

제1 발표논문(영어본)

Global Perspectives of Organic Agricultural Industry

- Growth, Trade & Standards -

Vincent Stehli
Professor, AIT University, The Netherlands

ABSTRACT

The last few years have seen significantly increased interest in organic food. Organic food is still a small but growing part of the food industry with an identity defined and protected by law. Its existence provides an element of consumer choice.

To obtain consumer confidence and, product credibility and transparency in the organic market, organic legislation and certification is needed. To facilitate export of organic products, harmonization of the organic legislation is favoured. The IFOAM accreditation programme has already achieved very much in this respect. Several national regulations, such as the NOP(USA) and EC2092/91(European Union) have already complied with the IFOAM basic standards. But in many countries there is still a lack of national legislation on organic agriculture. Because of the fast globalisation, organic agriculture is facing major challenges for international trade, so it is very important to consider the future development and certification of organic produce in all countries.

I . Introduction

The last few years have seen significantly increased interest in organic food, that is, food grown using those husbandry principles and techniques that predated the introduction of modern agrochemicals and intensive farming methods. These husbandry principles are now applied with the benefit of modern scientific understanding and technologies to give a more sustainable system of food production, sometimes using the

indigenous knowledge of the farmer.

The production of organic food requires the same involvement of professional food scientists and technologists and is subject to the same requirements of good manufacturing practice and food safety as the rest of the food industry, but is also subject to specific additional legal requirements as to cultivation, composition and labelling.

Table 1. Organic land worldwide

Country	Total organic ha	% of Agricultural Area
Australia	7,654,924	1.62
Argentina	3,000,000	1.77
Italy	958,687	6.46
USA	900,000	0.22
Germany	452,279	2.64
UK	380,000	2.40
Sweden	174,000	5.60
China	8,517	0.002
Japan	5,083	0.09
India	1,711	0.0009
Rep. Of Korea	902	0.04
Sri Lanka	550	0.02
Colombia	202	0.0004

Nowadays, organic agriculture is practised in almost all countries of the world, and its shares of agricultural land and farms, together with its market is growing fast everywhere.

But the lack of state regulations for organic agriculture makes it difficult in many countries to distinguish organic from low-chemical or even non-organic products.

The close regulation of organic food production within the EU has contributed to an increase in consumer confidence and a clear set of standards that can be adhered to by new companies entering the organic food industry.

a) Organic Agriculture Worldwide

According to the SOL-survey(February 2001), about 15.8 million hectares are managed organically worldwide. Presently the major part of this area is located in Australia(7.6 million hectares), Argentina(3 million ha) and Italy(1 million ha) Oceania holds almost 50% of the worlds organic land, followed by Europe(23.6%) and Latin

America(20%). In most Asian countries the area under organic management is still very low. Table 1 shows figures on the organic agricultural area in different countries. For many countries no exact figures are available, but it may be assumed that no country has reached one percent yet. The total organic area in Asia is about 50,000ha.

According to the ITC study(October 1999), trade with organic foods has become a major business on the global market. Trade with organic products are showing growth rates which are rarely found in food markets. There are also strong opportunities for developing countries in most major markets, offering good prospects for suppliers of organic products that are not produced in Europe or North America, such as coffee, tea, cocoa, spices, tropical fruits, vegetables and citrus fruits. There are also very good prospects for foods that are produced in these countries themselves. These opportunities stem from the fact that rapidly growing demand in most markets cannot be met by local supply, at least, in the short and medium term.

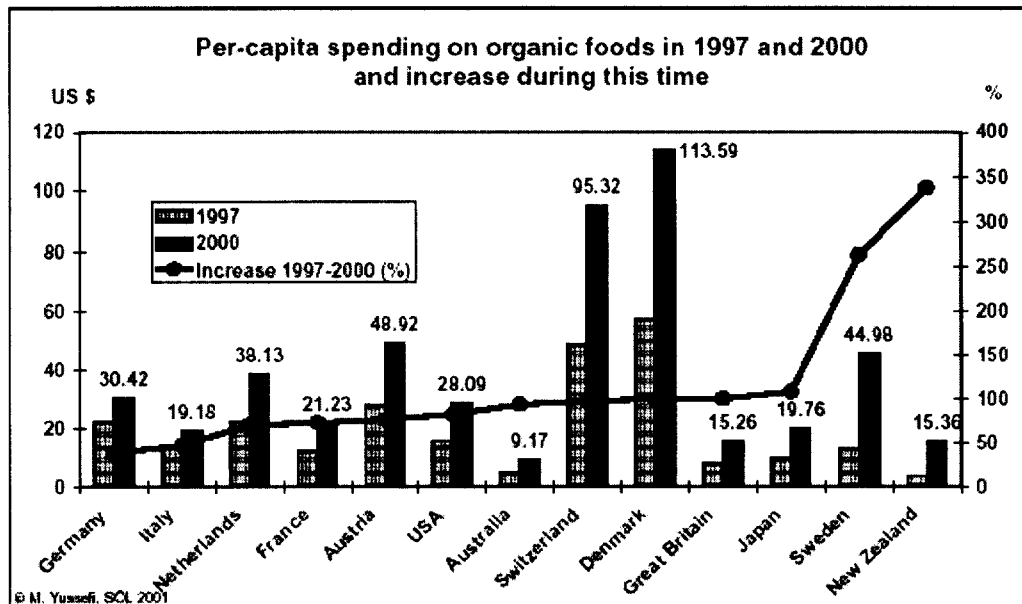


Fig 1. Per-capita spending on organic foods in 1997 and 2000 and increase during this time(Yusefi, