 to 10 hectares) usually organized in cooperatives in mountain areas where pest pressure is lower than in the main conventional cultivation zones. These cooperatives tend to sell their harvest to exporters (local firms and multinational companies such as Dole) but a few of them ship directly to importers under the fair-trade system. This is the case of the El Guabo farmer

association. The association has over 500 members and exports organic and fair-trade bananas mainly to Europe. In 2007 it shipped over 31 000 metric tonnes of organic bananas under the Eko brand and was Ecuador's largest exporter of such bananas. UBESA, the local subsidiary of Dole, ranked second with close to 30 000 metric tonnes and was followed by Noboa with some 16 000 metric tonnes under the Bonita brand. Noboa is by far the largest producer and exporter of conventional bananas in Ecuador. The multinational fruit company Del Monte shipped approximately 6 000 metric tonnes of organics. Overall, these three companies accounted for over a quarter of organic banana exports in 2007. A dozen of organic certification bodies operate in Ecuador, of which three (BCS-Öko, Skal and Ceres) are predominant in the banana sector. BCS-Öko was reported to hold some 80 percent of the banana certification market in Ecuador. In 2005 some problems were detected in the organic certification system and solutions were subsequently proposed by independent experts (FAO 2006).

Being by far the world's largest exporter of conventional bananas with over 4 million tonnes exported annually on average and in view of the large area of bananas in transition to organic cultivation, Ecuador seems bound to raise further its exports of organic bananas. In the 4-month period January-April 2008 shipments already totalled close to 58 000 metric tonnes (AEBE, 2008). Emilio Ramirez (2006) estimates that the average yield ranges between 1 600 and 1 800 18 kg-box per hectare and forecasts that exports will reach 350 000 metric tonnes in 2010. However, this forecast seems overoptimistic, as the actual export yield is currently much lower (closer to 600-700 boxes/ha or 10-11 MT/ha). Further,

the expected growth could be mitigated by the spread of pests and diseases, in particular the Black Sigatoka fungus, into the organic production area. The disease already causes considerable damage in the areas where conventional bananas are cultivated. According to local sources, the cost of treatments may account for between 15 and 20 percent of total production costs.

Maintaining the trust of foreign customers in the local certification system will support the further growth of exports. An article in the Ecuadorian online magazine *Banana Export* (2008) reported that producer groups have requested that the national sanitary control authority Servicio Ecuatoriano de Sanidad Agropecuaria (SESA) step up its controls over the activities of the certification bodies and that the certification bodies be monitored by a multi-stakeholder committee where they would be represented.

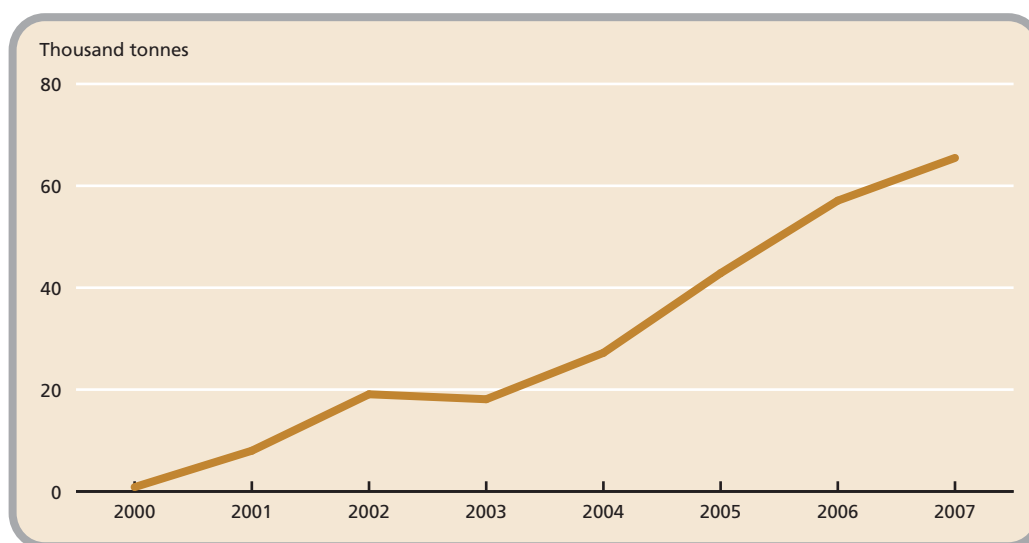
1.3 Peru

According to Peru's Ministry of Agriculture, over 270 000 hectares were cultivated organically (certified or in transition) by some 33 000 farmers in 2005. The average farm size is small, as 88 percent of the farms have less than 5 hectares. According to USDA (2008), total organic exports reached USD 220 million in 2007, making Peru the world's seventh largest organic exporter. Organic products as a whole are Peru's third largest agricultural export (behind coffee and asparagus). Organic bananas rank second after organic coffee and account for 19 percent of Peru's organic exports in value.

Organic banana cultivation started at the end of the 1990s, when the Ministry of Agriculture launched a programme to convert banana farms to organic agriculture in the Northern Coast area with support from the International Network for the Improvement of Banana and Plantain (INIBAP). The first exports of organic bananas took place in 2000 through POPSAC, a Peruvian private company. It was then replaced by Dole, which played an important role in expanding exports.

In contrast with other substantial suppliers, virtually all bananas exported from Peru are organic. Over 3 500 farmers grow organic bananas on approximately 3 500 hectares of certified land in the northern regions of Piura (81 percent of land, concentrated in Valle del Chira, Sullana Province), Tumbes (18 percent in the Tumbes and Zarumilla Provinces) and Lambayeque (1 percent). Due to this geographical concentration, the formation of associations and the transition to organic cultivation was rapid. The northern coast regions benefit from a relatively favourable climate (tropical dry), fertile soils, water resources and a relatively low incidence of pests and diseases. The Ministry of Agriculture (2006) estimates the yield at 1 920 boxes per hectare. The industry provides incomes for an estimated 15 000 persons (workers, farmers and their families). Organic bananas are mainly produced by small-scale farmers (the average farm size is 0.75 hectares) usually organized in associations or cooperatives. These groups include the Asociación de Pequeños Productores Orgánicos de Querecotillo (APOQ) and Asociación de Pequeños Productores de Banano Orgánico Samán y Anexos (APPBOSA). They tend to sell to exporters (local firms and multinational companies) but a few of them (e.g. APPBOSA) ship directly to importers under the fair-trade system. The share of exported fruit that is also Fairtrade certified has been increasing steadily. Five organic certification bodies operate in Peru: BCS-Öko (Germany, predominantly bananas), Bio-Latina (Peru), Control Union, OCIA (United States) and IMO (Switzerland).

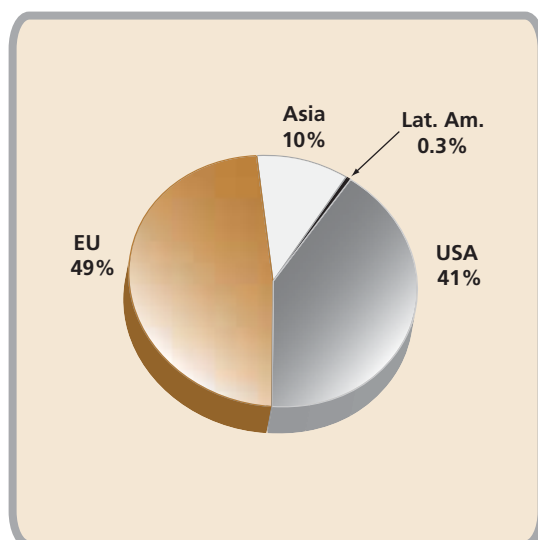
Peru's exports of certified organic bananas started in 2000. They increased markedly over the past seven years, from less than 1 000 metric tonnes in 2000 to over 65 000 metric tonnes in 2007, earning nearly 32 million that year (Figure 8). Peruvian bananas are mainly shipped to the European Union and the United States, but sizeable quantities are destined

Figure 8 - Peru's organic banana exports, 2000-2007

for Japan (Figure 9). Peru's shipments are set to continue rising, as a number of farms are in transition to organic management. They are projected to exceed 80 000 metric tonnes in 2008 (Soldevilla, 2008). According to industry sources quoted by FAS (2008), the area dedicated to organic banana cultivation will expand by nearly 40 percent to 7 200 hectares. The organic price at FOB level is high. It ranged between USD 8 and 9 per box between 2006 and 2007.

1.4 Colombia

As in the case of Ecuador, organics are only a small fraction of Colombia's banana exports. Until 2006, its organic bananas originated mainly from one large firm, the Daabon company (Grupo Daabon), which produces and exports a range of organic tropical fruits, in fresh and dried forms. The firm obtained organic certification in 1993. Production is located in the North of the country, in the Sierra Nevada de Santa Marta, near the coastal city

Figure 9 - Peru's organic banana exports by destination (in % of volumes 2004-2007)

of Santa Marta which serves as export harbour. Daabon had seven certified organic banana farms for a total area of approximately 500 hectares in early 2008. It forecasts the banana area to grow to close to 700 hectares by the end of 2008. Until 2005 Daabon was virtually the only Colombian exporter of organic bananas. In 2005 Dole established a large organic commercial farm ("Don Pedro") in the area of La Guarija. According to Dole's website, the farm was certified in 2005 and has over 310 hectares of organic bananas. It is equipped with a suspended cable-way harvesting system and a modern packing facility. According to Notifax (2008c), there are plans for converting some 2 000 hectares of banana land in the Santa Marta area to organic status. Colombian exports exceeded 30 000

metric tonnes in 2007. Colombia's main market is the United States, followed by the European Union and Japan.

1.5 Other suppliers

Honduras and Mexico are minor suppliers. **Honduras'** exports have been relatively stable over the past five years. They originate from a plantation owned by a company named ALVESA (Alma Verde Sociedad Anonima), a subsidiary of Dole Foods. All the production is exported to the United States. Industry sources indicate that the Ministry of Agriculture considers developing the cultivation of organic bananas in the South (Valle de Nacaome) in partnership with Chiquita Brands (Notifax, 2007). However, the large-scale expansion of production seems unlikely due to the high pressure of pests and diseases, especially the Black Sigatoka disease.

Mexico: pioneered organic banana exports and was a leading supplier to the United States and Japan in the late 1990s but production has decreased markedly since then. According to CIESTAAM (2005), the area under organic cultivation fell from 826 hectares in 2000 to only 153 hectares in 2004-2005. Mexican sources estimated output at 2 400 metric tonnes in 2006 and it is likely that exports were below 2 000 metric tonnes.

Ghana: Ghana's entry into the organic banana industry is relatively recent. In the early 2000s, the Volta River Estates Limited company (VREL), a large plantation located south of Lake Volta which was the only Ghanaian exporter of bananas and was certified to fair-trade standards, started converting parts of its land to organic cultivation. It later obtained organic certification and now exports bananas that bear the double certification organic and fair-trade, mainly to the United Kingdom, France and the Netherlands. According to FLO, VREL exported some 2 500 tonnes of organic bananas annually in 2005 and 2006.

The Philippines: The Philippines has been exporting organic bananas since the 1990s but no recent data could be obtained on its production and exports. The bulk of its exports go to Japan, which is also the main market for its conventional bananas. A study carried out by IFOAM Japan on behalf of the World Bank, RUTA and FAO (World Bank, 2005) estimated that it shipped some 10 000 metric tonnes of organic bananas to Japan in 2002. In addition, substantial quantities of non-certified organic bananas are shipped to Japan. Some of these bananas (balangon variety) are produced in the Negros Island and traded under a fair-trade system by an NGO (Alter Trade Japan) and distributed by Japanese consumer cooperatives.

A number of **other tropical countries** cultivate bananas organically. These include Brazil, Costa Rica, Guatemala, Bolivia, Uganda, Cameroon, Togo, Burundi, India, Australia and Thailand. However, the quantities that they export are very low. Among the leading four exporters of fresh conventional bananas, Costa Rica is the only country that does not export fresh organic bananas. It does produce organic bananas, but the bulk of the harvest is processed into purée. The organic banana purée is exported to Europe and the United States where it is used as ingredient for the foodstuff industry (in particular the baby food industry). Bolivia has started producing organic bananas recently with the support of the United States Agency for International Development (USAID). Banabeni, a group of small grower organizations representing 990 families in the Alto Beni province started exporting organic bananas to Chile in 2007 (USAID, 2007). Similarly, in Guatemala, one company has started producing bananas organically and is planning to ship them to the US and European markets (AEBE, 2008b). Cameroon exported small quantities of fresh organic bananas to the European Union in the late 1990s - early 2000s but had to stop due to the competition of Latin American and Caribbean suppliers. Uganda sells to Europe small quantities of a specific variety named 'apple banana'. India and Thailand market organic

bananas domestically and to neighbouring Asian countries. Multinational fruit company Fresh Del Monte recently indicated that it is considering converting its Brazilian banana plantations to organic cultivation (Notifax, 2008b).

2. MAIN MARKETS FOR ORGANIC BANANAS

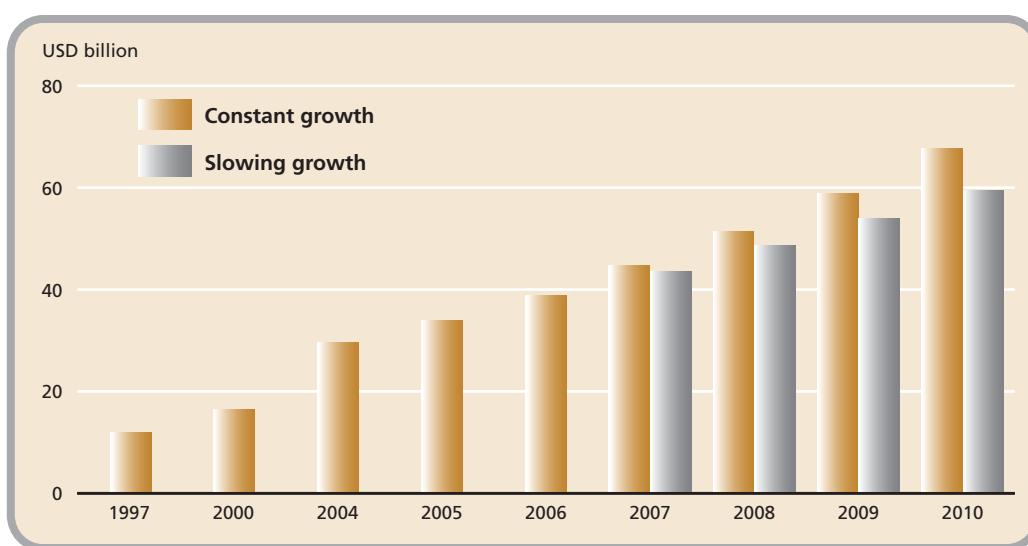
2.1 Overview

Based on estimates collected from various studies and industry sources⁷, global retail sales of organic foods were estimated at some USD 34 billion in 2005. Few final figures are available for 2006 yet, but it is estimated that sales approached USD 40 billion⁸. They have increased by over 200 percent in less than a decade, growing from approximately USD 11 billion in 1997 (Figure 10). Although growth slowed slightly in the early 2000s, it has remained robust (43 percent between 2002 and 2005) (IFOAM, 2007).

It is estimated that 98 percent of the sales of certified organic products take place in developed countries. North America and Europe account for the bulk of retail sales as illustrated in Figure 11. Other markets are Japan, Australia and New Zealand. Although developing countries presently account for only a fraction of sales, consumption is rising steadily in some of them, in particular in the emerging economies of East Asia (Singapore, Malaysia, China, Republic of Korea) and Latin America (Argentina, Brazil, Chile). In these countries organic sales are overwhelmingly concentrated in the large cities and purchasers originate from the upper classes.

Developed countries account for the bulk of imports of certified organic bananas. Europe, North America and Japan together represent 99 percent of imports. Europe alone accounted for over half of world imports in 2006 (Figure 12). The retail value of organic banana sales worldwide was estimated to approach USD 800 million in 2007.

Figure 10 - World retail sales of certified organic products (past and projected)



⁷ ITC, Eurofood, SÖL, Organic Monitor and other sources.

⁸ Organic Monitor (2008) has a slightly lower estimate of USD38.6 billion.

Figure 11 - Main markets for organic foods (in percentage of world retail sales in 2006)

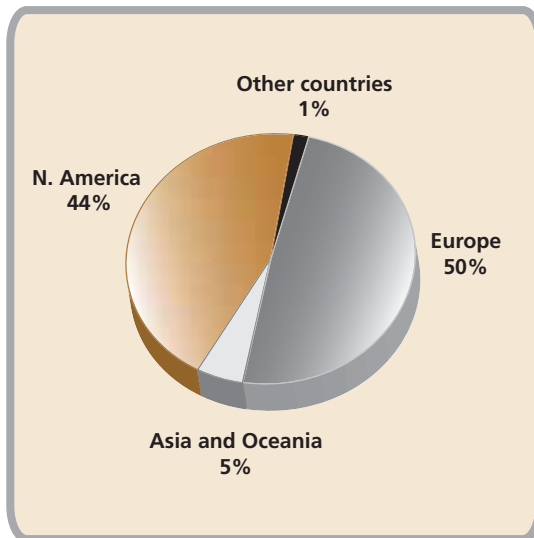
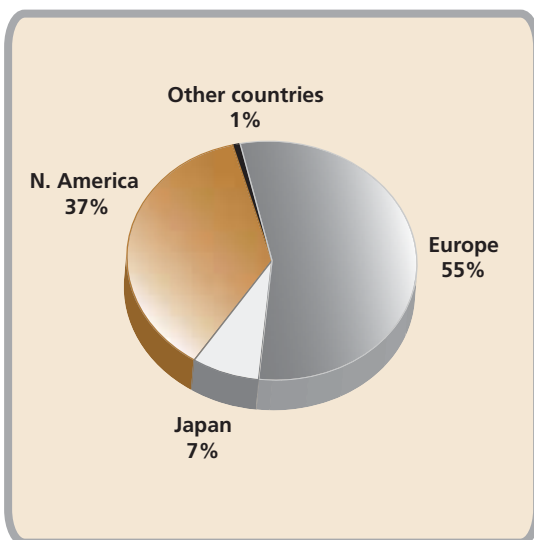


Figure 12 - Geographical breakdown of global organic banana imports in 2006



2.2 Europe

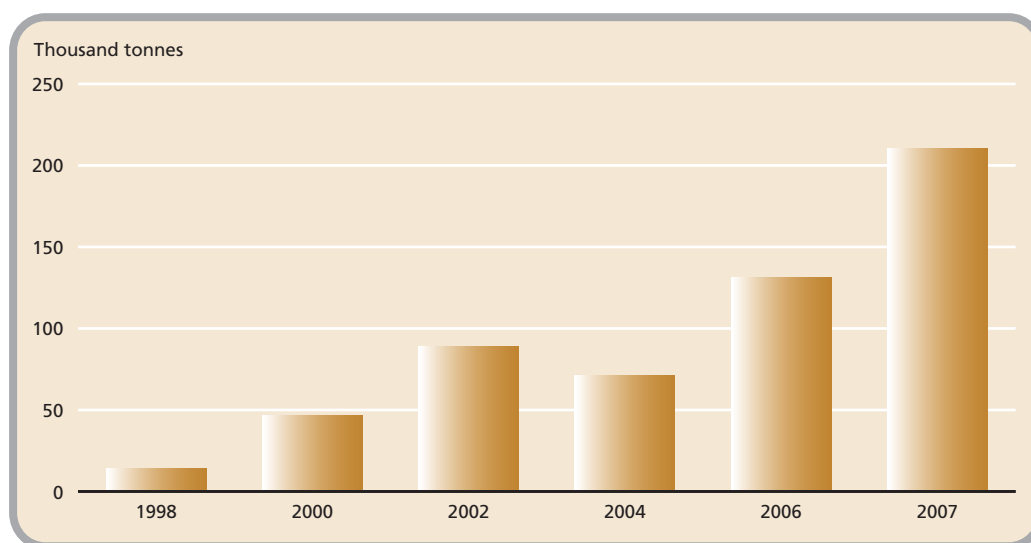
A. Imports and consumption

Europe is the world's largest market for organic products, accounting for half of global retail sales in 2006. According to Organic Monitor (2008), sales of fruit and vegetables certified to an organic and/or fair-trade standard exceeded €5 billion for the first time in 2007, with organic produce accounting for the bulk of this figure. Organic vegetables were the largest category, valued at €2.5 billion in 2007. The market share of organic and fair-trade fresh produce is particularly high in northern European countries. Organic Monitor (2008) estimates that over 5 percent of all fresh produce sold in countries such as the United Kingdom, Germany and Finland is now certified organic and/or fair-trade, while in Switzerland the market share has already exceeded 10 percent. Imports of fresh certified organic bananas into Europe were estimated to range between 130 000 and 140 000 metric tonnes in 2006. Preliminary estimates for 2007 indicate that they exceeded 200 000 metric tonnes. If this figure is confirmed, organics would account for over 4 percent of Europe's banana imports.

European imports of organic bananas have risen markedly since the late 1990s. They were multiplied by ten over the 8-year period 1998-2006. This compares with a 38 percent increase in total EU banana imports. The rise has been almost continuous, except in the year 2004 when output in the Dominican Republic, Europe's leading supplier at that time, was curtailed by the damage caused by a hurricane in late 2003 (Figure 13).

Over 95 percent of organic bananas are consumed in Western Europe. The leading consumption countries are the United Kingdom, Germany, France, Switzerland, Italy, Austria, the Netherlands and the Nordic countries. The market share of organic bananas in the EU-25 was estimated at over 3 percent in volume in 2007. Germany and the United Kingdom alone consumed nearly 100 000 metric tonnes in 2006, accounting for about three quarters of European consumption. Although the absence of data on retail prices makes it difficult to calculate the value of organic banana sales, it can be estimated in the order of €400 million (USD 590 million) in 2007.

The United Kingdom has become the largest market for organic bananas in Europe and the second largest in the world after the United States. Hinrichs (2007) estimates

Figure 13 - European imports of organic bananas, 1998-2007

UK consumption at 55 000 metric tonnes in 2006. This represents a market share of approximately 6 percent. Some UK retailers such as Marks & Spencer and Waitrose sell almost exclusively organic bananas. Over 10 percent of the bananas sold by leading supermarket chains Tesco and Sainsbury are reportedly organic. Sales continue to expand. According to industry sources, organic bananas accounted for 8 percent of the UK banana market at the end of 2007. This would translate into a volume of over 70 000 metric tonnes.

With retail sales of organic foods estimated at €5.4 billion (close to USD 8 billion) in 2007, **Germany** is by far the leading European organic market. Organics already account for over 3 percent of total food sales and the market grew by some 18 percent in 2007 (BioFach, 2008). The quantities of organic fruit and vegetables sold by retailers doubled in three years, reaching almost 250 000 metric tonnes in 2007 (Fruchthandel, 2008). Germany is the second largest market for organic bananas in Europe. Imports of organic bananas have risen rapidly since 2005, partly as a result of greater supply from Latin America. However, the estimates of their sales volumes vary substantially across sources. According to Fruchthandel (2007), sales doubled in 2006 to reach an estimated volume of almost 48 000 metric tonnes. However, Hinrichs (2007) has a slightly lower estimate of 44 000 metric tonnes for 2006. The 2008 annual report of the German organic NGO Bund Ökologische Lebensmittelwirtschaft (BÖLW) has an even higher estimate of 11 percent market share for 2006, which would represent well over 80 000 metric tonnes. Preliminary results by ZMP (personal communication, 2007) showed a further rise of 40 percent in the first quarter of 2007, leading to a market share of 9 percent, while BÖLW's report indicates a market share of 13.9 percent. The latter figure may be overestimated or may relate only to certain types of retail outlets. For the whole year 2007, Fruchthandel (2008) indicates sales of 57 000 metric tonnes based on ZMP data.

Although smaller than the United Kingdom and Germany, **France** is a relatively important market for organic bananas. Much of its imports arrive indirectly through other EU countries (in particular Belgium and the Netherlands). France sources organic bananas mainly from the Dominican Republic, Peru and Colombia, with smaller quantities of organic and fair-trade bananas originating from Ghana. A large share of these imports is indirect, with Belgium and the Netherlands playing the role of entry point.

Italy imports substantial quantities of organic bananas, but consumption is mainly concentrated in the Northern and Central regions. Italy's domestic production of organic fruits and vegetables is considerable (FAO, 2001b) and these products may compete with organic bananas.

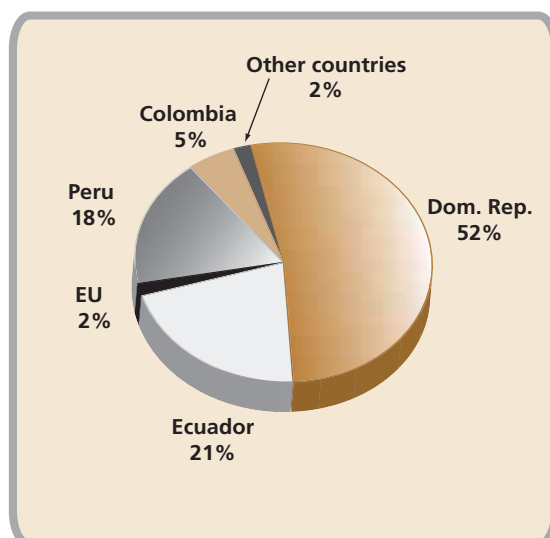
In spite of its relatively small population, **Switzerland** imports substantial quantities of organic bananas. It has the highest individual consumption of organic foods in Europe with an average of €102 (approximately USD 130) in 2006 according to ZMP (personal communication, 2008). Total retail sales of organics were estimated at close to USD 1.2 million in 2007, giving the sector an average market share of nearly 5 percent. The Swiss retail market is dominated by two large supermarket chains, COOP Switzerland and Migros, both of which make organic bananas widely available to customers in their stores. The price difference between conventional and organic bananas tends to be lower than in other European countries, making organic bananas relatively attractive to consumers.

B. Suppliers

Europe's main suppliers are the Dominican Republic, Ecuador, Peru and Colombia (Figure 14). The Dominican Republic was long its chief supplier, accounting for over half of its imports in 2006, but Ecuador took over the rank of leading supplier in 2007. In addition to these large suppliers, Europe also imports relatively small quantities of fresh organic bananas from sub-Saharan Africa (mainly Ghana, which ships some 2 500 metric tonnes of bananas under the double certification organic and fair-trade). Some of the overseas territories of EU member states produce organic bananas, notably the Canary Islands (Spain) where 50 hectares were cultivated organically in 2007 according to FruiTrop (2008). If the average local yield is applied this translates into a production volume of some 2 000 metric tonnes. The Portuguese island of Madeira in the northern Atlantic ocean also produces organic bananas but it was not possible to find data on the quantities harvested and sold. It is assumed that the quantities are low.

Organic bananas are imported into Europe by different types of firms: specialized organic importers (e.g. ProNatura and Brochenin in France; Eosta and AgroFair in the Netherlands; Organic Farm Foods in the United Kingdom), large conventional fruit importers (e.g. Fyffes, Dole and Pomona) and the specialized subsidiaries of some supermarket chains.

Figure 14 - Origins of organic bananas marketed in Europe (volume shares, 2006)



C. Prices

The lack of reliable data on prices for organic products in general makes it difficult to analyse the prices of organic bananas. There are virtually no data available on prices at import level. Surveys of importers have proven ineffective as firms consider price information as commercially sensitive. At wholesale level, data can be found for a few EU countries, but systematic data collection started only recently and the series are incomplete. Data on retail prices are very scarce and anecdotal.

Germany

Germany is the second largest market for organic bananas. ZMP, a German

Table 5 - Annual ranges of retail prices for bananas in Germany

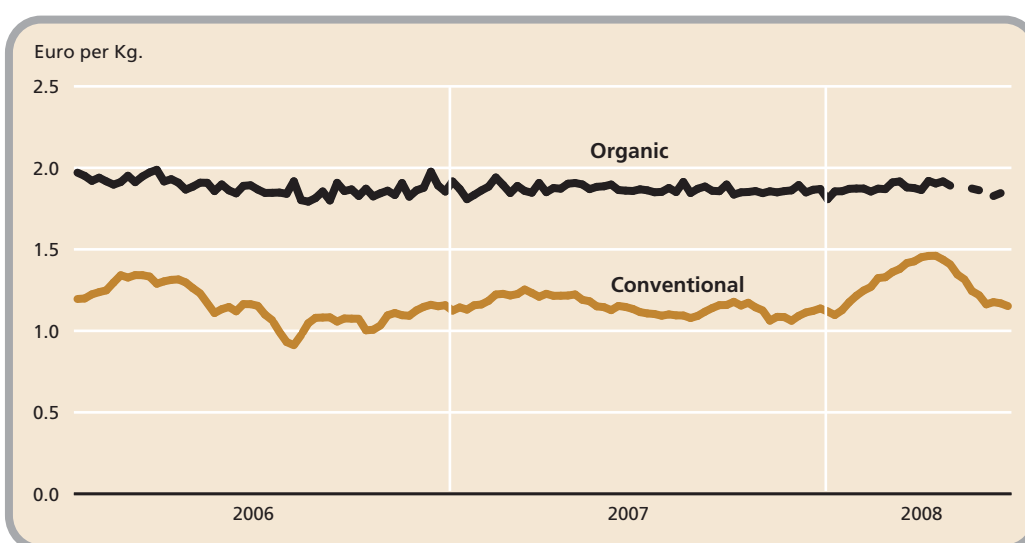
Year	Average organic price	Average conventional price	Organic price premium
	(€/kg)	(€/kg)	(%)
2006	1.88	1.15	63.3
2007	1.87	1.15	62.6
2008 (Jan.-Jun.)	1.87	1.29	45.5

Source: ZMP (2008)

firm that collects agricultural prices, has published wholesale and retail prices for some organic products including bananas in recent years. Data for the period 2004-2006 show that the rapid increase in organic banana imports into the German market was paralleled by a relative price decline. While retail prices ranged between €2.20 and €2.35 per kg in 2004, the range was only €1.8 to €2 per kg in 2006. However, prices seem to have stabilized since then, as illustrated in Table 5. They fluctuated moderately (+/- €0.1/kg) around €1.9/kg over the period April 2006-June 2008 and were much more stable than the conventional banana prices which ranged in the band of €1 to 1.5/kg (Figure 15). The organic price premium at retail level was around 63 percent over the period 2006-2007. However, it fell to 45.5 percent in the first half of 2008 as the price of conventional bananas rose while the organic price remained stable.

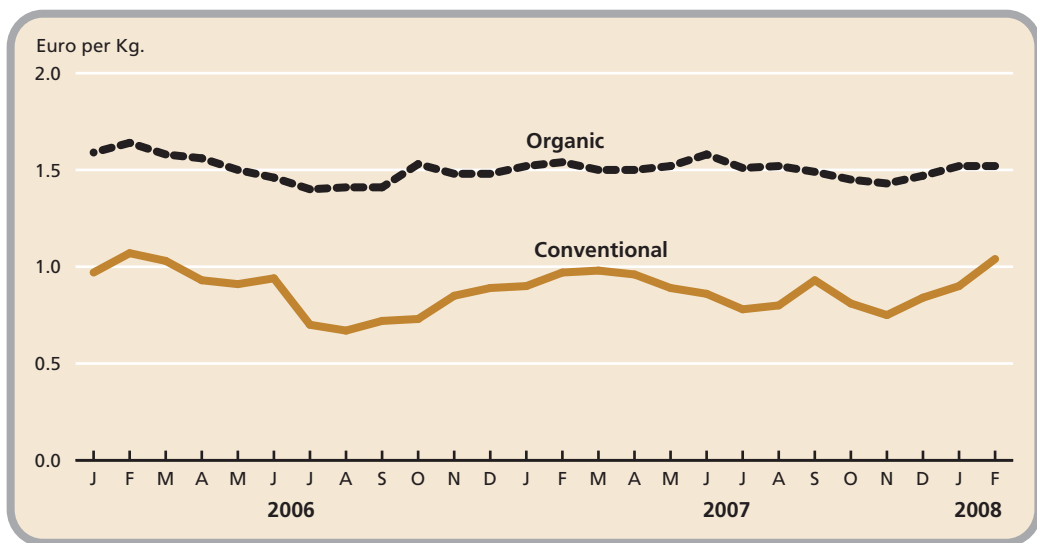
France

Although it is a smaller market than the United Kingdom and Germany, France consumes substantial quantities of organic bananas and its imports have been expanding rapidly in recent years. It is the only substantial European market where official prices for organic bananas at both wholesale and retail levels could be found over a significant period of time. These data are regularly collected and published by the French *Service des Nouvelles des Marchés* (Market News Service).

Figure 15 – Retail prices for organic and conventional bananas in Germany (January 2006-June 2008)

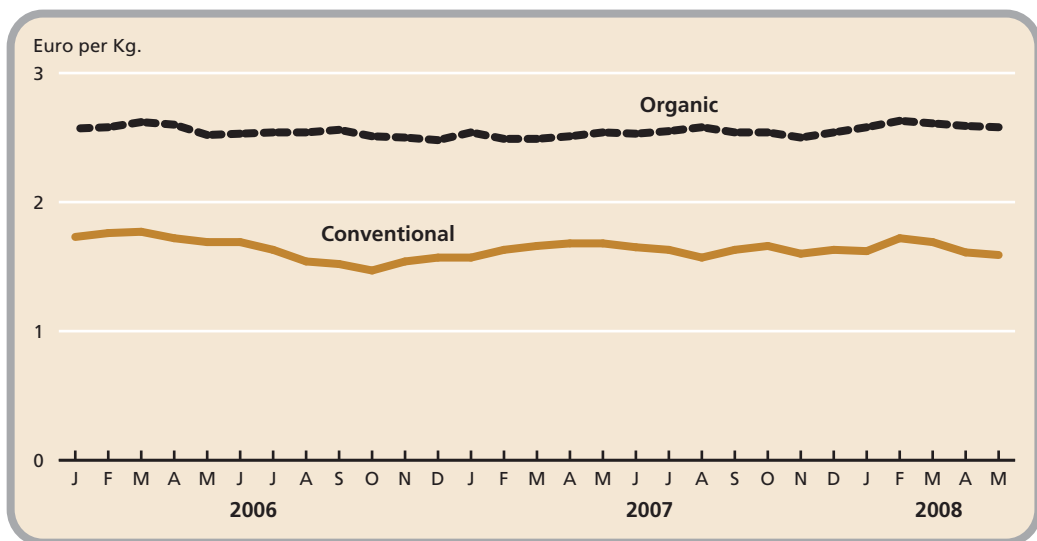
Source: ZMP (2008)

Figure 16 - Monthly wholesale prices for organic and conventional bananas in France (origin: Americas)



Source: Service des Nouvelles des Marchés (2008)

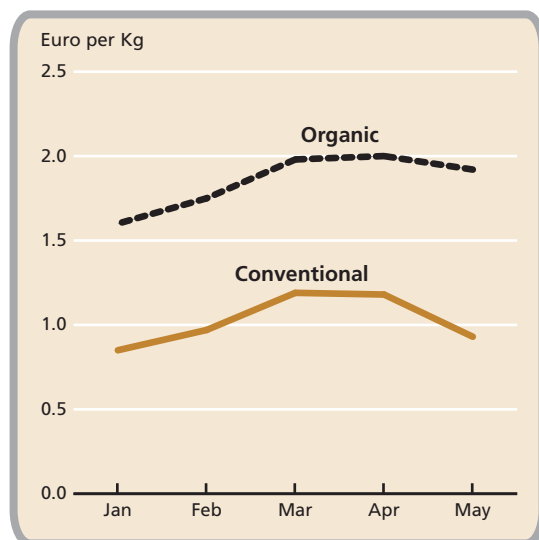
Figure 17 - Monthly retail prices for organic and conventional bananas in France (origin: Americas)



Source: Service des Nouvelles des Marchés (2008)

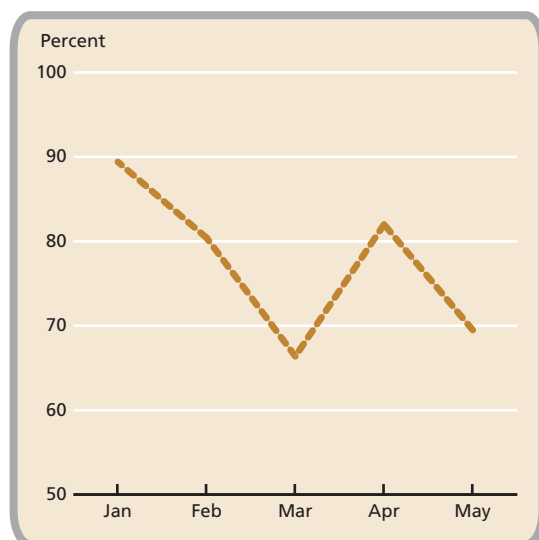
Figure 16 displays wholesale prices for organic and conventional bananas. Similarly to Germany, organic prices are more stable than conventional prices, which exhibit wide fluctuations. The average price premium was €0.63 per kg at wholesale level over the period considered. It grew from 76 percent in 2006 to 83 percent in 2007. The behaviour of prices at retail level is illustrated in Figure 17. Again, organic prices are more stable than conventional prices. The average retail price premium is €0.91 per kg, which is higher than the premium at wholesale level in absolute terms but not in relative terms. It rose from 56 percent in 2006 to 64 percent in 2007. In comparison with Germany, both the organic and conventional prices are higher in France. The organic price premium is also higher.

Figure 18 – Italy: monthly average wholesale prices of organic and conventional bananas (January-May 2008)



Sources: Chambers of Commerce of Bologna and Florence (2008)

Figure 19 – Italy: difference (percentage) between organic and conventional banana monthly wholesale prices (January-May 2008)



Sources: Chambers of Commerce of Bologna and Florence (2008)

Italy

Italy competes with France for the rank of third largest organic market in the European Union. Wholesale prices for organic and conventional bananas were found for the period January-May 2008 in the markets of Bologna (organic) and Florence (conventional). Figure 18 displays the average price of organic bananas imported from Colombia, the Dominican Republic, Peru and Ghana compared to the price of conventional bananas imported from various (unspecified) countries. The average difference over the 5-month period was €0.83/kg. Both prices vary in the same direction and, unlike in France, they have similar spreads. The organic price premium averaged 81 percent with a minimum of 65 percent and a maximum of 90 percent (Figure 19).

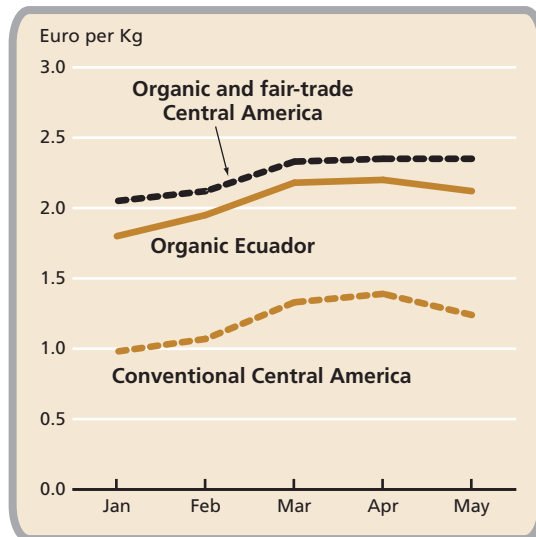
Figure 20 displays the average prices of double certified organic/fair-trade bananas and conventional bananas, both imported from Central America. The average difference over the 5-month period exceeded €1/kg, representing an organic price premium of 87 percent. Prices for organic bananas from Ecuador are displayed in the same graph. Unsurprisingly they are slightly lower than those of double-certified organic/fair-trade bananas. The difference, which varies between €0.1 and 0.2/kg, reflects the fair-trade premium and higher production costs in Central America.

C. Market prospects

Consumption of organic bananas is expected to increase further in Europe, especially in the European Union. With 27 member states and a population of nearly half a billion consumers with high average income, the European Union is

the world's largest market for bananas. It imported almost 4.7 million tonnes in 2007 from Latin America, Africa and the Caribbean, accounting for over one third of global banana imports. Several factors may contribute to raise its consumption of organic bananas. First, suppliers of organic bananas are expected to benefit from the liberalization of the EU banana import system. In January 2006, the European Union replaced its complex system of tariff quotas with a tariff-only system. Presently, there are no longer any quantitative restrictions on banana imports. As a result, banana imports have increased markedly since early 2006.

Figure 20 – Italy: monthly average wholesale prices of organic and conventional bananas from Central America and Ecuador

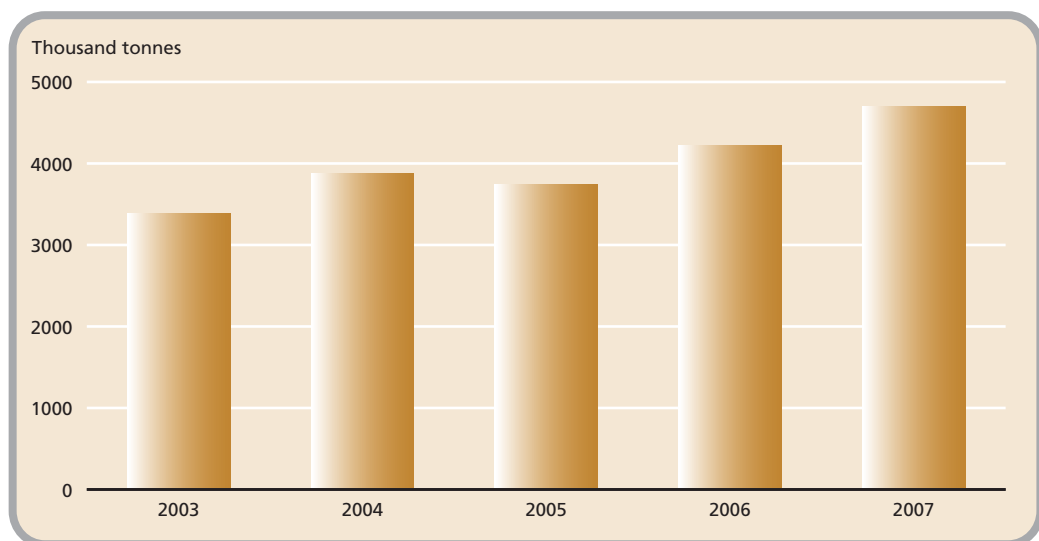


Sources: Chambers of Commerce of Bologna and Florence (2008)

In 2007, they were one million tonnes above their annual average for the period 2003-2005 (Figure 21)⁹. Organic bananas will benefit from the overall growth in banana imports. Another effect of the liberalization has been to raise their competitiveness *vis-à-vis* conventional bananas. In the tariff-quota system, banana traders had to obtain an import license in order to market their bananas in the European Union. Most of the licenses used to be allocated to the so-called “traditional operators”, who mainly imported conventional bananas, while organic banana importers received very few. As a result they had to purchase the licenses from traditional operators, and this raised the cost of organic bananas. With the removal of the import quotas, they no longer need to buy licenses and therefore organic banana have gained competitiveness with respect to conventional bananas.

The second factor is the rising purchasing power of consumers in the 12 new member countries following the enlargements of 2004 and 2007. In most of the recently-acceded countries the income per capita is well below the average of the older members, but it has risen rapidly since accession and is expected to catch up in the long term. Average per

Figure 21 - EU total net banana imports, 2003-2007



Note: EU-25 from 2003 to 2006, EU-27 in 2007

Source: Eurostat quoted in ECBTA (2008)

⁹ This rise also reflects the adhesion of Bulgaria and Romania to the European Union since January 2007.

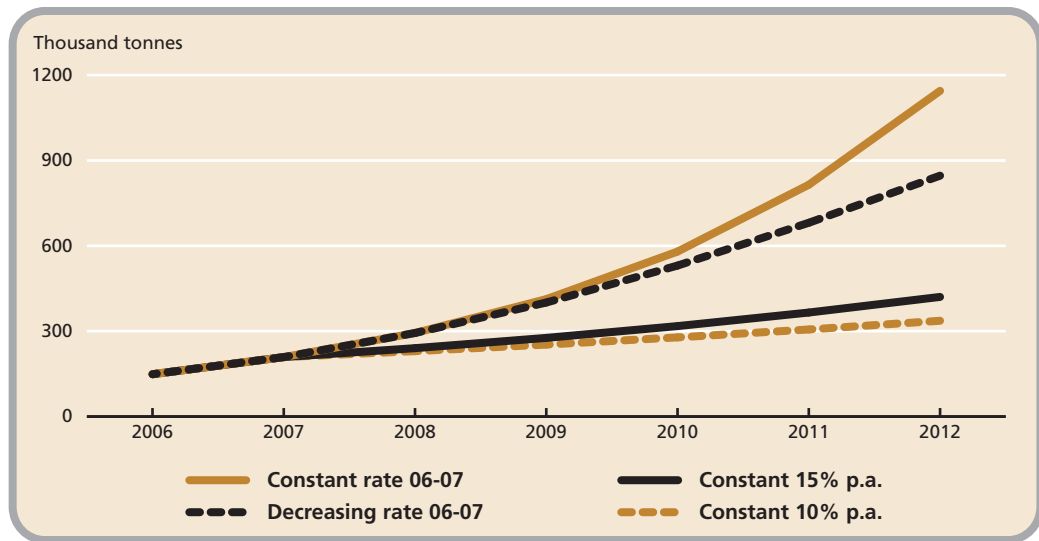
capita consumption of bananas is still relatively low in these countries (6.7 kg as opposed to an EU average of 11 kg). Their banana consumption has risen markedly in the past four years and the trend is expected to continue. Organic banana consumption is forecast to benefit from the general expansion as incomes increase.

The third factor is the general trend towards an increase in the market share of organic foods throughout the European Union. Between 2004 and 2005, the latest years for which reliable figures are available, the growth rate at world level was slightly over 15 percent. Assuming it remains constant at 15 percent over the coming years, global organic retail sales would approach USD 70 billion in 2010. In a more conservative scenario where the rate is assumed to decline from 15 to 10 percent over the period 2006-2010, sales would reach some USD 60 billion in 2010 (Figure 10). The UK market research company Mintel revealed that, despite the credit crunch, it expected the organic market to grow 44 percent by 2012. A spokesman for the Soil Association mentioned that a 10 percent growth was expected in 2008 (Farmers Guardian, 2008). Market expansion will be fuelled by both conventional and specialized large-scale retailers. According to the International Federation of Organic Agricultural Movements (IFOAM), in 2006 more than half of all certified products were sold in mainstream supermarkets, which are widening their range of organic foods and even creating specialized stores. For instance, French retailer Carrefour has been developing a new chain of dedicated organic stores in shopping centres. The first shop with 24 m² of space and some 350 items was opened recently in Thionville, France. In addition, specialized organic supermarket chains have developed across all European countries. For example, a new Biocoop shop opens in France every week. The network had some 300 organic stores and organic supermarkets in 2008.

Growth is forecast to be particularly strong in the fresh produce category. Organic Monitor (2008) projects the market for organic and fair-trade fresh produce to double in the coming years. Organic fruit sales are predicted to overtake organic vegetable sales as more tropical and exotic fruit varieties are introduced. Organic fruit imports are set to expand as domestic production in the European Union is rising less rapidly than demand. Indeed, several European countries report declining areas of organic farmland. Rising prices of agricultural products are discouraging farmers to convert to organic practices. European retailers are developing global supply chains to ensure continuous supply of organic fruits and vegetables. Supply-demand imbalances are expected to continue as consumer demand for organic products rises. Organic bananas will doubtless benefit from rising consumer interest in health, nutrition and ecological issues. Their market share is still relatively low (some 3 percent), which means that there is room for further increase. Some organic fruits (e.g. apples) have a market share reaching up to 10 percent in some countries.

A fourth factor that may raise imports of organic bananas is the new regulation EEC 834/2007 governing the importation of organic foods produced outside the European Union which will enter into force in 2009. The new rules, in particular the new "equivalence certification" option, are expected to make it easier for non-EU organic producers to obtain certification against EU standards and therefore market their products as organic within the European Union.

Future European imports of organic bananas were projected using four different scenarios. In the first one, imports are assumed to continue growing at the high rate observed between 2006 and 2007 (+40 percent). Under this optimistic scenario they are projected to reach close to 1 200 000 tonnes in 2012 (Figure 22). In the second scenario this rate decreases annually to reach 20 percent in 2012, leading imports to reach slightly below 900 000 tonnes in 2012. In the third one, banana imports are assumed to grow at the annual rate observed for European sales of organic foods overall in recent years (15

Figure 22 - Projected EU imports of organic bananas to 2012

percent). Finally, the fourth scenario assumes a somewhat slower constant annual growth of 10 percent. Under this more conservative assumption European imports are projected to exceed slightly 300 000 tonnes.

Competitive positions of suppliers

It is difficult to determine which suppliers stand to benefit from the market increase, as there are countervailing factors at play. On the one hand, well-established Latin American suppliers, in particular Ecuador and Peru, are likely to take advantage of higher European demand. Their producers are competitive and efficient, and large areas are already in transition to organic cultivation in both countries. They have the US dollar as national currency or their currency is pegged to it. A further depreciation of the dollar against the euro would favour their exports to Europe. In addition, Peru has well-organized grower groups that are Fairtrade-certified such as the Red de Productores de Banano Orgánico Comercio Justo (REPEBAN). Colombia may also benefit, although to a lesser extent due to internal political problems and the relative strength of its national currency.

On the other hand, other countries benefit from preferential market access. The European Union applies a general tariff of €176 per tonne to banana imports. However, some groups of countries are exempted from this tariff. Bananas imported from any Least Developed Country (LDC) can enter duty-free without any quantitative restrictions in accordance with the EU's Everything But Arms initiative. Similarly, since January 2008 countries from the ACP group (Africa, Caribbean and the Pacific) which have signed an Economic Partnership Agreement (EPA) with the European Union can export their bananas duty- and quota-free. Since all the ACP countries that supply substantial quantities of bananas to the European Union have signed an EPA, in practice virtually all ACP bananas now have free access to this market. This provision favours especially the Dominican Republic and Ghana, which already export substantial quantities of organic bananas to the European Union. But other ACP or LDC suppliers could emerge.

However, it is not certain that ACP and LDC countries will be able to retain this tariff preference for a long time. Latin American countries that export bananas to the European Union have complained that the tariff of €176 per tonne is too high and constitutes an unfair discrimination. In the previous EU system, duty-free imports of ACP bananas were capped by a quota of 775 000 tonnes. Since this quota was removed in January 2008, Latin

American suppliers fear that ACP bananas will displace their exports to the European Union and insist that the tariff should be substantially reduced. Conversely, ACP countries oppose any tariff reduction on the ground that this tariff difference is needed to compensate for the lower competitiveness of their banana industries.

A tariff reduction under the WTO negotiations would raise the competitiveness of Latin American suppliers *vis-à-vis* ACP suppliers. However, within each of these groups there are wide differences across countries in terms of income per capita, level of economic development and competitiveness of the banana industry. While Latin American banana producers tend to be modern and efficient, there are exceptions (e.g. Nicaragua, Panama). Also, within the ACP group, some suppliers (e.g. the Windward Islands, Jamaica) have low competitiveness but others (e.g. Cameroon, Côte d'Ivoire, the Dominican Republic) have efficient producers. The fact that imports of ACP bananas exceeded the duty-free quota of 775 000 tonnes in 2006 and 2007 means that some ACP suppliers can compete even when they face the same tariff as Latin American suppliers. However, a substantial tariff cut would have a strong negative impact on the exports of several Caribbean suppliers and may even lead to their exclusion from the EU market.

In the meantime, panels established under the Dispute Settlement Body of the World Trade Organization have ruled that the EU import system modified in 2006 is not compatible with the rules of the General Agreement on Tariffs and Trade (GATT). The European Commission appealed the ruling in August 2008. Negotiations with Latin American suppliers to agree on a tariff reduction phased-in over several years had been very close to conclusion but stopped after the failure of the WTO Geneva Ministerial meeting to reach an agreement on the overall Doha Round negotiations at the end of July 2008.

Beyond the European Union, several emerging markets offer prospects for sales expansion. In Russia sales of organic foods have increased in the wake of economic development and rising purchasing power, especially in the supermarkets of the large cities (USDA, 2008b). Organic banana sales are bound to benefit from this expansion. Large Russian banana companies such as Sorus and Sunway are well-established in Ecuador. They could easily increase their organics imports into Russia.

Table 6 - Estimated imports of organic bananas into North America in 2006

Country of origin	Estimated imports (MT)
Ecuador	47 000
Peru	26 400
Colombia	13 600
Dominican Republic	6 800
Honduras	3 600
Other countries	3 000-4 000
Total (estimated)	100 000

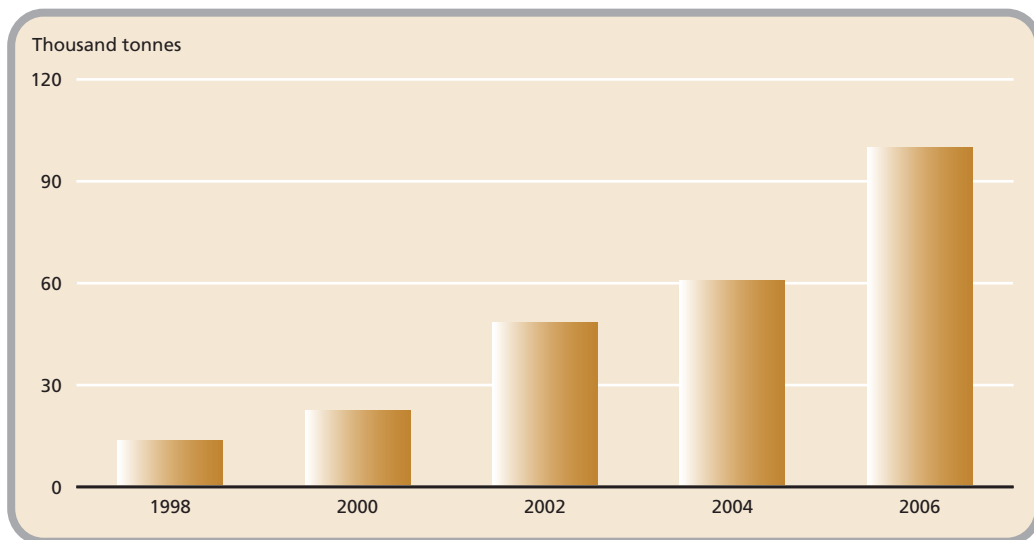
Sources: statistical departments for Peru and the Dominican Republic, industry for the other countries

2.3 North America

A. Current market situation

Bananas are by far the top North American fruit import with 14 percent of the total value of imports¹⁰. The United States is the country with the highest sales of organics. OTA (2008) estimates total retail sales of organic products in 2007 at some USD 21 billion. All organic bananas found on the North American market are imported since neither Canada nor the United States produces this fruit¹¹. Industry estimates for

¹⁰ USDA-FAS Database.

Figure 23 - North American imports of organic bananas

imports of fresh organic bananas in 2006 range between 80 000 and 110 000 metric tonnes. Based on data obtained from supplying countries, it can be estimated that actual imports probably exceeded 100 000 metric tonnes, accounting for over 2.3 percent of the 4.3 million metric tonnes of total fresh banana imports (Table 6). As illustrated in Figure 23, imports have risen by almost 700 percent since 1998 when they were estimated at 13 000 metric tonnes (Sauvé, 1998). The rise was particularly strong between 2005 and 2006 as Ecuador, the leading supplier, doubled its shipments. Preliminary estimates for 2007 show no substantial rise in imports as the main suppliers directed the bulk of their shipments to Europe, where prices were more remunerative due to the strength of the euro. Canada imports the bulk of its organic bananas through the United States. North America accounts for slightly less than 40 percent of world organic banana imports. Although the absence of data on retail prices makes it difficult to estimate the value of organic banana sales in North America, USD 130 million can be taken as a conservative estimate for 2007.

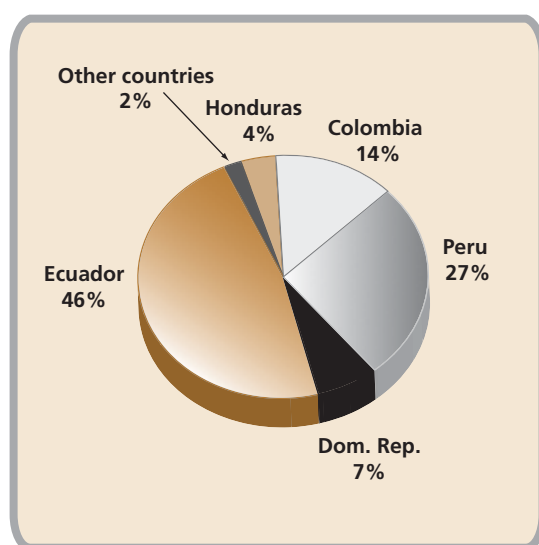
B. Suppliers and marketing channels

Ecuador has become by far the largest supplier to North America in recent years, accounting for almost half of total imports (Figure 24). Peru accounted for over a quarter of North American imports in 2006 and its shipments are set to rise further. Imports from Colombia have also expanded but less rapidly than those from Ecuador and Peru. The Dominican Republic is the world's second largest exporter of organic bananas, but it ranks only fourth among suppliers to North America, as the bulk of its production is exported to Europe. Although it was not possible to determine what quantities of organic bananas are imported from Mexico, it is estimated that these quantities are very low. Mexican organic banana production declined since the early 2000s and was estimated at less than 2 500 metric tonnes in 2005. There is no evidence that output has recovered since then.

In North America, organic bananas are mainly imported and distributed by Dole Foods ("Dole"), which was estimated to account for over two-thirds of the market in 2006. Dole imports from Peru, Ecuador, Colombia, Honduras and the Dominican Republic. Some 60 percent of its organic bananas are purchased from independent growers. In Peru, Dole

¹¹ Except a negligible quantity produced in Hawaii.

Figure 24 - Shares of suppliers in North American organic banana imports in 2006



is the largest organic banana exporter. Other importers include Daabon Organics USA and Chiquita Brands (“Chiquita”). Daabon Organics USA is the local subsidiary of Grupo Daabon, a Colombian agribusiness company that cultivates organic bananas and is by far the largest organic banana exporter in Colombia. It also sells organic bananas to Dole. Chiquita grows organic bananas in Peru, Ecuador and Colombia and reported exports of some 5 000 metric tonnes to the United States in 2006.

At least two major banana trading companies plan on gradually expanding their organic segments in order to take advantage of market opportunities. The same two companies also plan on

increasing the amount of double-certified (environmental and social) bananas they import. Double certification is rising and offers particular market advantages.

C. Prices

According to a large import company, in 2006 the premium at FOB level was approximately 30 percent and selling prices at import level in the United States ranged between USD 14 and 18 per box. However, the lack of data on prices for organic bananas at import level makes it very difficult to draw general conclusions on import price premiums. No governmental or independent organization records the import prices of organic bananas, and companies will not disclose these data. A possible solution is to compare the unit value of bananas imported from countries that only export organic bananas with that of bananas sourced from countries that overwhelmingly export conventional bananas. As shown in Table 7 below, the average unit value for organic bananas was 65 percent higher than for conventional ones in 2005. In 2006, the price differential increased to 80 percent.

Data on wholesale prices for organic bananas are available from some markets through the Agricultural Marketing Service of USDA (AMS). The wholesale markets of Boston and

Table 7 - Unit value of bananas imports into the United States (USD/MT)

Banana type	Organic	Organic	Conventional	Conventional	All banana imports
Country of origin	<i>Dominican Republic</i>	<i>Peru</i>	<i>Ecuador</i>	<i>Costa Rica</i>	<i>All</i>
2005	494	402	264	280	271
2006	562	478	291	293	287
2007	572	467	281	279	287

Source: Department of Commerce, US Census Bureau, Foreign Trade Statistics and USDA-FAS for 2007

Table 8 – Average wholesale prices of organic and conventional bananas in the United States

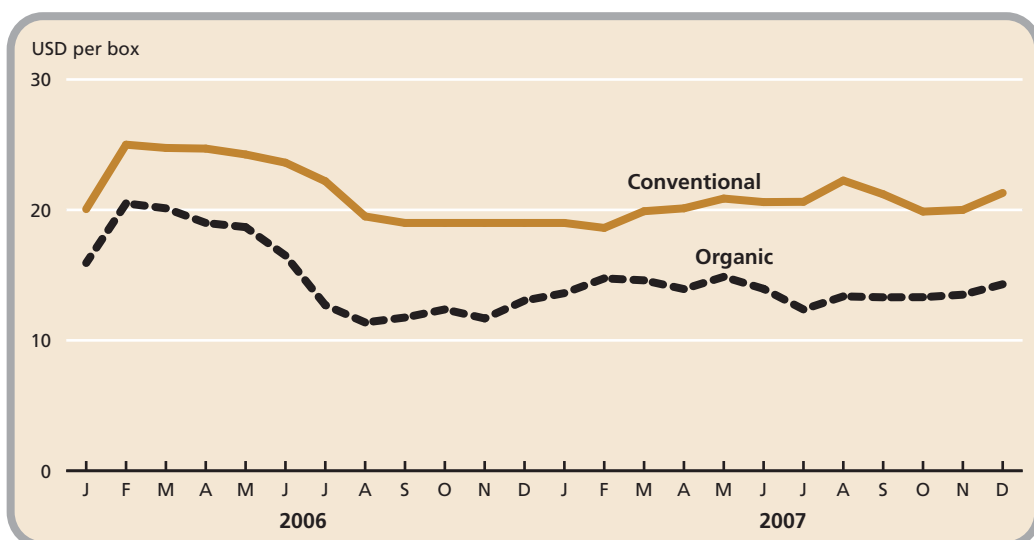
USD/box (18.14kg)	2005 Organic	2005 Conv.	D%	2006 Organic	2006 Conv.	D%	2007 Organic	2007 Conv.	D%
Boston	19	13	47	20	14	40	18	14	30
San Francisco	19	12	62	21	15	44	20	14	47

Source: USDA-AMS (2008). Figures are rounded

San Francisco have some of the most complete data sets and were chosen as they represent a large city on the East and West coasts. Over the period 2005-2007, the organic price premium at wholesale level was above 30 percent for bananas. In 2006, prices rose for all types of bananas, due to the reduction of supply from Latin America while domestic demand remained firm. However, the organic price premium declined slightly (Table 8). This decline in premium at wholesale level contrasts with the increase observed at import level.

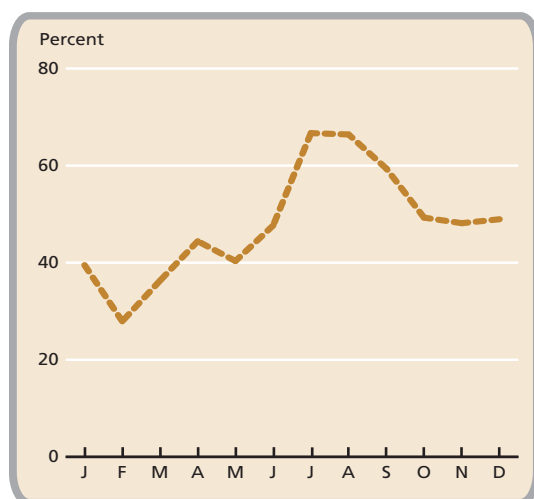
As illustrated by Figure 25, the wholesale prices of organic and conventional bananas usually vary in the same direction. Yet, organic prices tend to be more stable over time than those of conventional bananas. During the period 2006-2007 organic prices at the San Francisco wholesale market fluctuated in the band USD 19 to 25/box, while conventional prices ranged between USD 11 and 20/box. The organic price premium fluctuates markedly over time: it varied between USD 4.13 and 9.50/box in 2006 and between USD 4.10 and 8.90/box in 2007. In percentage terms, it ranged between 22 and 72 percent over the year 2007 (Figure 26). The summer peak of the premium may be explained by the fact that conventional banana prices usually drop during the summer when bananas face the competition of domestically-harvested summer fruits. Organic bananas may be less affected by this pattern.

It was not possible to obtain data sets on retail prices for organic bananas. Industry sources indicate that retail price premiums for organic bananas are usually between 10

Figure 25 - Average monthly wholesale prices for organic and conventional banana in the San Francisco market, 2006-2007

Source: USDA-AMS (2008)

Figure 26 - Organic banana price premium (in percentage) in the San Francisco wholesale market in 2007



Source: USDA-AMS (2008)

and 50 percent. These premiums are expected to decrease slightly as more major retailers and producers enter the market.

D. Market prospects for organic bananas in North America

North American organic banana imports have risen by 10 to 50 percent per year over the last five years. Although a deceleration was observed in 2007 and is expected in the next decade, growth is likely to remain robust, as bananas will continue to benefit from the overall expansion of the organic market. The North American market for organic foods shows the fastest growth worldwide, with yearly growth rates of approximately 18-20 percent (OTA, 2007). In 2006 it accounted for 44 percent of global revenues. In spite of signs of deceleration

due to the economic crisis, market expansion continues to be rapid in the United States. Di Matteo (2008) argues that between April 2007 and April 2008, sales of organic products (Wal Mart excluded) grew by 25 percent while those of conventional foods only rose by 4.4 percent and estimates that total organic retail sales reached USD 20 billion in 2007. Fresh fruit and vegetables lead the sales of organic foods. The Organic Center has claimed that organic produce accounts for nearly ten percent of retail sales of fresh produce, but this percentage may be overestimated. Several major fresh produce grower-shippers have recently announced ambitious programmes to convert all or most of their fruit and vegetable acreage to organic, assuming consumer demand continues to grow. The report argues that many fruit and vegetable farms are converting to organic agriculture methods, especially in the Western U.S. Concentration among organic retail chains and the rising involvement of conventional supermarkets will increase the efficiency of organic food distribution. This is likely to contribute to reducing retail prices and expanding organic sales.

In addition, it is possible that the expected further decrease of the import tariff on banana in the European Union will make this market more attractive and divert conventional bananas away from the North American market. Assuming that North American demand remains stable, this might drive prices for conventional banana up, thereby reducing the difference with organic prices and raising demand for organic bananas. This expected growth will create market outlets for Latin American producers.

However, industry sources consider that organic banana production will likely double in the next few years, which raises the risk of market imbalance and a drop in prices. Existing suppliers, in particular Ecuador and Peru, have heavily invested in organic banana farms and large areas of land are currently in transition to organic cultivation. Multinational banana companies such as Dole and Chiquita have been investing in new organic farms, either directly owned or through partnerships with local companies. As mentioned above, the multinational fruit companies (e.g. Fresh Del Monte, Dole, Chiquita) control the bulk of the North American banana market. They often have exclusive contracts with supermarket chains. Therefore, Latin American or Caribbean producers aiming to export organic bananas to North America may try to seek collaboration with these companies. An alternative strategy may be to sell directly to specialized organic retail chains such as Whole Foods and Trader

Joe's in the United States and Planet Organic in Canada, provided the logistical challenges of shipping, ripening and distribution can be met.

2.4 Asia and the Pacific

The Asia-Pacific market for organic foods is still very small compared to the European and North American markets. It was estimated at close to USD 2 billion in 2007, accounting for some 5 percent of global retail sales. Japan is by far the main market, far ahead of Australia, New Zealand and the Republic of Korea. Nevertheless, sales of organic foods are growing markedly in some emerging economies such as Malaysia, China and Thailand.

A. Current market situation

Organic bananas are imported in several countries of the region, in particular Japan, Singapore, Republic of Korea and New Zealand. However, the volumes are very small in all countries but Japan. Australia produces small quantities of organic bananas for its domestic consumption but does not import any. The Australian Government prohibits imports of fresh bananas on phytosanitary grounds. Thailand reportedly produces small quantities of organic bananas, mainly for domestic consumption and export to neighbouring countries. The Republic of Korea imports small quantities (less than 1 000 metric tonnes annually) from South America. The remainder of this section focuses on Japan owing to its importance in the Asian banana market.

Japan is a large market for organic foods but there is a lack of statistical data on these products. Estimates of organic food retail sales in 2006 range between USD 1.2 and 1.5 billion. It is difficult to provide a precise figure for the value of the organic banana market in Japan due to the lack of price data, but retail sales were likely to be in the order of USD 50 million in 2006. A study carried out by IFOAM Japan on behalf of the World Bank, RUTA and FAO (World Bank, 2004) estimated that Japan imported some 18 000 metric tonnes of organic bananas in 2002. However, due to the high rate of fumigation imposed on phytosanitary grounds at the port of entry, only an estimated 9 000 metric tonnes were sold with the organic label (fumigated fruits automatically lose their organic status). The Japanese import market of organic banana is dominated by Hiro International Co. Ltd, which imports mainly from the Philippines. Daabon Organic Japan Co. Ltd is another leading importer of organic bananas. It is a subsidiary of the Colombian organic producer and exporter Grupo Daabon. Kyoko Foods is a wholesaler that purchases organic bananas from Hiro International. These importers and wholesalers distribute organic bananas to supermarkets, organic specialty retail shops, consumer cooperatives, and distributors specialized in organic products. In 2004 Kyoko Foods declared that it handled an average of approximately ¥3.5 million (wholesale price to retailers) worth of organic bananas from the Philippines monthly. In terms of quantity, they purchased 10 000 tonnes from Hiro International in 2002, 7 410 tonnes in 2001 and 6 760 tonnes in 2000.

B. Suppliers

The main country supplying Japan in organic bananas is the Philippines, which is also by far its largest conventional banana supplier, accounting for some 80 percent of total imports. Imports from the Philippines account for over half of total organic banana imports. They are difficult to estimate, as Japanese customs statistics do not distinguish organic from conventional bananas. Moreover, it was not possible to obtain data on organic banana exports from the Philippines. Based on the above study, it can be estimated that the volume of imports ranged between 10 000 and 15 000 metric tonnes in 2004, although the volume of bananas marketed with the organic label was probably in the range of 5 000 to 8 000 metric tonnes due to the high fumigation rate as mentioned above. Based on discussions with a Philippine exporter, it is assumed that exports have remained unchanged since then and ranged between 10 000 and 15 000 metric tonnes in 2007 (Table 9).

Table 9 - Estimated exports of organic bananas to Japan in 2007

Country of origin	Exports to Japan (MT)
Colombia	3 000
Dominican Republic	300
Peru	8 000
Philippines	10 000-15 000
Mexico	1 000-2 000
Total	22 000-28 000

Sources: exporters for Colombia, Dominican Republic and Peru; author's estimates for the Philippines and Mexico

Note: according to Japanese importers, about 50 percent of the bananas are fumigated at the port of entry and therefore lose their organic status

Other suppliers of organic bananas to Japan include Peru, Colombia, Ecuador and the Dominican Republic. On average, Colombia's exports to Japan oscillated between 2 000 metric tonnes and 3 000 metric tonnes in the period 2004-2007. While the Dominican Republic was a leading supplier of organic bananas to Japan in the early 2000s, its deliveries have contracted and fell to some 300 metric tonnes in 2007. Conversely, Peru's shipments have risen steadily since 2003, making this country Japan's second largest supplier, with approximately 7 000 metric tonnes in 2007. Imports from Ecuador were estimated to range between 2 000 and 3 000 metric tonnes. Mexico was Japan's second largest source of organic

bananas in the early 2000s. The Japan Banana Importers Association (2006) reported total imports from Mexico of 2 610 metric tonnes in 2005 and 2 832 metric tonnes in 2006. However, these figures include conventional bananas since Mexican organic banana production in these years was estimated at less than 2 500 metric tonnes.

C. Prices

In the above mentioned study, IFOAM Japan surveyed approximately 80 large and medium-size supermarket stores, as well as 12 to 15 department stores and independent retailers that carry organic foods in the Tokyo area. Product prices were compared in each store by direct observation. Interviews on pricing strategies were conducted with staff from the purchasing department of the major supermarkets.

The survey found that organic bananas were available at 10 stores, ranging from ¥40 to ¥76 per 100g. The average price of organic bananas was ¥587 per kg, compared to ¥505 for conventional bananas. The organic premium of bananas was therefore 16.2 percent (Table 10). Examining the value chain, IFOAM Japan found that margins for bananas are 30 percent for the retailer and 10 percent for the wholesaler. The importer charges around 60 percent of the final retail price.

D. Prospects for organic bananas

The fresh banana market in Japan is expected to remain unchanged in the near future. If certified suppliers respond quickly to the recent boom of safe and reliable food, as well as to the heightened interest in health issues, the demand for certified organic bananas could rise, provided that their prices remain moderate. Nonetheless,

fumigation seems to be an obstacle, especially in the case of Organic JAS bananas, as more than half and up to all of the shipments could be fumigated, which implies that the products lose the Organic JAS status at the port of entry. The importers and wholesalers interviewed during the above mentioned study reckoned that organic bananas are fumigated at

Table 10 - Retail prices of imported organic and conventional bananas in Japan (2004)

Organic retail price	Conventional retail price	Premium (%)
¥587/kg	¥505/kg	16.2

Source: WB/FAO/IFOAM Japan 2004

a rate of around 50 percent¹². All of them considered that fumigation is an issue that needs to be resolved in order to promote organic banana imports. Their overall outlook on the future of this market was not very optimistic.

From the perspective of suppliers, an expansion of the Japanese market would primarily benefit the Philippines, due to its proximity and the trade links established with Japanese companies. Latin America is at a disadvantage in terms of distance and transportation costs, especially in competing with the Philippines and Taiwan Province of China. However, Ecuador, which is the second largest conventional banana exporter to Japan, is able to supply the Japanese market due to its low production costs that partly compensates for its high transport costs.

Beside Japan, other Asian countries may provide market outlets for organic bananas. The Republic of Korea has a sizeable market for organic products. Total sales were estimated at USD 318 million in 2007 and imports at USD 43 million (USDA, 2008b). Its current imports of organic bananas are very low, indicating a strong expansion potential. In the medium term, emerging economies such as China, Thailand, Malaysia and Viet Nam will raise their consumption of organic bananas. However, it is not certain that the expected rise in consumption will be met by imports as these countries have strong domestic production potential.

¹² Although one importer reported that 99 percent of the organic bananas that they imported were fumigated, several others indicated that the rate at which organic bananas are fumigated is around 50 percent.

CHAPTER III: FAIR-TRADE BANANAS

1. INTRODUCTION

As explained in Chapter 1, there are several fair-trade standards owned by different NGOs. However, over 95 percent of fair-trade bananas were traded under the system of the Fairtrade Labelling Organizations International (FLO) in 2007. This report uses the term “Fairtrade” created by FLO to designate fair-trade bananas certified under the FLO system (where FLO-Cert is the exclusive certification body). Alternatively, the term ‘fair-trade’ is used to designate more generally all bananas sold to consumers as fair-trade, including those certified by FLO-Cert.

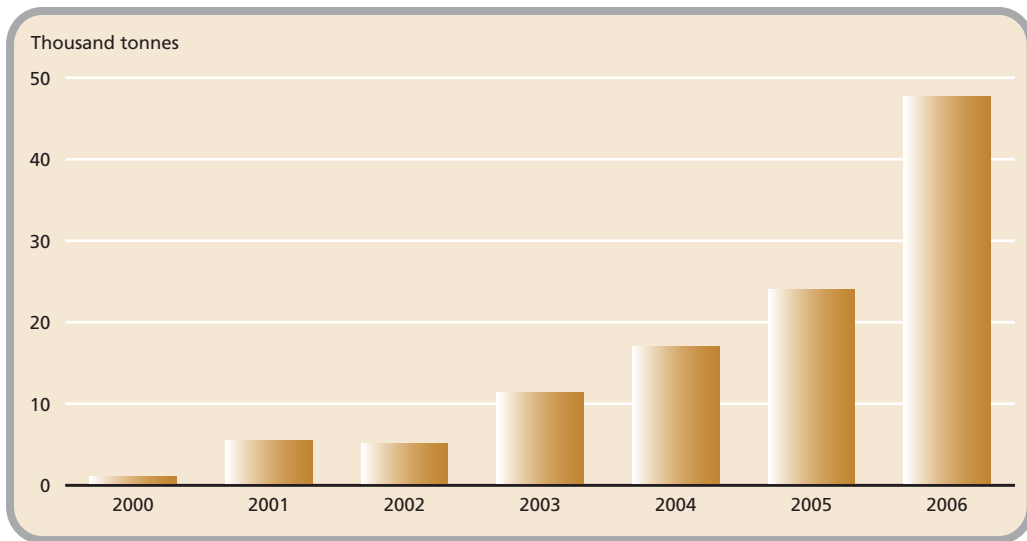
2. PRODUCTION AND SUPPLIERS OF FAIR-TRADE BANANAS

It is estimated that over 250 000 metric tonnes of fair-trade bananas were exported in 2007, accounting for 1.7 percent of global banana exports. Of these, some 70 000 metric tonnes were certified organic. Exports rose by 50 percent from 165 000 metric tonnes in 2006 following a rise of 46 percent the previous year. Although there had been initiatives by alternative trade organizations (ATOs) to import fair-trade bananas since the mid-1980s¹³, imports of fair-trade bananas under an independent certification system only started in 1996, when Max Havelaar Netherlands launched the first Fairtrade labelled bananas in Rotterdam. In 2007 there were 49 banana grower organizations certified by FLO-Cert in 10 countries (Colombia, Costa Rica, the Dominican Republic, Ecuador, Ghana, Peru, Jamaica and three countries of the Windward Islands). The largest suppliers are the Windward Islands, Ecuador and the Dominican Republic. Together they accounted for some 80 percent of Fairtrade banana exports in 2006.

The **Windward Islands Farmers’ Association** (WINFA) initiated an industry-wide conversion to fair-trade in the late 1990s. This move was made to a large extent as a response to the loss of competitiveness and market share in its sole market, the United Kingdom, in the wake of the successive reforms of the EU import system. The Windward Islands shipped their first certified Fairtrade bananas in 2000. By 2002 Windward bananas were sold by most major UK supermarket chains. The transition to fair-trade accelerated in 2005 as the European Union was preparing to liberalize further its banana import system and eliminate the tariff quotas. Exports rose more than fourfold from 2003 to 2006 (Figure 27). Presently some 3 500 farmers in the islands of Saint Lucia, Saint Vincent and the Grenadines and Dominica are Fairtrade certified accounting for approximately 90 percent of active banana farmers. In 2007 between 80 and 90 percent of banana exported from the Windward Islands were Fairtrade certified. The total Fairtrade premium earned by Windward farmers between 2000 and 2007 was estimated at close to USD 10 million (Smith, 2008). While conventional banana prices (FOB) have been declining, Fairtrade prices have remained stable. Fairtrade bananas are exported to the United Kingdom by the Windward Islands Banana Development and Exporting Company, WIBDECO, a subsidiary of the Ireland-based multinational banana company Fyffes. In 2008 WIBDECO decided to export only Fairtrade bananas (Notifax, 2008).

Jamaica exports Fairtrade certified bananas. Two producer groups are certified (Eastern Banana Estates Ltd. and St. Mary Banana Estates Ltd.). There is one Fairtrade certified

¹³ In particular the Swiss NGO GEBANA started importing fair-trade bananas from Nicaragua in 1985.

Figure 27 - Exports of Fairtrade bananas from the Windward Islands, 2000-2006

Source: WINFA Fair Trade Unit (2007).

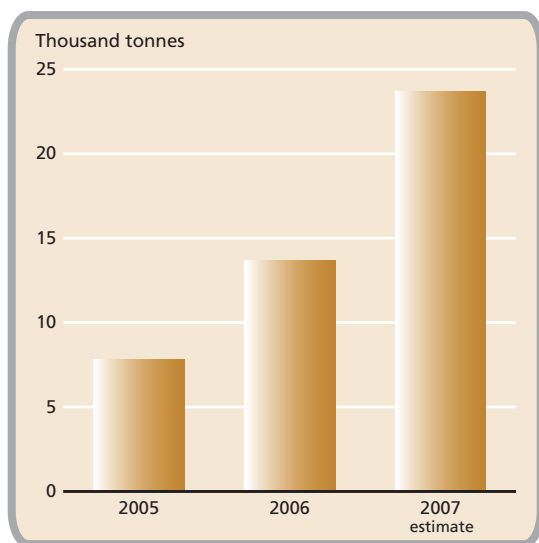
exporter (Banana Export Company Ltd.). Jamaica's banana plantations have been repeatedly devastated by hurricanes in recent years and local commentators have questioned the future of its export banana industry.

The **Dominican Republic** was one of the first countries to export certified fair-trade bananas in the late 1990s and presently it is a leading supplier. FLO (2007) reports exports of nearly 40 000 metric tonnes in 2006, up from some 32 000 metric tonnes in 2005. The main market is Western Europe, in particular the United Kingdom. According to Fruitrop (2007), 800 small growers and a large plantation have been certified by FLO, representing 70 percent of all banana producers. There were 23 producer organizations and five exporters certified by FLO-Cert in 2007. Certified Fairtrade farmer organizations include Asociación de Bananeros Unidos (ASOBANU) which was founded in 1998 and has nearly 200 members. All of them have small-scale farms and are located in the North West. More than half of the members are also certified organic while the others are in transition to organic farming. Another Fairtrade group, the BANELINO association (Bananos Ecológicos de la Línea Noroeste) is also located in the North West. It groups six cooperatives and has a total of some 340 members. All are small-scale farmers and over half of them are also certified organic. There are other fair-trade groups such as Finca 6 in the Azua province (South West).

In **Ecuador** Fairtrade bananas are exported by the El Guabo banana farmer association. The association was founded by 14 farmers in 1997. Its membership has expanded steadily since then and there were over 400 farmers by 2007. The volume of bananas exported as Fairtrade grew from 4 600 metric tonnes in 2000 to over 40 000 metric tonnes in 2006. In recent years, the association has encouraged farmers to convert to organic cultivation with the aim that eventually all members should be certified organic. According to data supplied by AEBE (2008), El Guabo exported some 31 000 metric tonnes of organic bananas in 2007, making it the leading organic banana exporter in Ecuador.

In **Costa Rica** there is only one certified supplier of Fairtrade bananas, Coopetrabatur, a banana grower cooperative. It was established by the workers of a banana plantation formerly owned by Chiquita Brands on the southern Pacific coast of Costa Rica. The cooperative has 69 members and employs an additional 109 workers. Its main markets

Figure 28 - Peruvian exports of fair-trade bananas, 2005-2007



Source: FLO (2007)

are Switzerland and Benelux countries. In 2006 it bought a smaller plantation in the Guapiles region of the Atlantic coast. Costa Rica is a relatively small supplier of Fairtrade bananas with less than 10 000 metric tonnes exported annually in the 2005-2007 period.

Colombia also exports Fairtrade bananas. Its main markets are Europe and the United States. Its export volumes are relatively small compared to other suppliers and to its overall banana shipments.

Peru started exporting Fairtrade bananas only recently. The volume of shipments has risen rapidly in the past three years (Figure 28). Fairtrade bananas are mainly produced by small-scale farmers usually organized in associations or cooperatives located in the region of Piura. These groups include Asociación de Pequeños Productores de Banano Orgánico de Samán y Anexo (APPBOSA) in the Sullana province, Piura region. All the members are also certified organic and the totality of Peru's Fairtrade banana exports is organic.

Outside the Latin American and Caribbean region, **Ghana** is the only country that exports FLO-certified bananas. Ghana was the first country to export Fairtrade certified bananas in 1996. There is only one certified producer-exporter, the Volta River Estates Limited company (VREL), a large plantation located south of Lake Volta. Until 2006 VREL was also the only Ghanaian exporter of bananas¹⁴. It cultivates bananas on five production sites covering 500 hectares in total. In 2005 VREL obtained organic certification for three of its sites and now also exports bananas that bear the double certification organic and fair-trade. Approximately 85 percent of its shipments are directed to the United Kingdom and France. According to FLO (2007), VREL exported some 4 000 tonnes of Fairtrade bananas in 2005 and approximately 3 500 tonnes in 2006, over half of which were also organic.

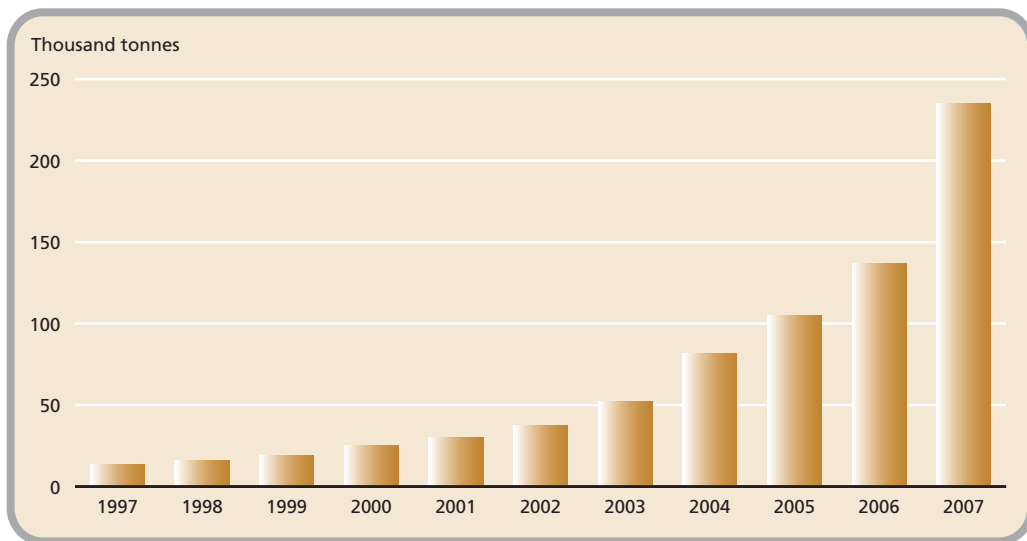
3. MARKETS FOR FAIR-TRADE BANANAS

3.1 Overview

Global sales of Fairtrade certified foods reached nearly €2.4 billion (USD 3.5 billion) in 2007 according to the Fairtrade Labelling Organizations International (FLO, 2008)¹⁵. Sales increased by 47 percent (in euro terms) over their level of 2006 and further growth is forecast for 2008. Tropical products such as tea, cocoa, coffee and bananas enjoyed the fastest growth rates. On average, sales expanded by 40 percent annually over the period 1997-2007. By the end of 2007, 632 producer organizations in 58 developing countries in Africa, Asia, the Caribbean and Latin America were certified by FLO. FLO estimates that

¹⁴ Since then, Dole has established a local subsidiary, Golden Exotics that produces and exports fresh bananas.

¹⁵ Since this figure only reflects sales of FLO certified foods and does not include sales by ATOs, the total market value of fair-trade food is slightly higher.

Figure 29 - Word sales of Fairtrade bananas, 1997-2007

Note: Source: FLO; non-FLO fair-trade bananas are not included

these organizations represent 1.5 million farmers and farm workers, and when counting their families and dependents, overall 7.5 million people benefit directly from fair-trade. Since FLO was created in 1997, the number of certified producer organizations has trebled. FLO certified products are available in more than 60 countries. The main markets for fair-trade products are the United States, the United Kingdom, France, Switzerland and Germany, accounting for nearly USD 2 billion in 2007 (82 percent of global sales of FLO-labelled foods). Some NGOs that do not belong to the FLO system also sell fair-trade labelled foods, but the quantities are very small compared to those of FLO-labelled foods.

In 2007 there were 52 FLO licensed Fairtrade fruit traders in 22 countries. Banana is by far the leading fair-trade fruit in both volume and value terms. The world trend is positive. Overall, it is estimated that total sales of fair-trade bananas (i.e. those certified by FLO and those imported by ATOs outside the FLO system) worldwide approached one-quarter of a million tonnes in 2007. Fairtrade bananas accounted for the bulk of this number; according to FLO, they reached 234 000 metric tonnes in 2007 (Japan excluded), up 72 percent from 136 000 metric tonnes in 2006 (Figure 29). This accounted for slightly over one percent of global net banana imports. Although the absence of data on retail prices makes it difficult to calculate the value of fair-trade banana sales, it was estimated to be in the order of USD 450 million in 2007 (including double certified fair-trade and organic bananas).

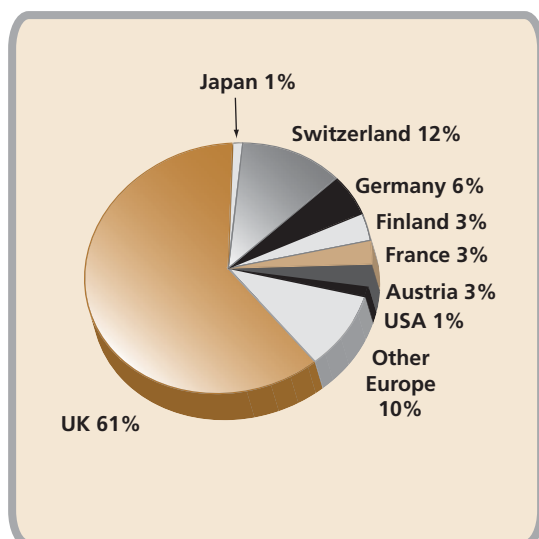
The share of FLO bananas that are also certified organic rose steadily until 2006, reflecting consumers' demand for both social and environmental sustainability. It stood at 33 percent in 2006, up from 30 percent in 2005. However, it dropped to 28 percent in 2007, as organic supply could not keep up with the surge in demand for fair-trade bananas. Unlike fair-trade, organic certification usually requires a transition time of two to three years (unless the land was not cultivated with agrochemicals). Sales of fair-trade bananas show a strong geographical concentration, with Europe accounting for close to 98 percent of sold quantities (Figure 30).

3.2 Europe

A. Current market situation

The European Union and Switzerland account for over 97 percent of fair-trade banana sales worldwide. The European Union alone imported over 200 000 metric tonnes of Fairtrade

Figure 30 - Main markets for fair-trade bananas (in percentage of sales volume in 2007)



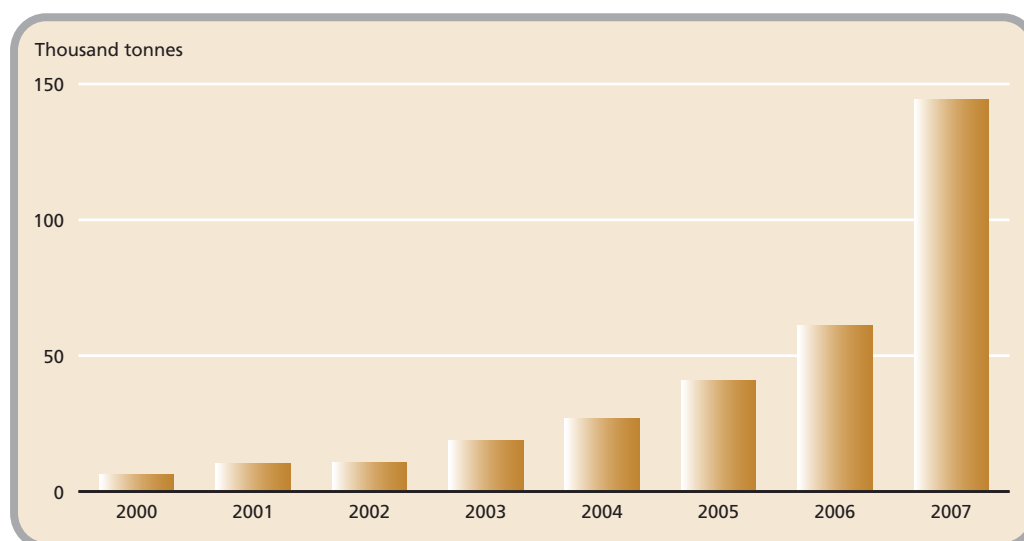
Sources: author's calculation based on FLO (2008) and other sources for Japan

certified bananas in 2007, accounting for 85 percent of world imports.

In the European Union, the largest market is by far the United Kingdom, followed at a distance by Germany, Finland, France, Austria and Belgium (Figure 30). In the **United Kingdom**, sales of Fairtrade bananas have soared since 2002 (Figure 31). Over 60 000 metric tonnes were sold in 2006, representing a consumption of 1 kg per person. Sales more than doubled over the year 2007, reaching 143 000 metric tonnes in 2007 according to FLO (i.e. 2.4 kg per capita). The above figure translates into an average market share in volume of close to 15 percent over the whole year (A. Smith, Bananalink, personal communication, 2008). A recent report claims that the market share was close to 22 percent in volume and 27 percent in value in the first half

of 2008 (Banana Link 2008). The doubling of Fairtrade sales in 2007 is primarily due to the decision of two leading UK retail chains (Sainsbury's and Waitrose) to carry Fairtrade bananas only. Unlike other European countries, the share of double certified bananas (organic and fair-trade) is relatively small: less than 10 percent of the Fairtrade bananas sold in the United Kingdom are also organic. The fair-trade system is vital to many Caribbean small growers who export to the United Kingdom. The sharp decline in retail prices in this market make fair-trade even more important to them. According to industry sources, the average retail price of loose bananas fell from £0.85 to 0.65 per pound from 2005 to 2008 (-21 percent over three years). The decline is mainly due to fierce price competition on bananas among the UK supermarket chains. The chains use the banana as a 'loss leader',

Figure 31 - Quantities of Fairtrade bananas sold in the United Kingdom, 2000-2007



Source: UK Fairtrade Foundation (2007) and FLO (2008)

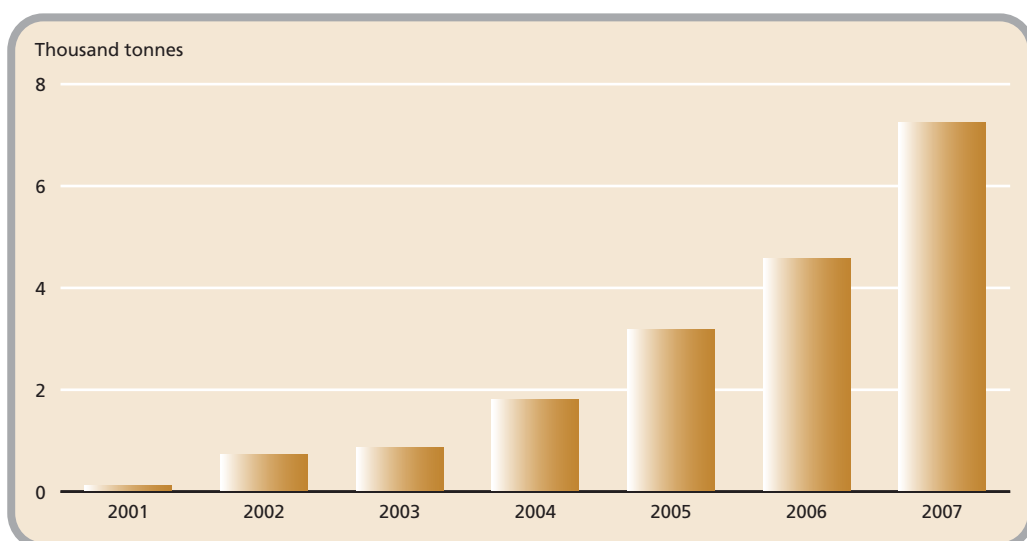
whereby heavy discounts on the fruit are meant to attract more clients into their stores. Fairtrade bananas have been somewhat insulated from the decline, although some critics have argued that retailers make exaggerated profits margins on them. The main supplier is the Windward Islands. There are several Fairtrade banana importers in the United Kingdom, but the company AgroFair UK has a predominant position.

Germany is the second largest market in the European Union in total volume terms (with 13 600 metric tonnes in 2007) but it ranks far behind other countries in terms of individual consumption: only 0.1 kg of fair-trade bananas was bought by the average German consumer in 2006. Fairtrade bananas have been on the German market for almost ten years but sales have failed to expand. Sources in the fair-trade movement indicate the strong control exercised by multinational fruit companies on the market as one of the reasons for this relative failure. Most Fairtrade bananas sold are also organic, reflecting the strong demand for organic foods by German consumers.

Since the introduction of Fairtrade labelled products. In **Finland** in 1999, fair-trade has become a well-known concept. A market study in August 2005 revealed that 83 percent of the Finnish population were aware of and knew the Fairtrade certification label (up from 73 percent one year earlier). The total turnover of Fairtrade labelled foods was estimated at €23 million in 2006. The estimated retail value of foods sold under the Fairtrade label grew from €7.6 million in 2004 to €22.5 million in 2006, nearly trebling over two years. The market share of Fairtrade bananas was 11 percent in 2007, up from 7 percent in 2005. With total sales of 7 300 metric tonnes, per capita consumption reached 1.4 kg in 2006. There was a moderate increase in 2007 to nearly 8 000 metric tonnes. Almost no Fairtrade bananas sold in Finland are also organic.

In **France**, the market for Fairtrade foods has expanded rapidly in recent years, with sales rising from €18 million in 2001 to €210 million in 2007 according to Max Havelaar France. Fairtrade bananas, which were launched in 2001, have enjoyed a similar trend. They are imported from Latin America (Ecuador, Peru and the Dominican Republic) and Ghana. Large fruit importers (e.g. Fruidor, Compagnie Fruitière/Dole and Katopé) and specialized organic importers (e.g. ProNatura) have a FLO license to import Fairtrade bananas. After three years of slow growth, imported volumes have expanded more rapidly since 2004

Figure 32 - Sales of Fairtrade certified bananas in France, 2001-2007



Sources: Max Havelaar France (2007) and FLO (2008)

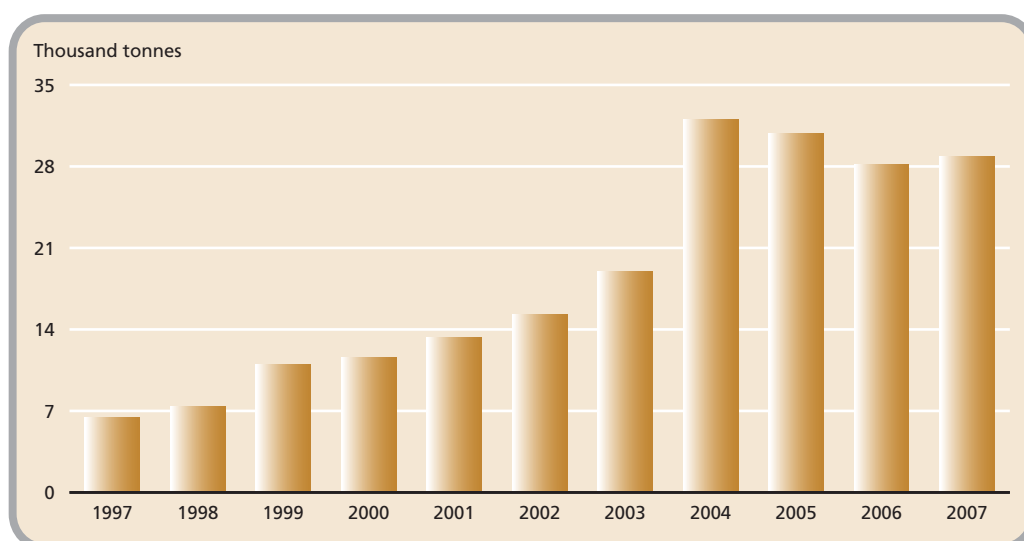
(Figure 32). Preliminary estimates indicate that sales soared in 2007, exceeding 7 000 metric tonnes (up 50 percent from 2006). This would translate into an average consumption of 0.12 kg per capita, i.e. less than 2 percent of total banana consumption. Nevertheless, this is a significant performance against the backdrop of a static conventional banana market. Almost all Fairtrade bananas found on the French market are also certified organic.

In **Austria** retail sales of Fairtrade certified goods were valued at €41.7 million in 2006, up from €25.6 million the previous year and €3.1m only in 2000. The most important fair-trade products sold in Austria are bananas, coffee and chocolate. Over 7 000 metric tonnes of Fairtrade bananas were sold in 2007, of which nearly 6 000 metric tonnes were also certified organic. Consumption was slightly above 0.8 kg per capita.

In **Italy**, approximately 4 000 metric tonnes of fair-trade bananas were sold in the period July 2006-June 2007 according to the Italian ATO CTM Altromercato (personal communication, 2007). More than two-thirds of this quantity were also certified organic. Most of the bananas are sold through a network of 1 300 World Shops under Altromercato's own label. A small quantity is sold through supermarkets under the FLO/TransFair Italy label.

Switzerland has long been the country where fair-trade bananas have the highest market share. Sales started already in 1985, when the ATO Gebana imported bananas from Nicaragua. Gebana stopped selling bananas when Max Havelaar Switzerland, a member of FLO, launched its certified Fairtrade bananas in 1997. The market expanded rapidly when the two Swiss supermarket chains, Coop and Migros, carried Fairtrade bananas in the early 2000s. Their policy was to sell these bananas with no (or a very low) price difference over conventional bananas. Sales soared in 2004 when Co-op decided to carry exclusively Fairtrade bananas. As a result, the volumes marketed stood above 30 000 metric tonnes annually in 2004 and 2005. Fairtrade bananas became the market leader, accounting for approximately half of all banana sales (FLO, 2007). However, Co-op's decision to sell again conventional bananas alongside the Fairtrade ones in 2006 caused a slight drop in sale quantities (Figure 33). Sales volumes remained almost unchanged in 2007 and were forecast to follow a similar pattern in 2008. Consumption per capita stood at 3.8 kg, by far the highest in the world. Of the approximately 28 000 metric tonnes sold in 2006, some 7 600 metric tonnes (27 percent) were also certified organic.

Figure 33 - Quantities of Fairtrade bananas sold in Switzerland, 1997-2007



Sources: Max Havelaar France (2007) and FLO (2008)

B. Suppliers and marketing channels

Europe's main suppliers of fair-trade bananas are Ecuador, Peru, the Windward Islands, the Dominican Republic and Ghana. Several EU banana importers are fair-trade certified. The largest one is the Dutch company Agrofair, which is jointly owned by European NGOs and groups of Fairtrade growers in developing countries (Colombia, Costa Rica, Ecuador, the Dominican Republic, Ghana, Peru). Agrofair pioneered Fairtrade banana imports into the Netherlands in the late 1990s and has expanded strongly since then. It has sales units in the United Kingdom, Italy, France, Finland and the United States. Agrofair recorded a turnover of €62 million and a net profit of €944 000 in 2006 (Banana Link, 2008). Most of the European organic banana importers also import Fairtrade bananas. This is the case of ProNatura SA, Savid SA, Brochenin SA, Port International Organics GmbH and Daabon Deutschland GmbH. Several conventional banana importers such as the German company T-Port, the French company Pomona, the subsidiaries of Dole and Chiquita in Europe and the UK companies Pratt and Mack Multiple also import Fairtrade bananas.

C. Market prospects

Fair-trade products are increasingly popular as consumers believe product purchases have a direct impact on third world poverty. According to Organic Monitor (2008), sales of fair-trade fruit and vegetables expanded by 92 percent in 2007. High growth is occurring as a number of European supermarkets commit to carrying fair-trade products. In Switzerland, the United Kingdom and Finland, the high market share is partly due to the strong involvement of a few leading supermarket chains: Sainsbury's, The Cooperative and Waitrose in the case of the United Kingdom; COOP in the case of Switzerland; and Kesko and Siwa in the case of Finland. The 2004 decision by COOP to carry exclusively Fairtrade bananas was followed by both Sainsbury's and Waitrose in the United Kingdom, which decided in 2006 that they would only sell fair-trade certified bananas from 2007 onwards. Another important factor has been the active mobilization of local fair-trade organizations and other NGOs that have carried out massive awareness raising and promotion campaigns aimed at both consumers and retailers. Fair-trade weeks or fortnights are now held at least once a year in many European countries. The market share of fair-trade bananas is still low in most European countries and there is potential for growth (Table 11). For example, the German market may expand rapidly if the discount store chain Lidl continues to carry this type of bananas. If the average German consumer had the same consumption as the Austrian consumer (0.8 kg per capita), sales would soar to 64 000 metric tonnes.

Nevertheless, the emergence of various ethical labels and other fair-trade claims across Europe is a potential obstacle to market growth, as may create confusion among consumers. Although certified fair-trade products have clearly visible symbols and logos, consumers may be confused by these claims and seldom understand the differences between them. The emergence of fair-trade standards developed by private certification bodies may increase confusion. Also, should the current economic crisis deepen and endure, some consumers may switch to cheaper fruit than fair-trade bananas.

Table 11 – Individual Fairtrade banana consumption in selected European countries in 2007

Country	Switzerland	UK	Finland	Austria	Germany	France	Italy
kg per capita	3.8	2.4	1.4	0.8	0.17	0.12	0.10

3.3 North America

A. Market situation

Bananas account for the bulk of fair-trade certified fruits in the North American market, but sales have failed to meet the high initial expectations of fair-trade organizations so far. Fairtrade bananas were introduced into the North American market in 2004. However, import volumes into the United States have stagnated since then, totalling only 3 000 metric tonnes in 2007 (Table 12). This last figure compares with sales of over 200 000 metric tonnes in Europe. Some Fairtrade bananas were re-exported from the United States and sold on the Canadian market in 2004 and 2005, but sales have stopped since 2006. The value of sales in North America was estimated to be below USD 5 million in 2007.

Table 12 - Sales of Fairtrade bananas in the United States and Canada (metric tonnes)

	2004	2005	2006	2007
USA	3 700	3 300	2 600	3 000
Canada	184	239	0	0

Source: FLO (2007)

According to TransFair USA, the logistical challenges of shipping small quantities and the inspection period at US ports have created quality problems for Fairtrade bananas¹⁶. Fairtrade bananas are shipped to Europe in larger quantities and are packaged in vacuum bags, which help to preserve freshness. The quantities shipped to North America remain relatively small, and vacuum bags are unpopular with US buyers. Growth in the fair-trade certified banana market is further limited by the fact that the North American banana market is dominated by three large firms (Chiquita, Del Monte and Dole). Supermarkets tend to have long-term exclusive contracts with one of these companies, which make it virtually impossible for other firms to sell bananas to North American supermarkets (TransFair USA, personal correspondence).

Most of the Fairtrade bananas imported into North America are also certified organic. The share of organic bananas in Fairtrade banana imports rose from 73 percent in 2005 to 94 percent in 2006. In 2004 and 2005, all Fairtrade bananas were imported from Ecuador and Peru, and in 2006 Colombia also became a source of supply (TransFair USA, 2006). Ecuador is among the leading suppliers of fair-trade bananas worldwide.

According to TransFair USA, the 2 600 metric tonnes of Fairtrade bananas imported in 2006 generated an additional income (through the fair-trade premium) of USD 1.2 million to six farmer groups in the three supplying countries.

B. Market prospects

In spite of the stagnation of imports due to logistical problems among others, North American imports of fair-trade fruits should reach more meaningful levels in the longer

¹⁶ Ocean freight for smaller shipments of bananas costs roughly twice as much and takes twice as long, which increases costs and compromises freshness. For example, in 2004 fair-trade certified bananas were shipped from Ecuador to the West Coast of the United States, but quality problems arose because shipping and customs agricultural inspections were taking up to 30 days. – Transfair USA, personal correspondence.

run. The fair-trade NGOs will need to overcome a series of obstacles. The key constraint is the lack of awareness by North American consumers. Further, supermarket category managers are often reluctant to add yet another fruit category to their range, as they view it as extra work for very little profit due to the small quantities. In the case of pineapples and bananas, exclusive arrangements between supermarkets and the fruit multinationals are a further impediment. Collaboration between the multinational fruit importers and fair-trade organizations may help expand the market for fair-trade bananas and pineapples, but it is not clear whether these players are willing to work together. Yet, the considerable success of Fairtrade bananas in Europe indicates that there is potential for growth in the North American market. If North American fair-trade organizations manage to raise consumer awareness and pressure supermarkets into carrying fair-trade foods as their European counterparts did, demand for fair-trade fruits could soar. In the United Kingdom, Fairtrade bananas accounted for over 20 percent of banana sales by the end of 2007 due to the decision by a few large-scale retailers to only sell this type of bananas. Similarly, in Switzerland, Fairtrade bananas account for 40 percent of banana sales. Recently, the non-profit consumer cooperative Co-op America took the initiative to ask its consumers to pressure major retail chains to make fair-trade bananas more widely available in their stores. Co-op America justified its initiative due to “growing concerns about the human rights and environmental records of large conventional banana companies” (Banana Link, 2008).

Another factor that supports strong growth prospects for fair-trade bananas in North America is the fact that other fair-trade products have experienced rapid expansion in this market. Sources from the fair-trade sector believe that the market will grow, although perhaps not as rapidly as the market for other fair-trade products (coffee and cocoa, for example).

3.4 Asia and the Pacific

A. Market situation

At the time of writing this report, Japan was the only country of the Asia-Pacific region that imported fair-trade bananas. There is a lack of recent data on fair-trade product sales in Japan. According to information received from IFAT, total sales of fair-trade products (including FLO-labelled and other fair-trade goods) stood at USD 17.5 million in 2004 (Table 13).

There is a lack of data on Japanese imports of fair-trade bananas. The volumes are estimated to be small, probably below 10 000 metric tonnes annually, accounting for less than 1 percent of Japan’s total banana imports. Most of these imports are done by alternative trade organizations that do not belong to the FLO system.

Table 13 - Total sales of fair-trade products in Japan 2001-2004 (in USD million)

Year	2001	2002	2003	2004
IFAT members (non FLO)	9.9	11.3	14.16	14.85
Fairtrade Label Japan (FLO)	0.9	0.85	1.49	2.66
Total sales	10.8	12.15	15.65	17.51

Source: IFAT (2008)

B. Suppliers and marketing channels

Japan's principal supplier of fair-trade bananas is the Philippines, which is by far its main supplier of conventional bananas.

The main alternative trading organizations that import fair-trade goods into Japan are Alter Trade Japan, Global Village, better known today under its brand "People Tree" and Nepali Bazar. Fair-trade bananas are primarily imported by Alter Trade Japan (ATJ), an alternative trading NGO which is part of the Alter Trade Group. It does not belong to the FLO system. Alter Trade Japan started in 1987 as a joint activity of consumers' cooperatives, organic produce traders and citizen's groups. It was meant to complement the activities of the Japan Committee for Negros Campaign, an NGO involved in relief work for the sugar-dependent Negros Island, the Philippines, where many jobless sugar cane workers were suffering from hunger. Its aim was to secure incomes by setting up new export and distribution channels for the Negros sugar, including sales to consumers' groups in Japan. Since then Alter Trade has extended its range of products and the number of countries where products are sourced from (e.g. coffee from Peru and Mexico). Much of this work has been done in close cooperation with the UK-based fair-trade organization TWIN. Today Alter Trade Japan is a Tokyo-based organization that focuses on Asia, both through its offices abroad (like in Surabaya, Indonesia) and its product development initiatives in neighbouring countries (e.g. organic shrimp project in Indonesia, coffee projects in Timor-Leste and Lao People's Democratic Republic).

ATJ has sourced bananas from small producers in the Negros Islands of the Philippines since 1989. Over time, procurement has been extended to other areas (Northern Luzon, Panay, Bohol and Cavite). These bananas (a local variety named balangon) are cultivated without chemicals but do not bear any organic label. They are exported by the ATO Alter Trade Philippines and imported into Japan under the Teikei system, a Japanese participatory guarantee scheme to ensure the integrity of organic foods without using certification. ATJ sells mainly to consumer cooperatives. Its main customers are the consumers' cooperatives Green Co-op, Palsystem, and Seikatsu. In 2004 it reported sales of nearly ¥500 million (World Bank, 2004). The author could not find any recent data on quantities. According to IFAT, in 2004 (the year of the latest available figures) Alter Trade Japan had an annual turnover of about ¥2 billion (USD 18.5 million).

FLO's Japanese member is an NGO named Fairtrade Label Japan. It was established in 1993, originally under the name TransFair Japan, but changed its name in 2004. In 2006, Fairtrade Label Japan started using the FLO Fairtrade label on bananas sold in the Japanese market for the first time. There is no evidence that sales of Fairtrade bananas have taken off so far. The annual volumes sold in 2006 and 2007 were below 300 metric tonnes.

C. Market prospects

Japan

Although it has a large population with a high purchasing power and imports a large share of its foods, Japan still lags behind other developed countries in the development of its market for fair-trade products. While, according to IFAT, retail sales of Fairtrade-labelled products grew from an estimated USD 3.4 million in 2004 to USD 6 million in 2006, the market share of fair-trade remains almost negligible. The average per capita expenditure amounts to less than USD 0.05 and remains the lowest of all national label initiatives under the FLO system. The growth rate of sales during the period 2001-2004 was much below that of the European market.

Several researchers have tried to identify the reasons for this slow development. Ikegami and Uyama (2006) from the Kinki University in Osaka present two possible explanations:

(a) that there seems to be no common understanding of what fair-trade is and should be between different types of fair-trade organizations in Japan, and (b) that there has not been any reliable market research on the potential of labelled food products on the Japanese market.

However, the decision of several prominent large-scale retailers such as Aeon Corp., Japan's largest retail group, and Starbucks Japan to start selling Fairtrade labelled coffee since 2006, has increased the sales and is expected to be a key driver of market expansion.

Australia and New Zealand

While currently no fair-trade bananas are imported into Australia and New Zealand, the situation may change in the future, as both countries have market potential. Since the creation of the **Fair Trade Association of Australia and New Zealand** (FTAANZ) and the subsequent introduction of the Fairtrade label, the market has grown rapidly. The combined retail sales of Fairtrade products in the two markets were valued at nearly USD 16 million in 2007 (Table 14), a 59-percent rise over the previous year¹⁷.

Table 14 - Sales of Fairtrade products in Australia and New Zealand 2004-2006

Year	2004	2005	2006	2007
Retail sales (USD million)	0.9	3.1	8.9	15.9

Source: FLO (2008)

In Australia alone, sales of Fairtrade-labelled products rose 50 times between 2003 and 2006, reaching an estimated \$A8 million (USD 6.3 million) (Oxfam Australia, 2007). At the end of October 2007 FTAANZ had 123 business partners licensed to sell Fairtrade-labelled

products in Australia. The vast majority of licensed partners are engaged in coffee, and this product alone accounts for more than 80 percent of the organization's license income. In Australia Fairtrade-labelled products can now be found in many places, including national supermarket and retail chains such as Coles Supermarkets or the 1 500 Woolworth's supermarkets. Large domestic companies such as Origin Energy, Orica Australia and Lonely Planet have introduced Fairtrade coffees and teas in their offices.

In New Zealand, Fairtrade sales were valued at \$NZ3.98 million (USD 2.7 million) in 2006. This represents a 400 percent increase over the previous year. Fairtrade coffee accounts for about 90 percent of those sales, with tea and cocoa products representing most of the remainder.

The market potential however is much higher. This can be induced from the per capita consumption figures when comparing sales with other developed countries. Consumption of Fairtrade products in the United States and Canada are almost five times as high as in Australia and New Zealand, and in many European countries consumption levels are even much higher.

New Zealand could offer market opportunities for fair-trade bananas in the short term. It imported over 80 000 metric tonnes of fresh conventional bananas in 2006. In Australia, the ban on imports of fresh bananas for phytosanitary reasons is a major constraint. However, the Philippines has been negotiating access to the Australian market for years and it is not impossible that an agreement will be reached in the future. In this case local farmer organizations could be allowed to export fair-trade bananas to Australia.

¹⁷ Figures taken from the Annual Reports of Fairtrade Labelling Organizations (FLO) International.

CHAPTER IV:
THE BENEFITS AND CHALLENGES
OF CERTIFICATION AND PRICE
DISTRIBUTION IN THE VALUE
CHAIN

The previous chapters have reviewed the use of voluntary standards in the banana industry and analysed the supply and demand of organic and fair-trade bananas. This chapter examines the various benefits and challenges associated with the production and export of organic and fair-trade bananas from the perspective of developing countries. It starts by examining the direct economic benefits to exporters by comparing export prices for certified and conventional bananas. It goes on to review the challenges to comply with standards and obtain certification. The indirect benefits to grower groups and exporting countries are then discussed. The second part of the chapter analyses the distribution of prices along the supply chain to compare exporter prices with those of the other operators down the chain. This is done by first analysing regional data referring to 2004 and then studying two countries exporting organic bananas in more recent years. The findings are then summarized and discussed.

1. BENEFITS AND CHALLENGES FOR EXPORTING COUNTRIES

1.1 Value chains and market structure

The benefits that developing countries can reap from exporting bananas depend to a large extent on the value chain within which their growers and exporters operate and who controls it. There are different levels of integration in the value chain for fresh bananas as illustrated below (Box 1). While the traditional chain (a) is common for many tropical fruits, the bulk of export bananas is traded through the types (b) and (c) integrated chains. The international trader can be a multinational fruit company or a large national company such as Noboa in Ecuador or Uniban in Colombia. In the most integrated version (c), the trading company also produces part or all the bananas it exports. This has been typically the case of multinational banana companies ever since large-scale banana exports started at the beginning of the twentieth century. They perform directly the operations of export, import, ripening and distribution, and produce in their own plantations a sizeable share of the bananas they trade. The rationale was to ensure fruit quality and guarantee supply at stable prices. Vertical integration enabled trading firms to command the value chain and capture a large share of the added value, as well as to control service activities (shipment, ripening, distribution) that were more profitable than production. While the multinationals have had a tendency to partly divest from production since the 1990s against a backdrop of production surplus (FAO, 2003b), they still control a significant proportion of the fruit they trade.

In Latin America the fair-trade chain is also highly integrated, in line with the approach of fair-trade to reduce the number of intermediaries in order to maximize the returns to farmers. Usually a grower group packs and exports the fruit to a specialized fair-trade importer (such as Agrofair in the European Union) or a conventional importer who holds a FLO license. The importer ripens (directly if it owns facilities or through contracting) the bananas and sells them directly to retailers or other large clients. The organic chain often has a similar level of integration, although the less integrated form (b) is not uncommon.

The global market for conventional bananas is strongly concentrated both geographically and in terms of firms. Geographically, industrialized countries account for over 80 percent of world banana imports, with the European Union and North America capturing some 60 percent and Japan and the former USSR countries another 12 percent. In terms of market players, banana trade was run by an oligopoly for decades, with the leading three multinational companies (Chiquita, Dole and Del Monte) accounting for nearly two thirds of

Various types of banana value chains

a) Traditional chain

Grower -> Packer/Exporter -> Importer -> Ripener -> Wholesaler/Distributor
-> Retailer

b) Integrated conventional chain

Grower -> Trading company (Packing/Exporting/Importation/Ripening/Distribution)
-> Retailer

c) Highly integrated conventional chain

Fruit company (Growing/Packing/Exporting/Importation/Ripening/Distribution)
-> Retailer

d) Integrated fair-trade or organic chain

Grower group (Growing/Packing/Exporting) ->Specialized importer (Imports/Ripens/
Distributes) -> Retailer

global exports in 1980. These firms predominate in North America, with close to 90 percent of the market and hold close to half of the Japanese and European Union markets.

1.2 Economic benefits and costs

A. Export prices

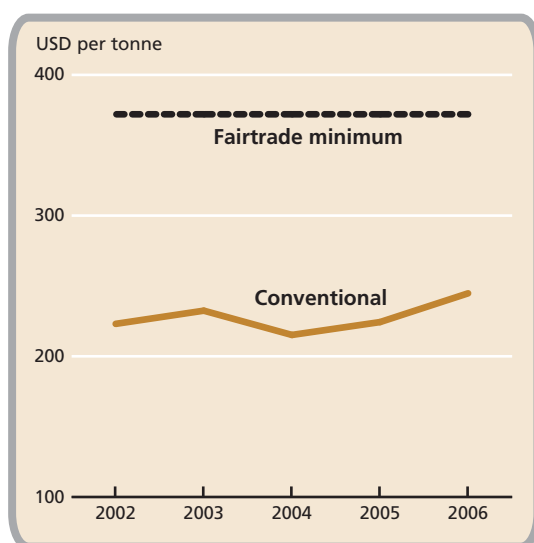
Fair-trade

The benefits of Fairtrade bananas to developing country growers are built in the FLO system, which guarantees a Fairtrade Minimum Price and pays an additional premium. The minimum price depends on the country of origin and on whether the fruit is organic or not, as detailed in Table 15. The premium paid in addition to the minimum price is USD 1 per box of 18.14 kg (40 lbs). In order to assess the economic benefits of fair-trade to exporting countries, it would be interesting to compare the fair-trade price with the FOB price for each country. However, real FOB prices are seldom available because traders consider them as confidential information. What national statistical agencies usually publish as FOB prices is the average unit value of total banana exports. Table 15 displays these unit values as a proxy for FOB prices. It is interesting to note that the fair-trade minimum FOB price is substantially higher than the average unit value of exports for all countries except Peru. This specific case can be explained by the fact that all bananas exported from Peru are organic and therefore fetch premium prices. The difference between Fairtrade minimum FOB price and unit value of export varies widely across countries.

Figure 34 shows that the FLO minimum price was consistently higher than the estimated FOB price in Ecuador over the period 2002-2006, with a difference of more than USD 120 per metric tonne.

The above finding is supported by a study by Kilian *et al.* (2005) who analysed the impacts of Fairtrade and organic certification on producer prices in two major producing countries: Costa Rica and Ecuador. Ecuador is known for its competitiveness in banana production while Costa Rica is known for its high production costs. They first examined FOB prices, which they consider as indicators for the producer prices, over the period 1990-2004. They

Figure 34 - Unit value of exports of conventional bananas and minimum Fairtrade FOB price for Ecuador



Sources: FAOSTAT, Comtrade and FLO

found that Fairtrade minimum prices are set above the average FOB price observed in both countries over the period considered. Fairtrade minimum FOB prices were set at USD 6/box for Costa Rica and at USD 5.25/box in Ecuador. On the other hand, prices for banana experienced large fluctuations, which ranged, since 1990 in the case of Costa Rica, between a low of USD 3.30/box at the end of 1999 and a high of USD 6.20/box in 1997, with an average being USD 5.17/box. Banana prices in Ecuador exhibited smaller fluctuations; the lowest prices were around USD 4/box and the highest around USD 6/box, with an average of USD 4.88/box. While in both cases the Fairtrade price was higher than the average conventional banana price, in the case of Costa Rica the difference between the average FOB price and the Fairtrade minimum price (about USD 0.80/box) was much higher than in Ecuador (around USD 0.40/box)¹⁸. When adding the Fairtrade price premium to the minimum Fairtrade price, the average FOB price paid by companies trading Fairtrade products amounted to USD 8.60/box.

Table 15 - Minimum prices for FLO-certified fair-trade bananas (USD per 18.14-kg box, 2006)

Origin	Fairtrade minimum price (farmgate)		Fairtrade minimum price (FOB)		Average unit value of exports	Diff. % with Conventional FOB
	Conventional	Organic	Conventional	Organic		
Colombia	5.50	7.25	6.75	8.50	5.61	20.3
Costa Rica	5.75		6.75		5.33	26.6
Dominican Rep.	7.00	8.50	8.50	10.00	4.43	91.9
Ecuador	5.50	7.25	6.75	8.50	4.44	52.0
Ghana			8.00	10.00		
Jamaica			9.06 (free along-side ship)		7.60	19.2
Panama	6.00		7.00		4.60	52
Peru		7.00		8.50	8.58*	
Philippines	6.00		7.50			
Windward Islands	7.60		9.00			

Source: FLO (2007) and FAOSTAT (2008)

Note: (*) organic only

¹⁸ The situation has changed since then, as FLO subsequently raised its minimum Fairtrade price for Ecuador to the same level as in Costa Rica (see Table 15).

According to FLO (2007), the 28 Fairtrade-certified banana producer organizations (spread across 10 countries) earned an estimated extra income of USD 21 million (€15 million) in 2006. Beside the higher FOB price level, the price stability guaranteed by Fairtrade is equally important. Over time the FLO system guarantees a stable minimum remuneration when prices fluctuate widely in international markets. This enables growers to plan and make investments for medium- and long-term development. These investments usually contribute to the preservation of natural resources and social improvements in the community (e.g. health and education).

Organic bananas

Unlike fair-trade, organic agriculture is primarily a standard for the production process and there is no built-in system to ensure a minimum remuneration to growers (i.e. no guaranteed price or premium). The profitability of organic production is determined to a large extent by the market. Assessing the direct financial benefits of organic banana cultivation is therefore more difficult. The above study found that while initially in the early 1990s, organic banana FOB prices often ranged above USD 15/box, prices decreased considerably due to continuous growth of organic banana production all over Latin America. FOB prices for organic banana in the region in 2004 amounted, on average, to USD 7/box, but were still above conventional banana prices. While prices in Ecuador ranged between USD 6-7/box, the Dominican Republic achieved up to USD 8 or higher. It found a higher price for double certified Fairtrade and organic bananas. Average FOB price for these bananas was around USD 10.50/box, while in the specific case of Ecuador, identified prices in 2004 were around USD 9.50/box.

More recently, in 2007 the average export value in the Dominican Republic was USD 7.14/box for organics, compared with USD 5.73/box for conventional bananas, i.e. a

Table 16 – Dominican bananas: unit values of export and price premium at export level 2004-2007

	Organic (USD/ box)	Conventional (USD/box)	Price premium (%)
2004	4.70	3.17	48.0
2005	6.77	3.83	76.8
2006	5.42	4.43	22.3
2007	7.14	5.73	24.7

Source: CEI-RD (2008)

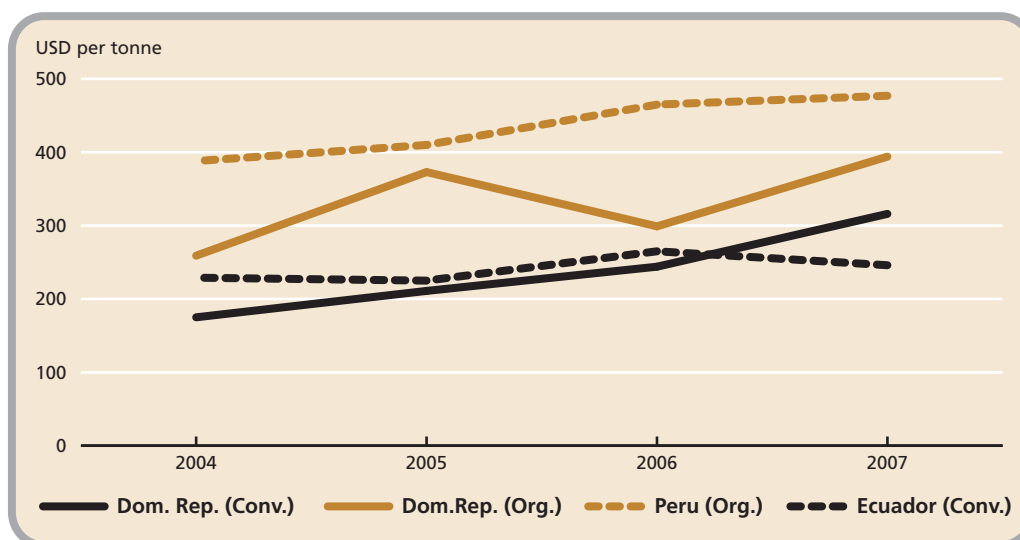
Table 17 – Unit values of export for bananas from Ecuador and Peru (USD/box)

	Peru organic	Ecuador Conventional
2004	7.04	4.15
2005	7.44	4.08
2006	8.44	4.81
2007	8.65	4.46

Sources: PromPex and COMTRADE (2008)

price premium of 25 percent. The premium varied between 22 and 77 percent over the period 2004-2007 (Table 16). In Peru the average export value was USD 8.43/box in 2007. Peru exports organic bananas only so it is not possible to calculate an organic price premium. However, a comparison with Ecuador may be useful, as both countries are located in the same geographical area and have similar climatic conditions. Over 95 percent of Ecuadorian banana exports are organic, so the comparison in Table 17 may give some indications on the price difference between organic and conventional bananas produced in the same region of the world. The average export value of a box of conventional Ecuadorian bananas was USD 4.47. More details are provided in the case studies of the Dominican Republic and Peru in section 2.2 below.

Figure 35 offers a direct comparison of estimated export prices over a recent period using unit values of exports as proxy. It is interesting to observe that Peruvian organic bananas fetch much higher prices than

Figure 35 – Unit values of banana exports from selected suppliers, 2004-2007

Sources: PromPex and COMTRADE (2008)

those from the Dominican Republic. Also, the former have seen their price rise steadily while the price of the latter has fluctuated considerably over time. This difference may result from the weather instability in the Caribbean island, where hurricanes and torrential rains may lead to fruit quality problems more frequently. Unsurprisingly the prices of organic bananas from both countries are above those of Ecuadorian bananas, reflecting partly the organic price premium. However, it was not expected to find prices for conventional bananas from the Dominican Republic so similar to those of Ecuador. The latter is known as a low-cost supplier, whereas banana production tends to be more costly in the Caribbean.

B. Costs

Organic bananas

The higher FOB prices for organic bananas do not necessarily translate into net gains for exporting countries, as they also reflect higher costs. The strict technical requirements of organic agriculture standards may raise production costs, especially during the transition period.

A review of case studies (FAO, 2003a) found that traditional low-input farmers may expect yield gains from conversion to organic agriculture methods. However, higher yields are usually accompanied by higher production costs, mainly in the form of increased labour demand. In particular, the introduction of new soil conservation methods, such as terracing and preparation of organic fertilizers, were often mentioned as increasing total labour demand. If soils were depleted under former land use management, these labour requirements can be expected to be higher. On the other hand, the organic price premium received usually covers these higher production costs and certification results in increased net profit. When converting low-input farms, the increase in productivity might in itself compensate higher production costs. For land that was cultivated without chemicals, the usual three-year conversion periods may be shortened or waived completely if the certification body is satisfied by evidence of former low or non-use of chemical inputs. This is an important advantage, leading to quicker returns on investments and less risk that price premiums will have fallen by the time certification is obtained.

In the cases of conversion from high-input production systems, initial yield declines are often observed, usually recovering to levels slightly below the original conventional

yields. Effects on production costs per hectare have been varied (lower, similar and higher). Organic cultivation of bananas requires technical skills and investment in time. Some tropical diseases, in particular Black Sigatoka, are difficult to combat with organic methods. They require constant monitoring and labour. In view of the initial investments and decline in yields, access to premium markets is essential – usually requiring certification. In all cases, returns on investments in organic agriculture, especially in soil conservation methods and in conversion from high-input situations, occur in the long term only. Tenants and sharecroppers without a guarantee of continued access to the land are unlikely to make this investment.

Certification costs are a key determinant of the profitability of organic banana cultivation. For small growers, the use of group certification involving an internal control system is important to reduce these costs. Developing internal control systems requires institutional changes in farmer organizations to. Group certification can be achieved in two distinct ways. First, through associations, with farmers participating actively in decision-making and monitoring, in which cases the certificate is owned by the association. In the second system the exporter organizes and pays for the certification. Kidd, Tulip and Walaga (2001) argue that although this has the disadvantage that farmers are not allowed to sell to other organic buyers (but they are allowed to sell to any conventional buyer), this option is preferable where producer organizations do not exist or are weak. It has often been observed that the quality requirements of the new organic market are higher than for the former conventional market. In a case study of the Dominican Republic, price premiums were apparently not sufficient to justify the necessary investments to significantly improve the quality of organic bananas grown by small-scale producers, and it was difficult for them to compete in the increasingly demanding international organic market.

The absence of reliable data on the costs of organic banana production makes it impossible to calculate the profits of exporters and growers. Further research is needed in this area through case studies.

Fair-trade bananas

The main costs entailed by fair-trade derive from the need for farmer groups to modify their internal organization and workings. Similarly as in organic agriculture, Fairtrade certification requires institutional changes in farmer organizations to develop internal control systems. Some organizational changes such as the need for holding general assemblies more frequently, record keeping, hiring independent accountants, etc. are likely to raise overhead costs. Yet, there are reasons to believe that growers selling their bananas under the FLO system may obtain higher margins than organic growers. First, FOB prices tend to be higher and there is a relatively good price transmission from the exporter to the grower, as many Fairtrade groups export directly. When this is not the case, the FLO system ensures that the exporter's margin is not excessive. Second, FLO has a special fund that may partly subsidize the cost of certification at least in the first years. Finally, the environmental requirements of FLO on production methods are less demanding than those of organic farming standards. Fair-trade standards do not pose the same technical challenges to banana cultivation as organic agriculture. In particular, the use of chemical fertilizers and pesticides is allowed. Growers may combat potent fungal diseases such as Sigatoka with synthetic fungicides. Therefore, yields are likely to be higher than in organic cultivation.

1.3 Other benefits and challenges

The previous section focused on the direct economic benefits that accrue to developing countries exporting organic and/or fair-trade bananas. Beyond these direct benefits, certification offers other types of non-financial advantages. Better and more stable market access ranks high among these. Furthermore, the organizational changes needed to

comply with the standard and certification requirements may yield significant benefits in the long run. They may help them rationalize production and cut input costs (for example through a more efficient use of agrochemicals in fair-trade cooperatives). Traceability and better record keeping may improve the management of the supply chain. Complying with standards may improve market access through enhanced product quality and improvement in the image of the farm or company.

Compliance with the strict environmental requirements of organic standards may improve the management of natural resources on which farmer livelihoods depend. They may enhance the farmer's relations with the local community, including its suppliers and lenders. Although they are difficult to quantify in financial terms, these benefits may be significant¹⁹. More broadly, organic farming generates a wide range of public goods including the preservation of natural resources (water, air, soil, biodiversity), maintaining amenities, and reducing health problems caused by agrochemicals.

Although farmer cooperatives often decide to seek fair-trade certification because of the guaranteed price premium, case studies (FAO, 2003a) show that other benefits derived from the fair-trade system may be more significant in the long run. The success in self-organization seems to be far more important, resulting in better bargaining positions, better credit worthiness and economies of scale. The fair-trade system contributes to these organizational successes through capacity building, an initial guaranteed market, linkages with the international market and learning-by-doing in exporting. In addition, and similarly to the organic case studies, fair-trade contributes to quality improvements. The labour criteria of fair-trade standards may reduce worker turnover, absenteeism and accident and sickness rates, thereby reducing costs and raising productivity. They may lead to better health conditions for farmers and farm workers.

The reported general lack of knowledge about fair-trade among individual members of large cooperatives has been mentioned as a challenge to the future development of fair-trade. One could have doubts regarding the "effective democracy" of large cooperatives, and suspect the emergence of a new "management class". The latter is not necessarily a negative development. Any organization would benefit from having professional management, as long as it is effectively and democratically controlled by the members.

2. DISTRIBUTION OF PRICES ALONG THE SUPPLY CHAIN

Theoretically, the extra costs generated by adopting organic or fair-trade standards are supposed to be more than offset by the price premium that consumers pay when purchasing bananas with a sustainable agriculture label. However, the percentage of the premium that trickles down to exporting countries is unknown. Some studies have argued that price distortions along the value chain substantially affect the distribution of the benefits generated by sustainable production, favouring downstream operators in importing countries instead of the production sector. Consequently, it is important to analyse the distribution of prices along the supply chain. This is the objective of this section. It starts by examining data for Latin America and then focuses on two countries exporting certified bananas.

There are very few studies on the value chain for certified bananas. The main obstacle is the lack of reliable data on prices and costs at the various stages of the chain. No

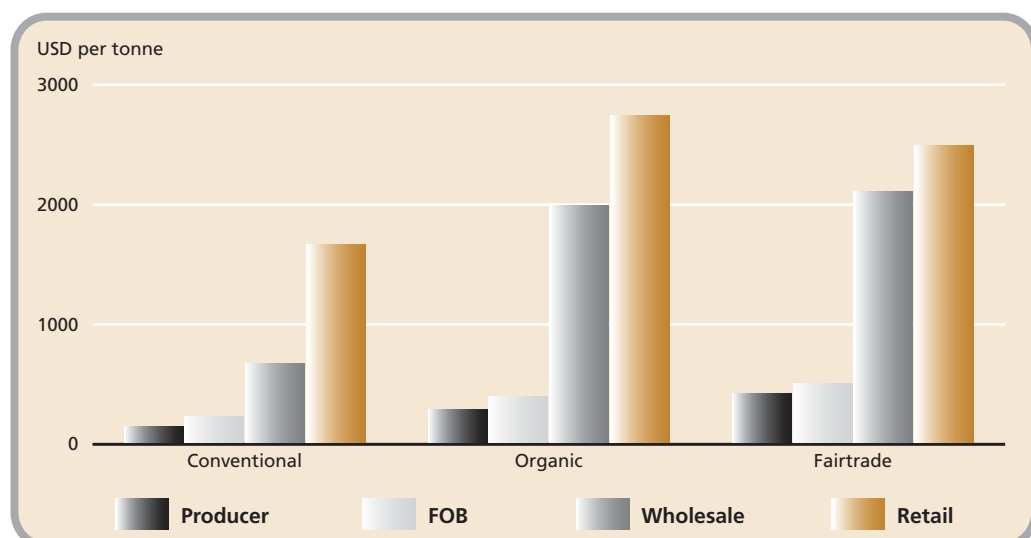
¹⁹ For a literature review of the impacts of certification in agriculture see FAO (2003a and 2008).

public-sector institutions collect or publish them. As for firms, they consider them as confidential information and will not disclose them. The distribution of value among operators is a sensitive issue. Each operator along the chain competes with the others to maximize its price and profit. The share of the consumer price that operators receive reflects to a large extent their bargaining power. For the Fairtrade system, FLO's official minimum prices are available at farmgate and FOB levels but actual prices received by growers or exporters are unknown when the market price is higher than the guaranteed minimum. For organic bananas, very few farmgate, FOB or import price data are available publicly, although the Sustainable Markets Intelligence Center (CIMS) based in Costa Rica does collect some market information. Elsewhere, a handful of importing countries have started publishing wholesale or retail prices very recently. Due to the absence of data on distributors' prices, wholesale prices will be used as a proxy, even though a limited share of bananas are traded through wholesale markets.

2.1 Regional studies

Using data for 2004 collected by CIMS, Kilian et al. (2005) examined the prices of certified and conventional bananas from Latin American origins at grower, FOB, wholesale and retail levels. Figure 36 shows the prices at various stages of the supply chain for Latin American bananas exported to Europe in 2004. As can be observed, the difference between the producer and FOB levels was relatively small. It was higher for conventional (60 percent) than for organic (40 percent) and fair-trade bananas (20 percent). The highest difference was between the FOB and wholesale levels (Table 18). In particular, there were very large differences for organic and fair-trade (414 percent and 322 percent respectively) leading to price differentials of more than USD 20/box. Although it was lower, the price difference for conventional fruit is also high in absolute value (200 percent). These high differences can be partly explained by the lack of data for import prices. It would have been useful to insert the import stage between the FOB and wholesale ones. It can be assumed that the high difference partly reflects transportation costs between Latin America and Europe and between the harbour and wholesale markets within Europe. It also reflects the payment of an import license, since the importation of bananas into the European Union was governed by a tariff quota system based on past imports ('historic references') at the time of the above study (FAO, 2004). Most European importers of certified bananas were newcomers and

Figure 36 - Prices for organic, Fairtrade and conventional bananas along the supply chain to Europe in 2004



Source: elaborated by the author from Kilian et al. (2005)/CIMS

Table 18 - Percentage price differences along the supply chain Latin America to Europe (2004)

Banana type	Diff. Grower to FOB %	Diff. FOB to wholesale %	Diff. wholesale to retail %	Producer/Retail %
Conventional	60	200	150	8
Organic	40	414	38	10
Fair-trade	20	322	18	17

Source: elaborated by the author from Kilian et al. (2005)/CIMS

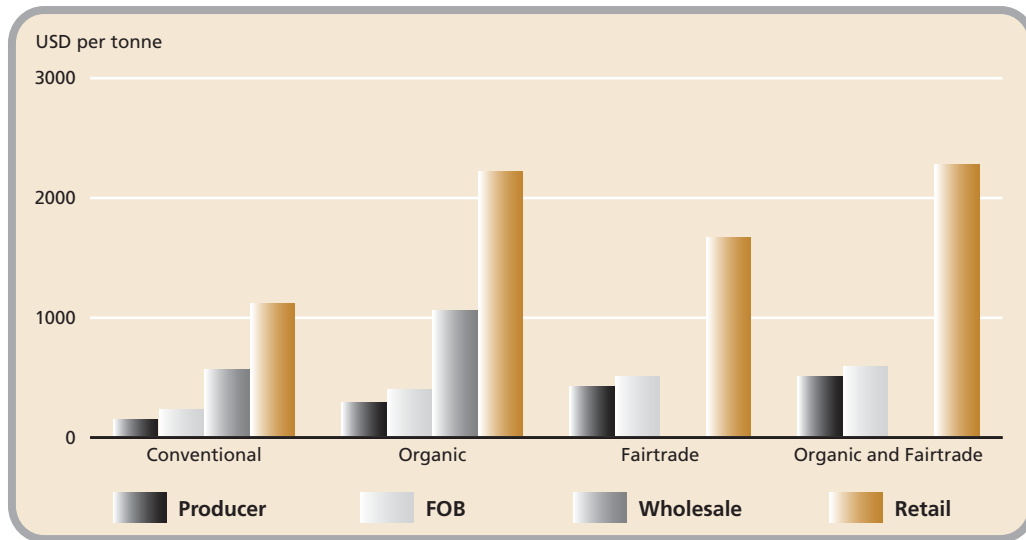
therefore did not receive licenses and had to purchase them from well established market operators ('traditional operators'). This could explain why the difference is much higher for organic and fair-trade than for conventional. Another possible explanation is the higher efficiency of the multinational fruit trading companies that can achieve scale economies.

Conversely, the price difference between wholesale and retail levels is highest for conventional (150 percent). For organic and fair-trade it is moderate (38 percent and 18 percent respectively). This may be explained by the willingness of retailers to limit the price difference between certified and conventional bananas in order to promote the sales of the former. Since conventional bananas were costly due to quantitative restrictions on imports, too large a price premium would have made certified banana unaffordable for most European consumers. Therefore, it is reasonable to assume that retailers limited their margin to promote this product category in which they saw a high growth potential. It can also be interpreted as a sign of a relatively strong bargaining power of European importers of certified bananas vis-à-vis retailers.

It is interesting to note that fair-trade bananas have the smallest differences at all stages (except between FOB and wholesale). Consequently, they have the highest share of the retail price that goes to growers (17 percent). Comparable findings were reported by Roquigny *et al.* (2008) in a recent case study of the Dominican Republic. This is consistent with the declared aim of fair-trade organizations to increase the returns to producer. For organics, the share is 10 percent and for conventional it is only 8 percent. The organic price premium at retail level is USD 19.5 per box of 18.14 kg but at farmgate level it was only USD 2.5 per box (15 percent).

A similar analysis was performed for the supply chain from Latin America to the United States (Figure 37 and Table 19).

A comparison of figures 35 and 34 shows that prices are higher in Europe than in the United States at all levels (wholesale and retail) and for all types of bananas (conventional, organic and fair-trade). Unlike the situation in Europe, the exporter-to-wholesale price differences are comparable for organic and conventional bananas exported to the United States and relatively moderate. The exporter-to-wholesale price difference is much higher in Europe than in the United States. The wholesale-to-retail difference is also higher in Europe for conventional bananas. However, it is smaller for organic bananas (38 percent to 111 percent). This is consistent with another finding of Kilian et al. (2005), namely that the price premium for organic banana expressed in percentage at retail level is higher in the United States than in Europe. They found that the lowest organic price was some 50 percent above conventional prices, with average prices more than 100 percent over the conventional product. In the case of double certification organic and fair-trade, price premiums of 100 percent were common. The authors explained the difference by the fact that the US banana market was a much more open market than the EU market during the period of study.

Figure 37 - Prices for certified and conventional bananas along the supply chain to the United States in 2004

Source: elaborated by the author from Kilian et al. (2005)/CIMS

Table 19 - Percentage price differences along the supply chain Latin America to the United States

Banana type	Diff. Grower to FOB %	Diff. FOB to wholesale %	Diff. wholesale to retail %	Producer/Retail %
Conventional	60	150	100	13
Organic	40	171	111	13
Fair-trade	20	n.a.	n.a.	25
Organic and FT	17			22

Source: elaborated by the author from Kilian et al. (2005)/CIMS

There was no quantitative restriction to banana importation, no import license system and no duty on imports. Therefore, importers and wholesalers could not extract a large rent on certified bananas. However, US retailers did extract a rent on certified bananas. The authors found that the price level for Fairtrade bananas, and especially organic ones, had a substantially higher range than for conventional bananas. In contrast, in Europe both Fairtrade and organic bananas could be found at prices comparable to conventional ones, depending on the kind of retailer. Although observed prices were often significantly higher than the conventional price, the premium seldom exceeded 100 percent. In Europe, the average organic price premium at retail level was 65 percent.

These differences between the United States and Europe may be explained by differences in the development stage of the market for certified products. In Europe, the fair-trade and organic markets started to grow in the early 1990s and market growth had slowed by 2004, whereas organic products in the United States were experiencing rapid expansion. Retailers took advantage of the expanding demand to increase their margin. However, at wholesale level the organic premium was 200 percent (217 percent for Fairtrade) while in the United States it was only 90 percent.

Fair-trade bananas had the smallest differences at all stages. Consequently, they had the highest share of the retail price that goes to growers (25 percent). The share was

identical (13 percent) for organic and conventional bananas. Although in the considered study growers were paid the same price regardless of the destination of the fruit, the share of the final price that went to growers was higher in the United States than in the European Union for all types of bananas (certified and conventional). It can be inferred that in the former EU import system the operators who received import licenses (mainly importers) had much larger margins than growers and exporters.

In conclusion, in both markets fair-trade bananas ensured both the highest price and export/retail price ratio (in percentage) to growers. The price premium was 200 percent at grower level. There was a premium for fair-trade bananas that were also certified organic (260 percent). Organic bananas fetched a higher price than conventional bananas. The premium was 100 percent at grower level.

The above study sheds light on the distribution of value along the banana supply chain in 2004. However, while minimum prices are guaranteed to growers in the FLO system, the profitability of organic production primarily depends on market conditions and these have changed since 2004. For example, the EU banana import system was deeply reformed in 2006. Consequently, it is necessary to carry out the analysis on a more recent period and to consider import prices between the exporter and wholesaler levels. Also, since prices vary markedly across exporting countries, it is necessary to perform country-specific analyses. The following section attempts to address these issues for two countries that export organic bananas.

2.2 Case studies of countries exporting organic bananas

In order to gain a better understanding of the distribution of value along the supply chain it is necessary to analyse specific country cases. This section examines successively two exporting countries and analyses how prices evolve from exporter to retailer level for two supply chains: conventional and organic bananas. Organic banana exports are of primary importance to the Dominican Republic and Peru. They account for nearly half of the total banana export value for the former, while the latter exclusively exports organic bananas. For the other suppliers, conventional banana exports are much more important. For this reason, this section will focus on these two countries.

A. The Dominican Republic

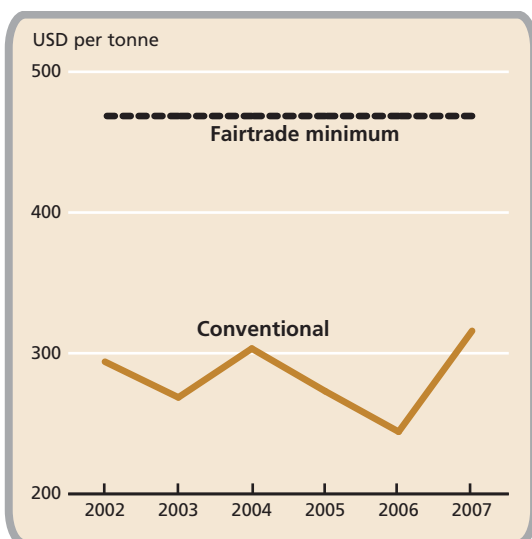
Analysis at exporter level

Bananas are an important export crop for the Dominican Republic. They already accounted for 6 percent of total agricultural export earnings and 3 percent of total merchandise exports in 2005. Their share has probably increased further since then, as the export value grew to over USD 70 million in 2007 (Table 20). Organics accounted for between 38 percent and 55 percent of the banana export value depending on the year over the period 2004-2007. The variations are due to a large extent to the incidence of weather, in particular hurricanes.

As it was not possible to obtain FOB price data for the years 2004 to 2007, the average unit value of banana exports will be used as a proxy. Figure 38 below shows that the FLO minimum price was consistently higher than the estimated FOB price in the Dominican Republic over the period 2002-2006, with a difference of more than USD 150 per metric tonne.

As shown in Table 16 in Section 1.2, prices for conventional bananas have risen steadily since 2004, whereas organic prices have fluctuated. As a result, the premium has contracted. In 2007, the organic price was high, but the conventional price reached an all-time high, which led to a rather small premium (less than 25 percent as opposed to nearly 77 percent two years earlier).

Figure 38 - Unit value of exports of conventional bananas and minimum Fairtrade FOB price for the Dominican Republic



Sources: FAOSTAT, Comtrade, FLO and CEI-RD

The Dominican Republic focuses its organic exports on a handful of markets. Europe accounted for 96 percent of the value exported between 2004 and 2007, with the top four markets representing 94 percent. It is interesting to examine which markets are the most profitable for organic banana exports. Figure 39 displays the average unit values of exports by main countries of destination. As seen in Chapter II, the United Kingdom is the primary market for Dominican bananas, accounting for nearly three-quarters of the export value in the period 2004-2007. The reason appears clearly from the figure. Only Sweden had, at times, prices that were similar to those for the United Kingdom, but demand is much lower due to the small population.

When examining the variations in the organic price premium across European destinations, one can observe some convergence over time (Figure 40). The premium has tended to fall in the markets where it was above the

Table 20 - Value of banana exports from the Dominican Republic (USD)

	Organic	Conventional	Total	Organic %
2004	11 871 035	9 627 531	21 498 566	55
2005	23 040 880	21 977 896	45 018 776	51
2006	25 573 228	28 694 230	54 267 458	47
2007	26 330 708	43 803 319	70 134 027	38

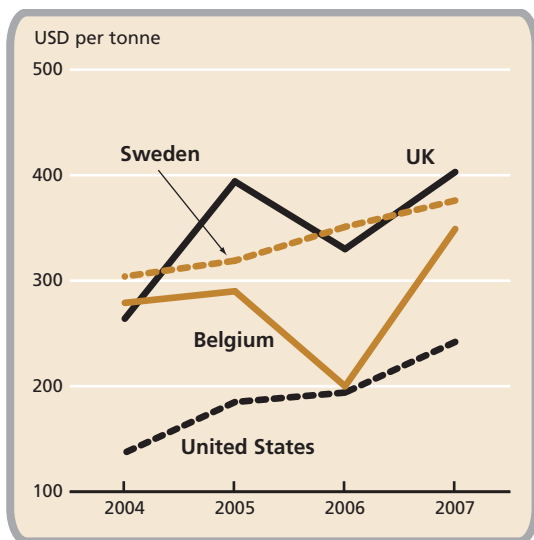
Source: CEI-RD (2008)

European average (e.g. the United Kingdom, Belgium) while it has risen in the other markets (Germany, the Netherlands). As a result, the premium was in a much narrower band across European destinations in 2007 than it was a few years earlier (20 to 60 percent as opposed to 10 to 100 percent in 2005). This development may reflect the ongoing integration of the European market for organic bananas.

Analysis at importer level

In order to examine import prices over a longer time period and compare them with the available export prices, the unit values of banana imports from the Dominican Republic were computed as a proxy for prices since these were unavailable. Since none of the organizations that collect official import statistics distinguishes between certified and conventional bananas, an estimate was calculated in the following way. The shares of organic bananas in total banana exports from the Dominican Republic were calculated both in value and volume. The total value and volume imported from the Dominican Republic into the European Union as reported by Eurostat were respectively multiplied by these coefficients and then

Figure 39 - Unit value of organic banana exports to main markets



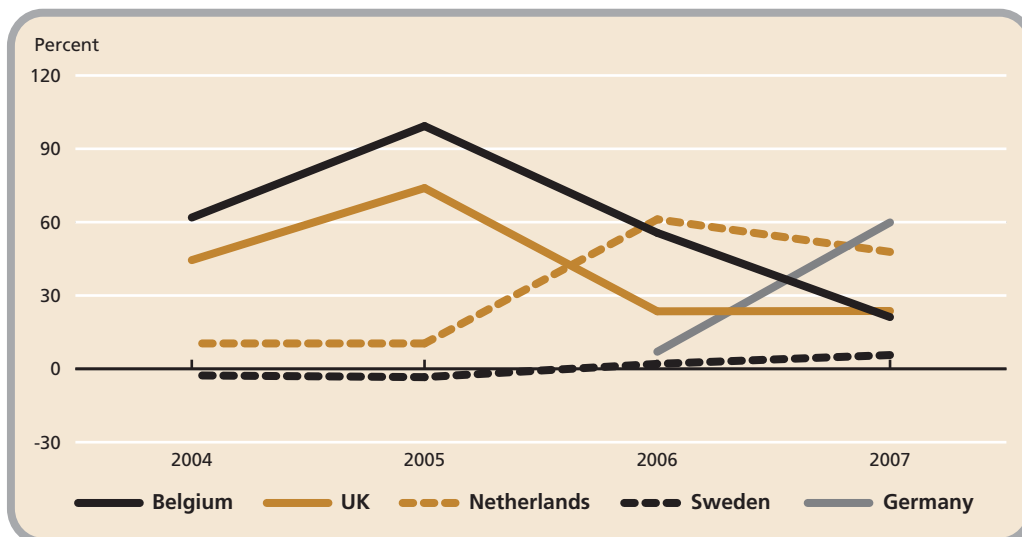
Source: CEI-RD (2008)

divided by each other. Although this method is not perfect, it is the only means of obtaining a proxy for the import price in the absence of reliable data. The results are displayed in Figure 41. High import prices are observed again. They exhibit wider fluctuations than export prices. The price premium for organic bananas at import level varies broadly over time, rising as high as USD 620 per metric tonne in 2005. However, it has contracted in recent years due to the decrease in the organic price and the moderate rise of the conventional price. The organic price appears more stable: it fluctuates in a narrower band than the conventional price, both at import and export levels. It is interesting to note that the prices at export and import levels move in the same direction, except for the year

2005, which was a very atypical year in the EU banana market due to the recent admission of ten new member states.

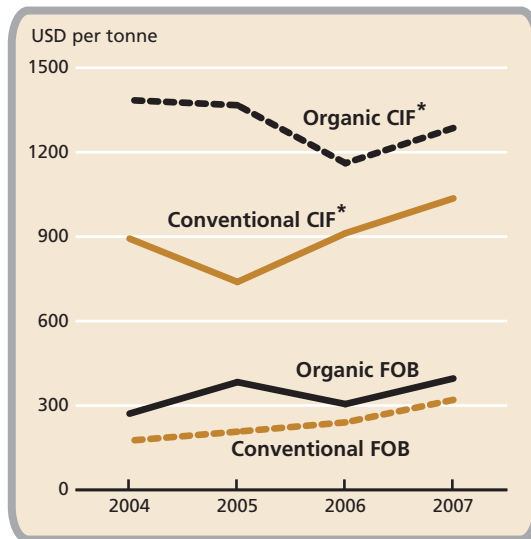
In order to obtain a better estimate of the price premium at import level, import prices for Dominican bananas could be found for the period August 2007-March 2008. They are displayed in Figure 42. The prices of conventional bananas from the Dominican Republic were not available for this period but the average price of bananas imported the EU-15 from all origins is displayed in the chart. The figure shows that the price premium virtually disappeared in March 2008 when conventional banana prices reached a record level. There was a premium for double certified organic and fair-trade bananas of some USD 200 per tonne over the price of organic only. The premium decreased in March 2008 as the price of conventional bananas rose.

Figure 40 - Organic banana price premium at FOB level by country of destination



Source: CEI-RD (2008)

Figure 41 - Unit values of bananas exported from the Dominican Republic to the European Union



Sources: Eurostat (2008) for imports and CEI-RD (2008) for exports
(*): constructed import prices

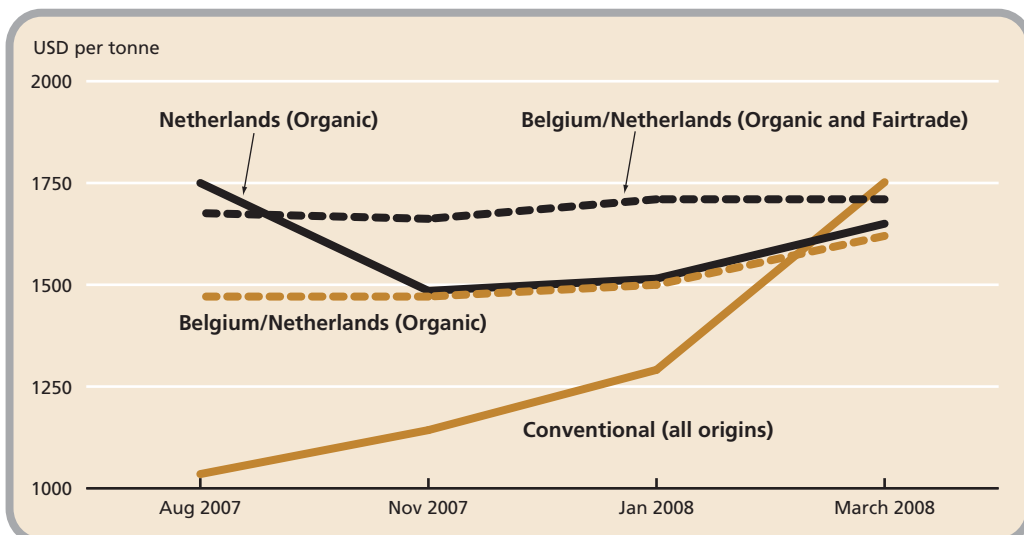
Analysis at wholesale and retail levels

Once more, the lack of data is a major hurdle when trying to analyse the behaviour of organic banana prices at wholesale and retail levels. France is the only substantial European market where official prices for organic bananas at both wholesale and retail levels could be found for a significant period of time. These data are regularly collected and published by the French Service des Nouvelles des Marchés (Market News Service). Although it is a smaller market than the United Kingdom and Germany, France consumes substantial quantities of organic bananas. Also, there is evidence that the market of the countries that are members of the euro zone is highly integrated. Hence, the French market can be assumed to be representative of other euro zone's markets. These prices are displayed

in Figure 43 for the period 2006 to early-2008. They relate to a mix of origin countries designated as "America" which includes the Dominican Republic, Peru and Colombia.

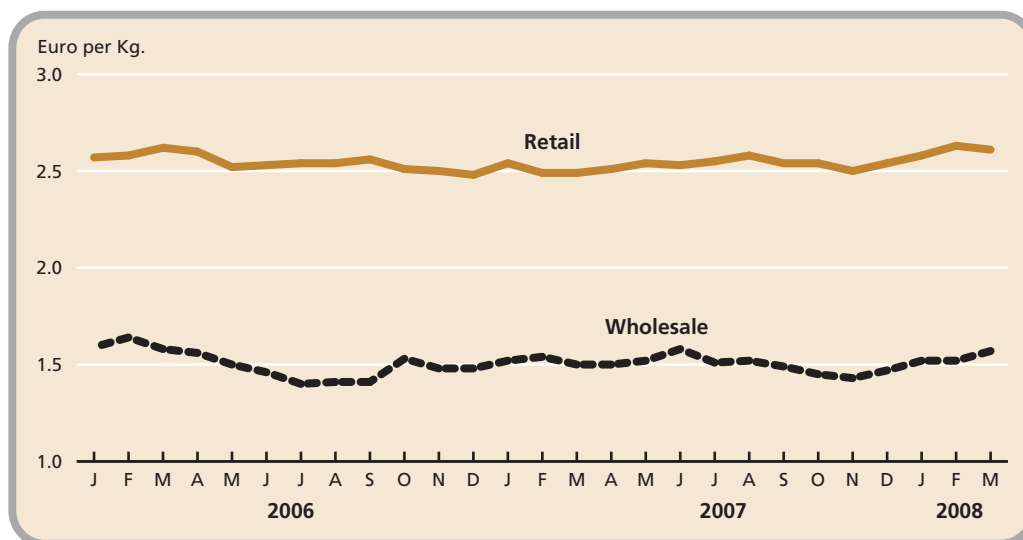
As can be observed, prices were relatively stable during the period considered. The retail price was almost always above €2.5 per kg while the wholesale price fluctuated around €1.5 per kg. The average difference retail/wholesale was important: approximately €1 per kg or 155 percent over the period. This percentage difference is more than double the retail/wholesale difference for conventional bananas, which was on average 64 percent (€0.76 per kg) as shown in Figure 44.

Figure 42 - Import prices of Dominican organic bananas in Europe (EXW)



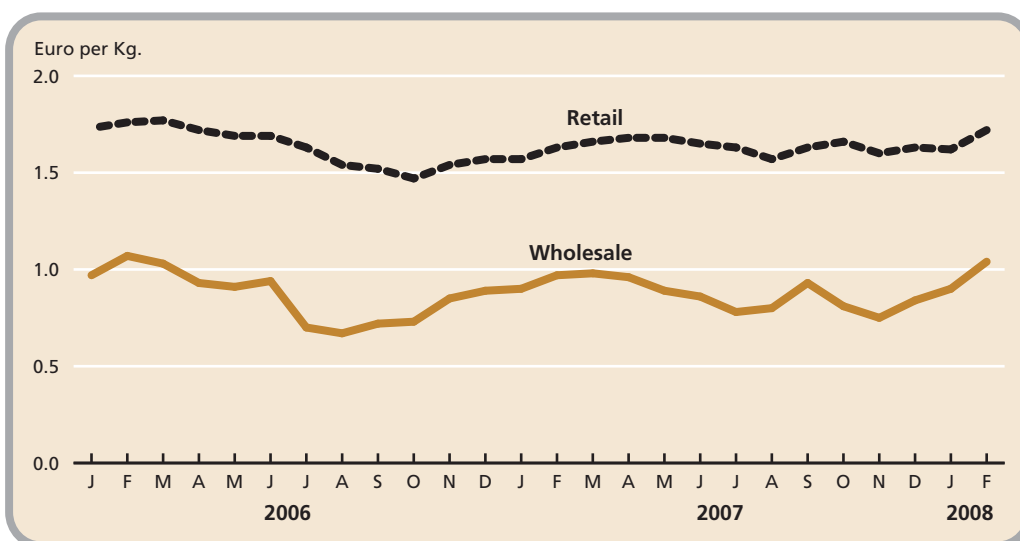
Source: ITC Market News Service (2008) and Corbana (2008) for onventional prices

Figure 43 - Monthly wholesale and retail prices for organic bananas in France (origin: Americas)



Source: Service des Nouvelles des Marchés (2008)

Figure 44 - Monthly wholesale and retail prices for conventional bananas in France (origin: Americas)



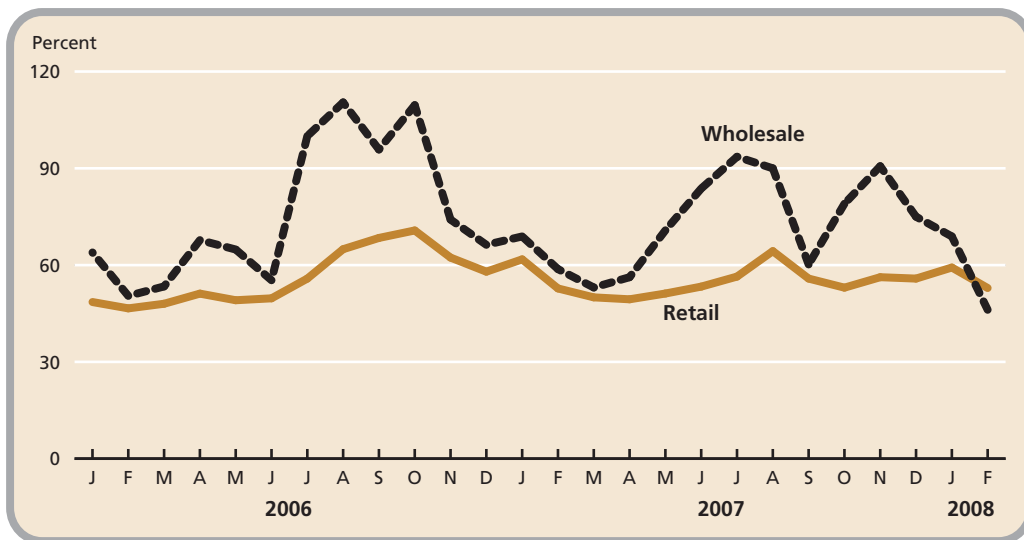
Source: Service des Nouvelles des Marchés (2008)

The organic price premium expressed in percentage was analysed. The results (shown in Figure 45) show that the premium is more stable at retail than at wholesale level but it is larger at wholesale level. At retail level, it fluctuates in a 46 percent to 71 percent range. At wholesale level, its fluctuation range is 46 to 110 percent. Table 21 below shows that the annual average premium rose in 2007 from its level of 2006.

Price distribution along the supply chain

A large share of the bananas found on the French market is imported through Belgium and the Netherlands. Therefore, the import price needs to be considered in these countries. Since the euro zone functions to a large extent as a unified market, this assumption is justified. The unit value of exports to these two countries was calculated for both

Figure 45 - Difference (%) between organic and conventional prices at wholesale and retail levels



Source: Service des Nouvelles des Marchés (2008)

Table 21 - Organic price premium for bananas at wholesale and retail levels in France (in percentage)

	Org./Conv. % Average Difference (Retail)	Org./Conv. % Average Difference (Wholesale)
2006 (average)	56.08	75.99
2007 (average)	64.35	82.91
2008 (2 months)	56.07	57.51

Source: Service des Nouvelles des Marchés (2008)

organic and conventional bananas. The real import price for organic bananas in these countries as collected by the ITC for the period August-November 2007 was used. A better estimate of the unit value of imports of conventional bananas from the Dominican Republic was computed using this price and the total import figures of Eurostat. The result found was tested by comparing it with the average FOR (free on rail) price for bananas imported into the EU-15 from all origins during the same period as published in the Notifax bulletins. The former was 18 percent below the latter, which is reasonable given the fact that FOR prices are above CIF prices and that the Dominican Republic is known to be a competitive supplier.

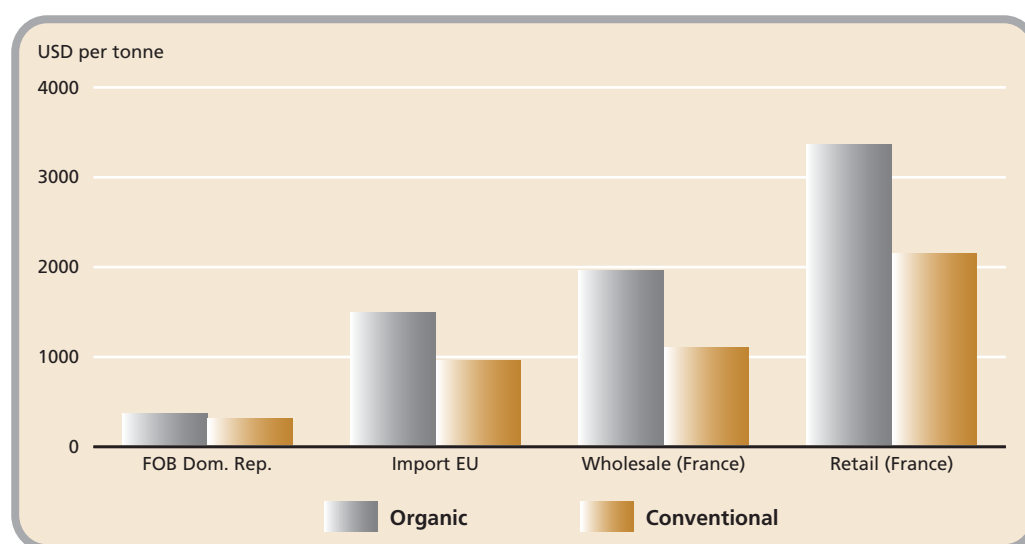
The results are presented in Table 22. As can be observed, the price difference along the supply chain is the highest between the export and import levels. This is consistent with the findings presented above and reflects transportation and handling costs. Conversely, the difference appears small between the import and wholesale levels, especially for conventional fruit. This is surprising, as the difference is supposed to cover ripening and transportation costs overland from the harbour (Rotterdam or Antwerp) to France. The retail difference is high, but more for conventional bananas than for the organic ones. Again, this may be explained by an attempt by retailers at limiting the level of organic prices (much higher than conventional ones) to encourage organic banana sales. The organic price premium rises along the supply chain (it doubles between the FOB and CIF levels) up to the wholesale level (where it is over three times its FOB value) but contracts slightly at the retail level²⁰ (Figure 46). Nevertheless, it remains high in absolute value: in France in

²⁰ His finding is consistent with the results of Kilian et al. (2005) for Latin American bananas exported to

Table 22 - Estimated prices and differences of Dominican bananas along the supply chain to France in 2007

2007 USD/MT	Est. FOB DR	Import price EU	Diff. %	Wholesale (France)	Diff. %	Retail (France)	Diff. %	Export price (%)
Organic	350	1 471	320	1 938	32	3 342	72	11
Conventional	288	941	227	1 082	15	2 125	96	13
Organic premium %	22	56		79		57		

Sources: CEI-RD, ITC MNS, French MNS (2008)

Figure 46 - Estimated prices of Dominican bananas along the supply chain to France in 2007

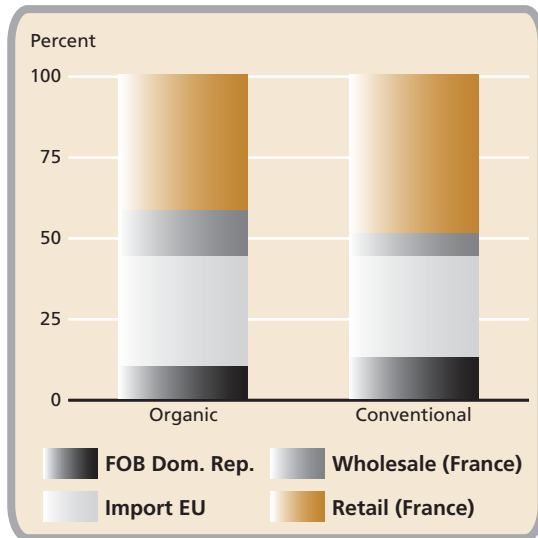
Sources: CEI-RD, ITC MNS, French MNS (2008)

2007 on average organic bananas cost almost one euro more per kg than conventional ones. The exporter obtained only a fraction of this premium (less than €0.05 per kg). As Figure 47 shows, retailers obtain the highest share of the retail price (over 40 percent). CIRAD (2008) found a similar percentage. Yet, the value chain for organic bananas is less dominated by retailers than that of conventional bananas. However, this situation does not benefit the exporting countries, as the value is captured by importers/wholesalers. The share of the retail price that goes to the exporter is larger for conventional than for organic bananas (13 percent against 10 percent). In view of the higher costs of organic banana production, this finding raises questions on the returns to investments in organic banana production in the Dominican Republic.

The analysis was repeated using the unit value of imports constructed from Eurostat data for the years 2007 (instead of collected import prices) and 2006. Very similar results were found: the price difference is greatest at the exporter to importer level and the wholesale price difference is relatively small for conventional bananas.

The same analysis was repeated with Germany, for which retail prices are available for the whole year 2007. Wholesale prices could be found for the second half of 2007 only. The results are presented in Table 23 and figure 48.

Figure 47 - Price distribution along the banana supply chain Dominican Republic to France in 2007 (as percentage of retail price)



Sources: CEI-RD, ITC MNS, French MNS (2008)

Analysing the evolution of price along the supply chain, it can be observed that the largest price difference is between the FOB and importer stages, but the difference is comparable for organic and conventional bananas. As in the case of France, the lowest price difference is between the import and wholesale stages. The difference between the wholesale and retail prices is similar to France for organics: in both countries, retailers capture some 40 percent of the retail price. However, for conventional bananas it is much lower in Germany. Indeed, the retail stage accounts for less than 30 percent of the conventional retail price in Germany (Figure 49) as opposed to almost 50 percent in France. This difference might be explained by the fact that competition in the conventional banana market is more

intense in Germany partly due to the presence of discount store chains. The organic price premium is relatively stable along the supply chain. It is lower than in France at wholesale level but similar at retail level.

In Germany retail prices are lower than in France for both organic and conventional bananas (Figure 48). Combined with the higher FOB prices for bananas exported to Germany, this results in higher export/retail price ratios to exporters. The percentage of the retail price that goes to the exporter is 15 percent for organic bananas exported to Germany while it is 10 percent to France. This advantage is reflected in the larger quantities exported to Germany. The price premium is slightly above USD 1/kg at retail level and USD 0.15/kg at exporter level (14.5%).

Figure 48 – Estimated prices of Dominican bananas along the supply chain to Germany in 2007

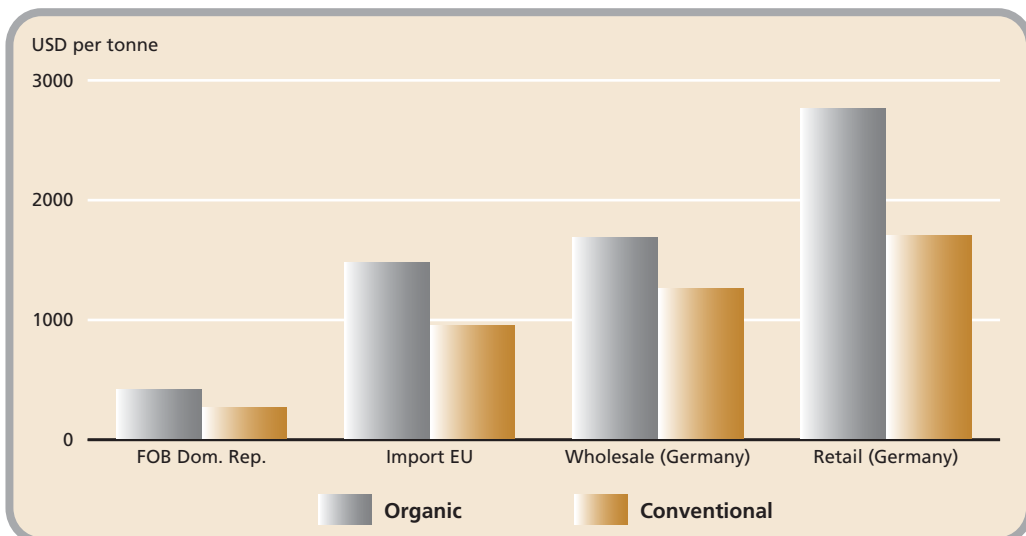


Figure 49 – Price distribution for Dominican bananas along the supply chain to Germany in 2007 (as percentage of retail price)

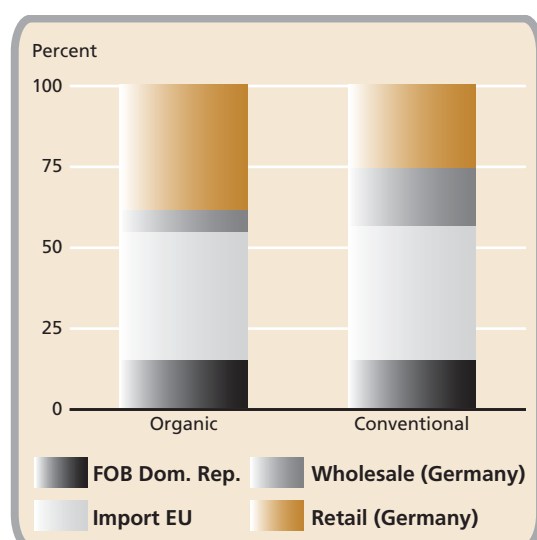


Table 23 - Estimated prices and differences of Dominican bananas along the supply chain to Germany

2007 USD/MT	FOB DR	Import EU	Diff. %	Wholesale (Germany)	Diff. %	Retail (Germany)	Diff. %	Export as % of retail
Organic	412	1 471	257	1 675	14	2 750	64	15
Conventional	258	941	265	1 251	33	1 691	35	15
Organic premium %	60	56		34		63		

Sources: CEI-RD, ITC and ZMP (2008)

B. Peru

Peru's exports of organic banana have risen rapidly since 2000 and exceeded the value of USD 30 million in 2007, accounting for approximately 2 percent of total agricultural exports. Until 2006, the United States was Peru's main market, but it was taken over by the European Union in 2007. Shipments to the European Union trebled from early 2006 to end 2007 (Figure 50) and the European Union accounted for nearly two-thirds of the export value (Table 24). This surge may be partly explained by the fact that rising quantities of Peruvian bananas are also Fairtrade certified. Another cause is the reform of the EU banana import system. Until December 2005, Peru's exports were constrained by the system of tariff quotas. As Peru is a relatively recent origin for banana supply and not an ACP country, importers of Peruvian bananas did not have easy access to import licenses and had to purchase them from other importers at a high price. This made exporting to the United States, where banana entered duty-free without any quantitative restrictions, more profitable. In January 2006 the European Union's quota system was replaced by a tariff-only system, whereby bananas from non-ACP third countries pay a duty of €176 per tonne but are no longer subject to quantitative restrictions. The higher level of prices in the European Union makes it more profitable to

Table 24 - Value of Peruvian organic banana exports by destination (in USD) 2004-2007

	USA	EU	Asia	AL	Total USD
2004	4 690 387	4 332 588	1 453 338	75 805	10 552 118
2005	9 346 000	6 389 616	1 823 366	29 628	17 588 610
2006	12 213 190	12 168 185	2 084 179	76 860	26 542 414
2007	8 118 799	19 289 789	3 795 205	37 684	31 241 477

Source: PromPex (2008)

export there in spite of the tariff. As a result, Peruvian exporters have increasingly shifted their exports towards the European Union away from the United States since 2006. This strategy is better understood when examining the unit value of exports according to the destination (Table 25). The values have been consistently greater in the European Union than in the United States. They have increased steadily, as a rising number of farmer groups obtained Fairtrade certification and were able to obtain a higher price (Soldevilla, 2008). It is interesting to note that the values can be extremely high in Asia (mainly Japan), which may explain why exports to this market have expanded, but they are subject to large fluctuations.

Since Peru exports organic bananas only, the organic price premium cannot be computed directly. However, it is interesting to compare its prices with those of Ecuador²¹. Ecuador and Peru are neighbouring countries located in the same geographical area with similar climates. Their banana sectors present many similarities in terms of agro-ecological, social and economic conditions. Although there are large plantations operating in Ecuador, production mainly originates from locally-owned small and medium-sized farms, as is the case in Peru. The bulk of Ecuador's exports being conventional bananas, the average unit value of its banana exports can be considered a good proxy for the FOB price of conventional bananas. The percentage differences displayed in Table 26 below can give some indications on the 'price premium' for Peruvian organic bananas. The constructed 'premium' averaged USD 180 per tonne over the period 2004-2006. In percentage terms, it ranged between 70 and 94 percent.

Since the United States was the main market for Peruvian bananas until 2006, it is interesting to analyse the value chain. The unit value of exports and imports to the United States were used as proxies for FOB and CIF prices respectively. Prices for organic bananas are available for some wholesale markets (Boston, San Francisco) through the USDA's Agricultural Marketing Service (AMS). However, it was not possible to find useful data on retail prices. The analysis was therefore performed from the export to the wholesale stages. The results are displayed in Table 27 and Figure 51. The constructed organic 'price premiums' (in %) are almost identical at export and import level. The 'premium' is lower at wholesale level. The exporter-to-importer price difference is relatively low. The

Table 25 - Unit value of Peruvian organic banana exports by destination 2004-2007 (USD/MT)

	USA	EU	Asia
2004	384	381	818
2005	405	412	436
2006	463	466	469
2007	454	487	895

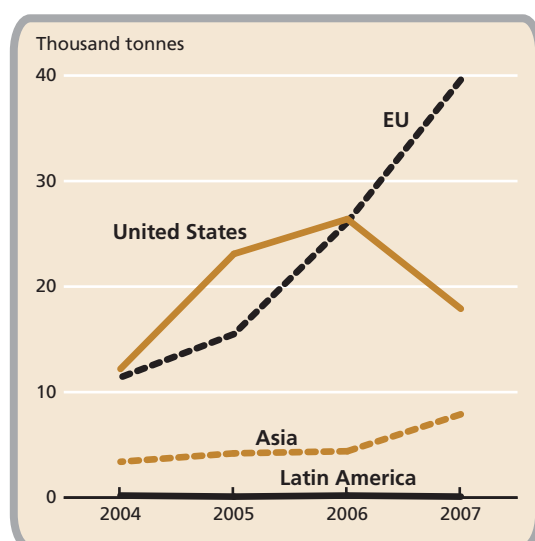
Source: PromPex (2008)

²¹ It would have been interesting and logical to compare the prices of organic and conventional bananas from Ecuador but the former were not available.

Table 26 - Unit value of banana exports from Peru and Ecuador (all destinations, 2004-2007, in USD/MT)

Year	Peru Organic	Ecuador Conventional	Difference %
2004	388	229	69
2005	410	225	82
2006	465	265	75
2007	477	246	94

Sources: PromPex and COMTRADE (2008)

Figure 50 - Variations in Peru's organic banana exports by destination, 2004-2007

Source: PromPex (2008)

export and import prices is considerable (over 130 percent), especially in the case of conventional bananas from Ecuador. Generally speaking, import prices are much higher than in the United States. In their study Kilian *et al.* explained the difference by the import quota system that was then in force in the European Union. However, the above figures relate to 2006, the first year of the tariff-only system, when quantitative restrictions no longer existed. Part of the difference may be explained by the tariff of €176 per tonne

Table 27 - Estimated prices along the banana supply chain: Peru and Ecuador to the United States (2006)

USD/MT	Export price	Import price (USA)	Difference %	Wholesale price (USA)	Difference %
Organic (Peru)	463	580	25	1 131	95
Conventional (Ecuador)	279	346	24	825	138
Estimated 'organic premium' %	66	68		37	

Sources: PromPex, COMTRADE and USDA-AMS (2008)

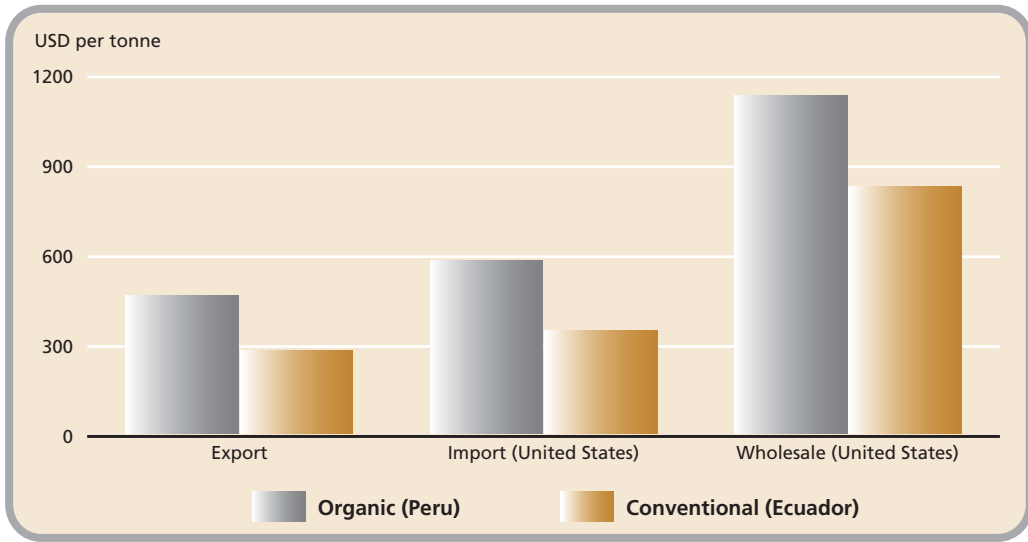
importer-to-wholesaler difference is higher for conventional Ecuadorian bananas. As can be seen in Figure 52, Peruvian exporters obtain a higher share of the wholesale price than Ecuadorian exporters. The same analysis was done for the year 2007 and similar results were found.

Comparison United States-European Union

Since Peru has become a substantial supplier of the European Union, it is useful to compare the value chains to the United States and the European Union. In 2006, Peru's banana exports were almost equally split in value between these two markets, and together they accounted for 92 percent of the total export value. Table 28 below shows the result of the analysis, using the unit values of exports and imports as a proxy for import prices. The wholesale and retail prices in France are the same as those used in the previous section on the Dominican Republic (they are understood to include a mix of bananas from the Americas including the Dominican Republic and Peru). No price data were available for a single country of origin.

Unlike what was observed with the United States, the difference between

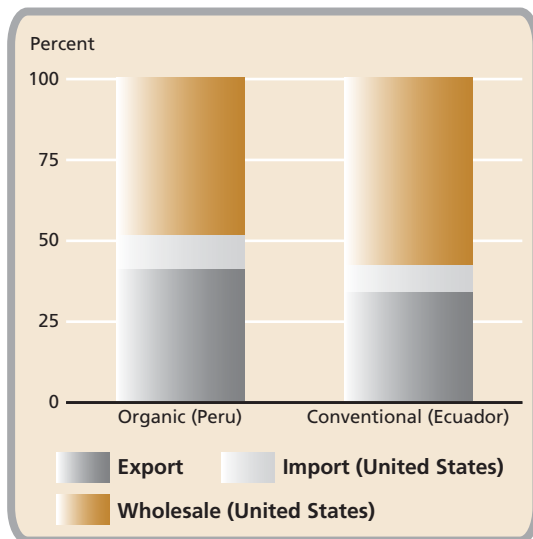
Figure 51 - Prices along the banana supply chain: Peru and Ecuador to the United States in 2006



Sources: PromPex, COMTRADE and USDA-AMS (2008)
 Note: conventional wholesale price for all Latin American origins

(USD 258 at the exchange rate of 2007) and the higher transportation costs due to the longer distance between the European Union and the two Andean countries, but this is not sufficient to cover the difference. Consequently, it can be inferred that there are some rigidities and market power in the European import industry that enables importers to extract a greater margin. On the other hand, the share of the retail price that goes to retailers is higher than that found for the year 2004 by Kilian *et al.* (2005). This may reflect the effects of the liberalization of the EU banana import system in 2006.

Figure 52 - Distribution of banana prices along the supply chain: Peru and Ecuador to the United States (as percentage of wholesale price)



Sources: PromPex, COMTRADE and USDA-AMS (2008)
 Note: conventional wholesale price for all Latin American origins

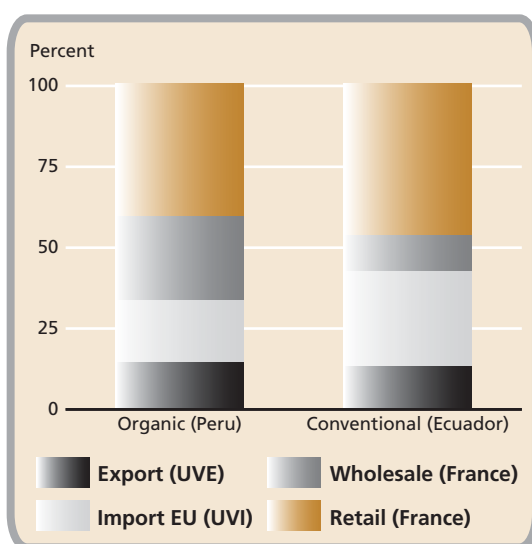
The import-to-wholesale difference is high for organics but relatively low for conventional fruit. The percentage of the retail price that accrues to Peruvian exporters is 14 percent, a higher value than the percentage obtained by Dominican exporters (11 percent), reflecting a higher FOB price for Peru. It is similar to the percentage found for conventional bananas from Ecuador (13 percent). The estimated 'price premium' at retail level is approximately USD 1.2/kg while at it is USD 0.19/kg at FOB level (16%).

The estimated 'organic price premium' (in %) is much lower at import level than at export level, which reflects the very high import margin for conventional bananas. It rises at wholesale level but decreases at retail level.

Table 28 - Estimated banana prices along the supply chains: Peru and Ecuador to France in 2006

2006	Export USD/MT	Import EU USD/MT	Diff. %	Wholesale (France) USD/MT	Diff. %	Retail (France) USD/MT	Diff. %	Export/retail price (%)
Organic (Peru)	466	1 099	136	1 978	80	3 350	69	14
Conventional (Ecuador)	274	891	225	1 141	28	2 152	89	13
Est. 'organic premium' %	70	23		73		56		

Sources: PromPex, Comtrade, Eurostat and SNM (2008)

Figure 53 – Distribution of banana prices along the supply chains from Peru and Ecuador to France (as percentage of retail price)

Sources: PromPex, Comtrade, Eurostat and SNM (2008)

C. Discussion

Exporter and producer prices

The above analyses found that there is a price premium at FOB level for developing countries exporting certified bananas. The size of the premium varies substantially across producing countries, over time and depending on the chosen standard. The Fairtrade guaranteed minimum price was found to vary from 20 to 50 percent above the average unit value of exports depending on the country. The analysis suggests that the organic price premium is higher for Peruvian bananas than for bananas from the Dominican Republic. In the latter, the organic FOB price premium fluctuated between 22 and 77 percent over the period 2004-2007. The variations in price premiums are mainly due to the fluctuations of the price for conventional bananas, as the

price of certified bananas tends to be more stable over time. The comparison of the two standards examined in this report suggests that not only Fairtrade FOB prices are more stable than organic FOB prices due to the existence of the guaranteed minimum price, but in addition they tend to be higher. The stability of prices is an important element for exporters and growers, as it can give them the visibility necessary to make investments.

It would have been useful to determine to what extent higher FOB prices lead to higher prices for growers. Evidence for the year 2004 suggests that growers do obtain substantially higher prices for certified bananas, but the more recent analyses presented above could not go beyond the exporter level due to the lack of data on producer prices. When producer groups export directly, which is the case of most fair-trade groups in Latin America, the FOB price premium can give useful indications about the farmgate price. However, when producers sell to an independent exporter, a case which is not uncommon in the organic banana sector, the price they obtain cannot be inferred from the exporter's price.

Price distribution in the value chain

The distribution pattern of the value generated by certification at consumer level has important implications for the economic development of the exporting countries. In view of the consumer surveys showing that the high price of certified products is a critical constraint to market development, one would hope that a large proportion of the price premium paid by consumers is redistributed to the producers. Yet, the value chain analyses suggest that a relatively small share of the premium accrues to the exporting country. Most of it is captured by downstream operators in the import market. The redistribution of value to the producing country depends on the type of certification system and the export market. There is some evidence that the FLO system, which guarantees a minimum Fairtrade price and a price premium, redistributes more value to growers than organic and conventional bananas. This is consistent with FLO's declared objective of raising the percentage of the consumer price that goes to growers. The example of Peru shows that Fairtrade certification raises the average FOB price of organic bananas.

There is no price guarantee in organic agriculture, but there usually is a price premium resulting from consumer preference for organic foods. This premium is not distributed evenly along the supply chain. While the premiums found generally exceeded one dollar per kg at retail level, they only ranged between 5 and 20 US cents per kg at exporter level (accounting for between 5 and 16 percent of the premium at retail level) depending on the exporting and importing countries examined. In percentage terms, the premium varied along the supply chain and was at its maximum at the wholesaler/distributor level.

Analysing the evolution of prices along the supply chain, it was found that retailers capture the largest share of the retail price. In the cases presented above this share ranged between 40 and 48 percent. This situation highlights the strong bargaining power of large-scale retailers. The control of the conventional banana chain has gradually shifted away from trading companies towards supermarket chains since the 1990s. This change can be explained by two factors. First, the retail sector has undergone unprecedented concentration over the past 20 years. Second, the banana industry has become more fragmented during the same period, as the combined market share of the leading three multinational companies contracted. A similar development may be occurring in the value chains for certified bananas, especially in the United States, where the analysis suggests that retailers capture a large proportion of the value generated by certification. Their estimated margin is slightly higher for organic bananas than for conventional ones. However, this may not necessarily mean that they totally control the organic value chain. The importation and distribution of organic bananas is relatively concentrated in the United States, with one company playing a central role. The ability of retailers to take a large margin on certified bananas may also derive from the fact that prices for all types of banana were low in the United States in the period covered by the study.

The trend towards more retailer power is less evident in the European market for certified bananas, where importers still manage to capture a substantial share of the value added by organic certification. The analyses tend to indicate that they take a high margin on certified bananas. Conversely, the estimated retailer margin is lower for certified than for conventional bananas. This may reflect a relatively high bargaining power of the specialized organic produce importers, and could indicate that they retain some control over the value chain for organic bananas in Europe. Faced with high supplier prices for organic bananas, EU retailers may have limited their margin in order to avoid discouraging clients with excessive retail prices and promote consumption of a product for which they see a high growth potential. Interestingly, data for an earlier period (2004) evidenced a lower percentage of the organic retail price accruing to retailers. The fact that this share had increased in 2007

might reflect the first effects of the liberalization of the EU banana market, which is viewed as favourable to retailers due to the resulting increase and fragmentation of supply.

Regardless of the export market, the comparison of the organic and conventional supply chains suggests that the price difference between two links of the chain is higher in the organic chain. The difference between the two chains may be partly explained by higher costs in the organic chain. The prohibition on the use of chemical fungicides and preservatives may raise fruit losses at all stages of the chain. Also, the volumes are much lower in the certified banana trade, providing less scope for economies of scale. This raises the unit cost of all operators and makes the organic chain less efficient. However, there is a suspicion that higher margins in the organic chain also contribute to the difference. It would have been useful to examine the profit margins of operators at the various stages of the chain. Regrettably this was impossible due to the lack of data on costs. Yet, it is likely that the extra costs entailed by certification vary widely along the chain. In particular, growers bear a large share of the extra costs of organic banana due to the technical challenges of organic cultivation in tropical countries, where diseases such as Black Sigatoka are prevalent and difficult to combat with organic inputs. However, the export/retail price ratio of organic bananas tends to be similar to that of conventional bananas. The analysis suggests that the share of the retail price received by organic exporters ranges between 10 and 15 percent, a range which does not differ much from that of conventional bananas. Thus, despite the existence of an organic price premium at exporter level, it seems that the share of the consumer price premium that trickles down to producing countries is not commensurate with their extra costs. Field studies are needed to obtain more data on the costs of organic cultivation.

In short, the marketing chains for organic and fair-trade bananas are affected by distortions which have two negative effects. First, they prevent developing country producers from reaping the full benefits of implementing sustainable agriculture standards. This reduces the returns to investment in sustainable production and the incentives for growers to adopt such standards. Second, they impede the expansion of the markets for certified bananas by generating high retail prices. Consequently, market failures limit the potential of certification systems to contribute to sustainable development. Policy interventions may partly remedy these failures. Some suggestions are made in the next chapter.

Methodological issues

It is important to note that the analyses were constrained by the lack of reliable data and, therefore, their results should be taken with caution. They can only indicate general trends that should be validated by more detailed studies. The lack of data on farmgate and FOB prices for organic bananas is a major constraint. Even the official data available on export values and quantities that were used to estimate FOB prices are subject to caution. Also, while more data on import, wholesale and retail prices for organic bananas have become available recently in a few developed countries, these data are still limited and do not distinguish between countries of origin, thus making value-chain analysis less accurate. Farmer organizations, trade associations and government agencies in the major supplying countries would benefit from the development of national systems to collect import and retail prices.

Finally, the high degree of vertical integration of the banana industry is another constraint. Integrated companies account for a substantial share of conventional banana exports. Similarly, large volumes of certified bananas are shipped directly by farmer organizations to specialized importers who ripen and distribute them to large-scale retailers. Therefore, a substantial share of the trade takes place within firms, making value chain analysis more difficult.

CHAPTER V: CONCLUSIONS AND RECOMMENDATIONS

1. CERTIFICATION HAS BECOME WIDESPREAD IN THE BANANA INDUSTRY

Within the fresh produce sector the banana export industry is by far the leader in the use of voluntary certification. There are several reasons for its widespread adoption of certification. First, voluntary certification is a means of responding to growing concerns among consumers and NGOs over the industry's environmental and social performance. These concerns played a significant role in the decision of some multinational fruit companies, in particular Chiquita and Dole, to have part or all of their operations certified to social (e.g. SA8000) or/and environmental standards (e.g. Rainforest Alliance, ISO 14001, organic). Second, it is a strategy to differentiate products and add value. Diversifying into higher-value products is a basic strategy to maintain profit in a market that has been characterized by surplus and decreasing returns to investments by producers and traders. Finally, the highly concentrated and vertically-integrated nature of the industry facilitates the adoption of standards.

There is a wide array of voluntary certification schemes used in the banana industry, and they differ significantly in their objectives, scope, advantages and constraints. Among the environmental and social standards, the most common ones in the industry are Rainforest Alliance, ISO 14001, organic agriculture, SA8000 and fair-trade. Some of them use on-product labels that target consumers with a view to harnessing premium market segments. The segmentation of the banana market is a relatively new phenomenon. Until the 1990s bananas were marketed as a uniform mass commodity, whereas today it is relatively common to find at least three types of bananas in Western European supermarkets. A rising number of banana producers use environmental and/or social certification. Aggregate exports of bananas certified to one of the leading three environmental and social standards were estimated at over 2 million metric tonnes in 2007, accounting for close to 15 percent of global banana exports.

2. PROSPECTS FOR FURTHER GROWTH IN THE MARKETS FOR ORGANIC AND FAIR-TRADE BANANAS

Among the many voluntary certification systems that are available to the banana industry, fair-trade and organic agriculture stand out for their premium prices, recognition by consumers and market growth. Europe and North America are by far the largest markets for organic bananas, accounting for over 90 percent of global imports. As regards fair-trade bananas, sales are overwhelmingly concentrated in Europe (98 percent of global imports in 2007). The exact value of retail sales is unknown due to the lack of price data, but a global value of US\$800 million in 2006 for both products can be taken as a conservative estimate. In view of the rapid growth of sales and prices in the past two years, it is very likely that this value exceeded US\$1 billion in 2008. Consumption has soared since the late 1990s. Global sales of organic bananas rose ninefold over the ten-year period 1998-2007, while those of fair-trade bananas have been multiplied by 5 in the five years since 2003. While a deceleration is forecast, the drivers of the rapid market expansion observed in the past decade are likely to remain prominent. Four key factors will influence the future growth rate:

- Continued focus by consumers on health and ethical issues in food production
- The conflicting trends towards consumption of locally-produced foods and globalization of the market
- The effects of the commodity price surge on sales and the duration of the economic crisis that started in 2007
- The role of large-scale companies and their rising involvement in the market

The market growth will continue to be mainly driven by changing consumer preferences. In developed countries, consumers are increasingly attentive to the preservation of the environment, social equity, working conditions and labour rights. Also, the growing focus on the health value of foods will favour the consumption of organic bananas. However, certified bananas will need to respond to consumers' multiple and sometimes conflicting demands that encompass all the dimensions of sustainable development. Consequently, the market segment of double-certified organic and fair-trade bananas is forecast to enjoy the strongest expansion provided output can keep up with the rise in demand. Prospects are for further consumption growth in the European Union, where the recent liberalization of the banana market makes it now easier for smaller-scale exporters and importers to sell fruit. The market has become more open and competitive, and this should favour innovative products such as certified bananas. In the United States, sales of organic bananas are expected to accelerate once the economic crisis is over. The future of fair-trade bananas is more difficult to predict. Developing this market in North America will require powerful awareness-raising and advertisement campaigns and the serious involvement of at least one large supermarket chain.

Beside higher per capita consumption in well-established markets, global sales growth is also forecast to be fuelled by a spread to new areas (Asia, Eastern Europe and Latin America). Consumption of organic foods has expanded markedly in Asia in the wake of economic development and rising purchasing power. The Asian market has considerable potential for further growth. Japan offers good export opportunities but the pace of growth will be influenced by the application of phytosanitary measures (in particular fumigation) at the ports of entry. Consumption of organic bananas is expected to rise rapidly in other East Asian countries such as China, Republic of Korea and Malaysia. However, the development of domestic production in China needs to be taken into account. Consumption of certified bananas is forecast to rise steadily also in Eastern Europe owing to the integration of the regional economy and the rising level of incomes.

In theory, the debate on food miles and the rising preference for locally-produced foods might possibly have a negative influence on banana consumption, since the bulk of bananas consumed in developed countries are imported. However, the extent to which consumers are sensitive to this argument is unknown. Even if it had an impact on conventional banana sales, marketers of organic and fair-trade bananas could claim that these products should be considered differently due to their environmental friendliness and social development advantages. In any case, the concept of "food miles" is too narrow to be used for assessing environmental performance. Rather, a full life cycle analysis, from the production to the disposal of the product should be used. Studies have shown that when the whole life cycle of products is considered, there are cases where imported products have a lower overall emission of greenhouse gases than domestic ones.

The surge in agricultural commodity prices that started in 2007 has caused widespread concerns throughout the world. Banana prices have been no exception to this general rising trend. Assuming that prices will remain high, it is difficult to assess the impacts that this development will have on demand for certified bananas, as factors play in opposite directions. A major force that drove the rise was the surge in the oil price. This factor

may favour organic bananas, as organic production generally uses less fossil fuels than conventional agriculture, where they are necessary for the production of chemical fertilizers and synthetic pesticides. Being more labour intensive, organic farming is less affected by the rise in energy prices. Therefore, production costs are expected to rise less than in conventional agricultural production. *Ceteris paribus*, the gap between the prices of organic and conventional bananas may be expected to shrink to the advantage of the former.

However, some factors in the current crisis play against certified bananas. First, even if the price of organic bananas rises comparatively less, this rise may still take the price to a level in absolute terms that few consumers will accept to pay. This effect might be compounded by the loss of purchasing power if the current economic crisis affecting the major markets endures. Press articles from the United States report that some organic farmers have gone back to conventional farming as their product prices were too high for a majority of consumers. In addition, as consumers have to dedicate a larger share of their budget to food, they may try to mitigate this increase by spending less on foods viewed as 'luxuries', including organics. Finally, as conventional farmers obtain better prices, they have less incentives to convert to organic farming (the transition may be lengthy and costly), which might slow the expansion of organic banana areas and the decrease in organic prices.

In the case of fair-trade bananas, if the current rise in conventional banana prices continues and exceeds the Fairtrade minimum price, Fairtrade growers will be paid the market price. The only difference with conventional growers as far as price is concerned will be the payment of the Fairtrade premium. Thus, Fairtrade certification is expected to become less attractive for banana growers from a purely financial perspective. Fairtrade entails other benefits such as market stability, pre-financing and capacity building, as explained in Chapter IV, but growers are not always aware of these. In any case, prices for conventional bananas are forecast to decrease in the medium term due to the current investments in new plantations and the expected slowing of demand growth.

The intensification of the economic crisis in the last quarter of 2008 curbed commodity prices to some extent and is an important demand factor. It has slowed the growth of organic sale in 2008 and will continue to have a marked impact in 2009 and possibly 2010. Yet, experts disagree on the harm it could cause to sales of certified foods, and few of them forecast an outright fall.

On the supply side, the large area of land currently in transition to organic cultivation and investments in organic production by various banana companies will raise the quantity of organic bananas available on the market. In their early years, the organic and fair-trade banana sectors were composed of small and medium farms and enterprises. As the market has grown exponentially, concentration and consolidation have occurred, leading to a higher average firm size today. In addition, some large conventional banana companies, including leading fruit multinationals, have entered the organic banana industry. For example, both Chiquita and Dole market organic bananas purchased from independent growers or cultivated in their own farms, and Dole has become the leading organic banana importer and distributor in the United States. While organics account for only a fraction of the bananas sold by the large companies, their financial and marketing powers create a challenge for smaller-scale producers. If large companies gained control over the importation and distribution of organic bananas in Europe, they would capture a large share of the price premium generated by the organic label. However, they may also be viewed as potential partners in an alliance, especially when they do not have sufficient supply. As for fair-trade certified growers, the large companies are not direct competitors since FLO focuses on small growers. It is unlikely that plantations owned by a multinational banana company will obtain Fairtrade certification.

Combined with the rising involvement of large fruit marketing firms, the expected growth in supply will lead to scale economies, rationalization and increased efficiency of the marketing channels. This should result in lower retail prices, which in turn will raise consumption. The expected market growth is likely to benefit primarily the established suppliers, in particular Ecuador and Peru. Colombia will also raise its exports if companies further invest in organic production and the political situation continues to improve. Elsewhere in South America, Bolivia has started cultivating banana organically and has the potential for becoming an exporter. Similarly, Brazil could become a substantial supplier of organic bananas thanks to its solid experience in organic cultivation and the availability of land, labour, capital and strong fruit companies. Although the Dominican Republic is expected to remain a substantial supplier, its capacity for expanding exports is constrained by climatic factors, in particular hurricanes. Sub-Saharan Africa may harness the liberalization of the EU banana market and the trade preferences granted by the European Union to raise its exports. Ghana, presently the only substantial exporter of organic bananas in the region, stands to benefit from higher European consumption. Finally, market expansion in Asia should primarily benefit exporters from the Philippines, Ecuador and Peru, although Asian newcomers such as China, Thailand and India are forecast to gain strength in the medium term.

3. BENEFITS OF ORGANIC AND FAIR-TRADE BANANAS TO DEVELOPING COUNTRIES

Do exporters obtain higher prices for their certified bananas?

The analyses presented in Chapter IV suggest that there is a price premium at exporter level for developing countries shipping certified bananas. The size of the premium varies substantially across producing countries, over time and depending on the chosen standard. The Fairtrade guaranteed minimum price was found to vary from 20 to 50 percent above the average unit value of exports depending on the country. The analysis suggests that the organic price premium (FOB) is higher for Peruvian bananas than for bananas from the Dominican Republic. The variations in the price premium over time are mainly due to the fluctuations of the price for conventional bananas, as the price of certified bananas tends to be more stable. The comparison of the two standards examined in this report suggests that not only Fairtrade FOB prices are more stable than organic and conventional FOB prices due to the existence of the guaranteed minimum price, but in addition they tend to be higher. The stability of prices is an important element for exporters and growers, as it can give them the visibility necessary to make investments.

Do exporting countries reap the full benefits of certification?

The distribution pattern of the value generated by certification at consumer level has important implications for the economic development of the exporting countries. In view of the consumer surveys showing that the high price of certified products is a critical constraint to market development, one would hope that a large proportion of the price premium paid by consumers is redistributed to the producers. Yet, the value chain analyses suggest that a relatively small share of the premium accrues to the exporting country. Most of it is captured by downstream operators in the import market. The redistribution of value to the producing country depends on the type of certification system and the export market. There is some evidence that the FLO system, which guarantees a minimum Fairtrade price and a price premium, redistributes more value to growers than organic and conventional bananas. This is consistent with FLO's declared objective of raising the share of the consumer price that goes to growers.

There is no price guarantee in organic agriculture, but there usually is a price premium resulting from consumer preference for organic foods. This premium is not distributed evenly along the supply chain. While the premiums found generally exceeded one dollar per kg at retail level, they only ranged between 5 and 20 US cents per kg at exporter level (accounting for between 5 and 16 percent of the premium at retail level) depending on the exporting and importing countries examined. In percentage terms, the premium varied along the supply chain and was at its maximum at the wholesaler/distributor level.

Analysing the evolution of prices along the supply chain, it was found that retailers capture the largest share of the retail price. In the cases presented above this share ranged between 40 and 48 percent. This situation highlights the strong bargaining power of large-scale retailers. The control of the conventional banana chain has gradually shifted away from trading companies towards supermarket chains since the 1990s. This change can be explained by two factors. First, the retail sector has undergone unprecedented concentration over the past 20 years. Second, the banana industry has become more fragmented during the same period, as the combined market share of the leading three multinational companies contracted. A similar development may be occurring in the value chains for certified bananas, especially in the United States, where the analysis suggests that retailers capture a large proportion of the value generated by certification. Their estimated margin is slightly higher for organic bananas than for conventional ones. However, this may not necessarily mean that they totally control the organic value chain. The importation and distribution of organic bananas is relatively concentrated in the United States, with one company playing a central role. The ability of retailers to take a large margin on certified bananas may also derive from the fact that prices for all types of banana were low in the United States in the period covered by the study.

The trend towards more retailer power is less evident in the European market for certified bananas, where importers still manage to capture a substantial share of the value added by organic certification. The analyses tend to indicate that they take a high margin on certified bananas. Conversely, the estimated retailer margin is lower for certified than for conventional bananas. This may reflect a relatively high bargaining power of the specialized organic produce importers, and could indicate that they retain some control over the value chain for organic bananas in Europe. Faced with high supplier prices for organic bananas, EU retailers may have limited their margin in order to avoid discouraging clients with excessive retail prices and promote consumption of a product for which they see a high growth potential. Interestingly, data for an earlier period (2004) evidenced a lower percentage of the organic retail price accruing to retailers. The fact that this share had increased in 2007 might reflect the first effects of the liberalization of the EU banana market, which is viewed as favourable to retailers due to the resulting increase and fragmentation of supply.

The comparison of the organic and conventional supply chains suggests that the price difference between two links of the chain is higher in the organic chain. The difference between the two chains may be partly explained by higher costs in the organic chain. The prohibition on the use of chemical fungicides and preservatives may raise fruit losses at all stages of the chain. Also, the volumes are much lower in the certified banana trade, providing less scope for economies of scale. This raises the unit cost of all operators and makes the organic chain less efficient. However, it is likely that higher net margins in the organic chain also contribute to the difference. The analysis suggests that the share of the retail price received by organic exporters ranges between 10 and 15 percent, a range which does not differ much from that of conventional bananas. Yet, a large part of the extra costs entailed by organic agriculture arises at production level. Thus, despite the existence of an organic price premium at exporter level, it seems that the share of the consumer price premium that trickles down to producing countries is not commensurate with their extra costs.

In short, the marketing chains for organic and fair-trade bananas are affected by distortions which have three negative effects. First, they prevent developing country producers from reaping the full benefits of implementing sustainable agriculture standards. This reduces the returns to investment in sustainable production and the incentives for growers to adopt such standards. Second, if the market does not compensate adequately the extra costs of producing organically, some growers might be tempted to cheat, especially in areas where the monitoring system is viewed as weak. Finally, the distortions impede the expansion of the markets for certified bananas by generating high retail prices. These market failures limit the potential of certification systems to contribute to sustainable development. Policy interventions may be needed to mitigate these adverse effects.

4. POLICY IMPLICATIONS AND RECOMMENDATIONS

How can developing country producers capture a larger share of the value?

In order to limit market distortions and reap the full benefits of value-adding standards, grower organizations should strive to establish short marketing chains on which they can have a sufficient degree of oversight and control. Banana growers should organize in sufficiently large enterprises so that they can reach a critical mass of supply and invest in the necessary facilities to perform the functions of collecting, transporting, packaging and exporting. They need to increase the efficiency of management, rationalize production and achieve scale economies. The next logical step for them would be to establish import companies that would directly ripen and distribute the fruit to retailers in the main import markets. However, grower organizations often lack the capital and expertise to do so, and may be drawn into activities for which they have no clear comparative advantage. Where possible, grower organizations may consider taking a stake in import firms so that they can monitor and have a say in the marketing of their fruits abroad. A more feasible solution in the short run is to market through the fair-trade distribution channels, favouring those importers who give a greater say to producers in the marketing of the fruit.

The analyses suggest that the fair-trade chain is the one that yields the highest FOB prices and export/retail price ratio, above conventional and even organic bananas. Also Fairtrade gives producers more stability and visibility through the system of guaranteed minimum price and premium. Another advantage of the Fairtrade standard is that it does not raise much the costs of production. For small-scale growers seeking to improve their incomes Fairtrade certification seems to be the most profitable option provided they can meet FLO's requirements. These include demonstrating that they have found an importer who agrees to purchase their fruit under the Fairtrade rules. As consumers of fair-trade bananas are increasingly demanding that the fruit be also certified organic, the recommended strategy is to seek double certification organic and fair-trade. Many of the organizational changes required by one of the standards will be also useful to comply with the other one. These include improving the management of the group, establishing an internal control system, enhancing produce quality and reducing the use of agrochemicals.

Policy implications for governments and development agencies

Since organic and fair-trade standards raise export prices and deliver a number of public goods, it is in the interest of governments to support the certification of domestic producers to these standards. The price transmission along the supply chain is the result of the workings of the market and the power relationships among private operators. It is

therefore difficult for government to intervene within the chain. However, public policies can play a role at both ends of the chain.

On the supply side, developing country governments and development agencies should help grower groups strengthen their capacity to meet organic and fair-trade standards. Experience shows that achieving organic and fair-trade certification is a complex learning process that requires much time and expertise. It may also involve substantial investments, depending on the economic level of the farm. Groups of small-scale farmers in developing countries seldom have the necessary resources. They are unlikely to obtain certification without external assistance. Groups should be supported in their efforts to establish internal control systems and enhance product quality. More generally, strengthening the capacity of the groups through the training of their managers, administrative, financial and technical staff will increase the profitability of producers in the medium term.

Converting to organic banana cultivation entails major challenges for farmers due to the technical constraints in tropical climates. Because organic farming generates a broad range of public goods, there is a case for governmental support to organic banana farmers. More suitable production technology is needed. Research and development systems should put more emphasis on developing techniques for organic cultivation and post-harvest treatment. Since tropical pests and diseases are important cost components, research institutes should develop methods for the biological control of pests and diseases, in particular bio-fungicides to combat the Black Sigatoka and crown rot diseases. Extension teams could be trained in integrated pest management techniques so that they can in turn train farmers. An interesting approach is the use of farmer field schools to train banana growers in these techniques, and other production methods useful in organic cultivation such as composting, mulching, intercropping and crop rotation.

Organic banana growers will benefit from policies that aim at supporting the development of the organic agriculture sector in general. These include a legal framework that protects organic farmers and policies that support the emergence of domestic organic input suppliers. Certification is a key condition for accessing international markets but small-scale growers seldom have the resources to cover its costs. Government should consider policies that lower the cost of certification. The training of local inspectors in developing countries can contribute to this objective. Government should ensure that there are a sufficient number of certification bodies operating in the country and sufficient competition among them. Also, public policies should favour the establishment of domestic certification bodies and their recognition in the main export markets.

On the demand side, governments of importing countries can encourage sustainable procurement in the private sector. This can be done through various avenues. Government can give the example by adopting sustainable procurement policies in the public sector. It can also promote good practices in product sourcing and persuade trade associations to adopt them collectively. In this respect, a particular effort towards national retailer organizations seems to be necessary. Government can facilitate dialogue among players of the marketing chain on responsible pricing policies. Finally, consumers must understand the necessity to pay prices that ensure fair returns to producers' investments. Public awareness-raising campaigns promoting fair-trade and sustainable agriculture products among consumers would be helpful.

Areas for further research

More field research is needed to validate the results of the analyses presented in Chapter IV. It is necessary to determine to what extent higher FOB prices lead to higher prices for growers. Evidence for the year 2004 suggests that growers do obtain substantially higher prices for certified bananas, but the more recent analyses could not go beyond the exporter level due to the lack of data on producer prices. When producer groups export directly, which is the case of most fair-trade groups in Latin America, the FOB price premium can give useful indications about the farmgate price. However, when producers sell to an independent exporter, a case which is not uncommon in the organic banana sector, the price they obtain cannot be inferred from the exporter's price. The lack of data on farmgate and FOB prices for organic bananas is a major constraint. Even the official data available on export values and quantities that were used to estimate FOB prices are subject to caution.

Also, while more data on import, wholesale and retail prices for organic bananas have become available recently in a few developed countries, these data are still limited and do not distinguish between countries of origin, thus making value-chain analysis less accurate. Farmer organizations, trade associations and government agencies in the major supplying countries would benefit from the development of national systems to collect import and retail prices.

The analyses focused on prices and their distribution along the supply chain due to the lack of data on costs. Further research is needed to examine the net profit margins of operators at the various stages of the chain, as there is a suspicion that the price premium charged by operators is not always proportionate to their costs. The extra costs entailed by compliance with the organic standard vary widely along the chain. In particular, growers bear a large share of the extra costs of organic banana due to the technical challenges of organic cultivation in tropical countries, where diseases such as Black Sigatoka are prevalent and difficult to combat with organic inputs. However, the export/retail price ratio of organic bananas tends to be similar to that of conventional bananas, suggesting that growers may not be adequately compensated for the costs of complying with the standard. Field studies are needed to obtain more data on the costs of organic cultivation.

Finally, the high degree of vertical integration of the banana industry is another constraint to the analysis. Integrated companies account for a substantial share of conventional banana exports. Similarly, large volumes of certified bananas are shipped directly by farmer organizations to specialized importers who ripen and distribute them to large-scale retailers. Therefore, a substantial share of the trade takes place within firms, making value chain analysis more difficult. Further research is needed to gain a better understanding of the internal price transmission within firms.

REFERENCES

- AEBE.** 2008b. Bananotas, July 2008. Ecuador.
- AEBE.** 2008a. Bananotas, June 2008. Ecuador.
- AEBE.** 2005. Bananotas, August 2005. Ecuador.
- Banana Export.** 2008. Productores de Orgánicos exigen al SESA control a Certificadoras. 23 June 2008. www.bananaexport.com/actualidad/index.htm
- Banana Link.** 2008. Towards a new deal for bananas? Banana Trade News, Issues No. 39, February 2008 and No. 40, August 2008.
- Bendell, J.** 2001. *Growing pain: A case study of a business-NGO alliance to improve the social and environmental impacts of banana production.* Bristol: Aspen Institute.
- BioFach.** 2008. Newsletter. August 2008. Germany.
- CIESTAAM.** 2005. Agricultura orgánica de México: situación "retos" tendencias (available at http://vinculando.org/organicos/directorio_de_agricultores_organicos_en_mexico/full/agricultura_organica_de_mexico_situacion_retos_tendencias.html). Mexico.
- CIMS.** 2005. *Sustainable banana market profile.* Alajuela, Costa Rica.
- CIRAD.** 2008. *Making the rich richer? Value distribution in the conventional, organic and fair trade banana chains of the Dominican Republic,* by S. Roquigny, I. Vagneron, T. Lescot & D. Loeillet. Paper No. 68 presented at the Fair Trade International Symposium, May 2008, France.
- Di Matteo, C.** 2008. *The North American organic market.* Presentation at the Organic World Congress. 16-20 June 2008, Modena, Italy.
- Emilio Ramírez, P.** 2006. *Panorama mundial del banano orgánico.* Presentation at the seminar "Los nuevos retos del mercado bananero". January 2006, Guayaquil, Ecuador.
- FAO. 2008a.** *Value-adding standards in the North American food market,* by A. Byers, D. Giovannucci, P. Liu. Rome (also available at <http://www.fao.org/docrep/010/a1585e/a1585e00.htm>)
- FAO.** 2008. *Private standards in the United States and European Union markets for fruit and vegetables.* Rome (also available at <http://www.fao.org/docrep/010/a1245e/a1245e00.HTM>).
- FAO.** 2007. Technical regulations and standards for food exports: trust and the credence goods problem, by P. Liu & N. Cuffaro. *Commodity Market Review 2007-2008.* Rome (also available at www.fao.org/docrep/010/a1487e/a1487e00.htm).
- FAO.** 2006. *Diagnóstico de la situación de las exportaciones de banano con certificación orgánica al mercado de la Comunidad Europea y recomendaciones a la Autoridad Nacional de Control para un control efectivo de la calidad orgánica,* by J.C. Pons, Consultant. Rome (also available at www.fao.org/ag/ags/subjects/en/agribusiness/organic/Latin%20America/consultoria%20FAO%20para%20el%20SESA.pdf).

- FAO.** 2004. *Voluntary standards and certification for environmentally and socially responsible agricultural production and trade*, by P. Liu, M. Andersen & C. Pazderka. Rome (also available at www.fao.org/docrep/007/y5763e/y5763e00.htm).
- FAO.** 2003b. *The world banana economy 1985-2002*, by P. Arias, C. Dankers, P. Liu & P. Pilkauskas. Rome (also available at <http://www.fao.org/docrep/007/y5102e/y5102e00.htm>).
- FAO.** 2003a. *Environmental and social standards, certification and labelling for cash crops*, by C. Dankers. Rome (also available at www.fao.org/DOCREP/006/Y5136E/Y5136E00.htm).
- FAO.** 2002. *International Code of Conduct on the Distribution and Use of Pesticides*. Rome (also available at www.fao.org/DOCREP/005/Y4544E/Y4544E00.HTM).
- FAO, ITC & CTA.** 2001b. *World markets for organic fruit and vegetables*. Rome (also available at www.fao.org/DOCREP/004/Y1669E/Y1669E00.HTM).
- FAO.** 2001a. *Comparative Analysis of the Main Environmental and Social Certification Programmes in the Banana Sector*. Background document for discussion at the Ad-hoc Expert Meeting on Responsible Banana Production and Trade, 10-11 December 2001. San José (also available at <ftp://ftp.fao.org/docrep/fao/010/ah923e/ah923e00.pdf>).
- Farmers Guardian.** 2008. Growth in premium and organic food expected, despite credit crunch (available at <http://www.farmersguardian.com/story.asp?sectioncode=1&storycode=19272>).
- FLO.** 2008. *Annual report 2007*. Bonn, Germany (also available at www.fairtrade.net/fileadmin/user_upload/content/FLO_AR2007_low_res.pdf).
- FLO.** 2007. *Fairtrade Standards for Bananas for Small Farmers' Organizations*. FLO. Bonn, Germany (also available at www.fairtrade.net/fileadmin/user_upload/content/Banana_SF_November_07_EN.pdf).
- Fruchthandel.** 2008. Bio-Obst und –Gemüse verlassen Nische. Issue No. 19. Germany.
- Fruchthandel.** 2007. *Special issue for BioFach 2007*. February 2007. Germany. Quoting ZMP. 2006. Bundesanstalt für Landwirtschaft und Ernährung (BLE), K. Wagener & C. Thimm.
- Hinrichs, E.** 2007. *The European banana market today – Challenge and opportunity*. Presentation at the AEBE Congress, April 2007. Ecuador (available at <http://www.bananacongress.com/downloads/presentations/hinrichs.pdf>).
- IFOAM.** 2007. *The world of organic agriculture – Statistics and emerging trends*. Germany (available at http://www.soel.de/fachthemen/downloads/s_74_09.pdf).
- Ikegami, K. & Uyama, M.** 2006. Also available at <http://fr.pekea-fr.org/Dakar/D-T/T-D-Ikegami.doc>.

- IUF.** 2001. IUF, COLSIBA and Chiquita sign historic agreement on trade union rights for banana workers (available at www.iuf.org/cgi-bin/dbman/db.cgi?db=default&ww=1&uid=default&ID=111&view_records=1&en=1).
- Kidd, A.D., Tulip, A. & Walaga, C.** 2001. Benefits of globalisation for poor farmers. *BeraterInnen News* 2/2001. Lindau, Switzerland. LBL (also available at www.agridea-international.ch/fileadmin/10_International/PDF/RDN/RDN_2002/RDN_2001/5_Uganda.pdf).
- Kilian, B., Jones, C., Pratt, L. & Villalobos, A.** 2005. *The value chain for organic and fairtrade products and its implication on producers in Latin America* (also available at http://www.ifama.org/tamu/iama/conferences/2005Conference/Papers&Discussions/1042_Paper_Final.pdf).
- Ministerio de Agricultura del Perú.** 2006. *Agronegocio bananero orgánico en el Perú* by Ing. Marly López Rengifo, Dirección General de Promoción Agraria. Lima.
- Notifax.** 2008c. Issue 622, CORBANA, Costa Rica.
- Notifax.** 2008b. Issue 620, CORBANA, Costa Rica.
- Notifax.** 2008a. Issue 581, CORBANA, Costa Rica.
- Notifax.** 2007. Issue 571, CORBANA, Costa Rica.
- Organic Monitor.** 2008. *The European market for ethical fruit & vegetables: ethical fresh produce sales rocketing in Europe*. Research Publication: #1002-42 (also available at www.organicmonitor.com/100242.htm).
- OTA.** 2008. *Manufacturer Survey 2007* (available at <http://www.ota.com/pics/documents/2007ExecutiveSummary.pdf>). Greenfield, USA.
- OTA.** 2007. *Manufacturer Survey 2006* (available at http://www.ota.com/pics/documents/FINAL2006_Executive%20Summary.pdf). Greenfield, USA.
- Oxfam Australia.** 2007. Australia's Fairtrade growth the fastest in the world, 26 April 2007. Press release (also available at <http://www.oxfam.org.au/media/article.php?id=345>)
- PromPex.** 2007. www.prompex.gob.pe
- Reefer Trends.** 2007. Reefer Trends online daily news, 7 February 2007
- Sauvé, E.** 1998. *The global market for organic bananas*. INIBAP, Montpellier, France.
- Soldevilla, S.** 2008. Peru líder en exportación de banano orgánico. INCAGRO, Peru (available at http://incagro.gob.pe/~incagro/apc-aa-files/67a4a69687d83de98a0ff99b37f34961/articulo_de_banano_organico_2008.pdf)
- TransFair USA.** 2006. *Fair Trade Almanac*.

USAID. 2007. Bolivia: new markets for organic bananas. www.usaid.org

USDA. 2008c. Peru - Organic products - Update. Attaché report (available at <http://tf.tribes.cc/telfort/px/url/287/www.fas.usda.gov/gainfiles/200805/146294603.pdf>)

USDA. 2008b. Russian Federation – Organic products – Developments in the Russian organics market. GAIN Report (available at <http://tf.tribes.cc/telfort/px/url/287/www.fas.usda.gov/gainfiles/200808/146295507.pdf>)

USDA. 2008a. Republic of Korea - Organic products – Organic market update 2008. GAIN Report (available at <http://tf.tribes.cc/telfort/px/url/287/www.fas.usda.gov/gainfiles/200809/146295782.pdf>)

World Bank, FAO & IFOAM Japan. 2004. *The Japanese Market for Environmentally and Socially Certified Agricultural Products from Central America* (also available at <http://www.fao.org/ES/ESC/common/ecg/52/en/studyfinal.pdf>).

CERTIFICATION IN THE VALUE CHAIN FOR FRESH FRUITS

The example of banana industry

Certification to voluntary standards is increasingly used by banana producers and exporters worldwide. This report deals with voluntary certification schemes, with a particular focus on those that use an on product label targeting consumers and have the potential to generate a price premium.

The report describes the main patterns of international trade in certified bananas. It examines the market situation and prospects of certified organic and fair trade bananas. It reviews the various types of benefits and challenges associated with organic and fair trade bananas from the perspective of producing countries. Export prices for certified bananas are analysed and compared to those of conventional fruit for a selection of producing countries. The report analyzes the distribution of prices along selected value chains and seeks to determine whether producing countries reap the full benefits of certified banana exports. It examines the policy implications and suggests areas for further research and action.

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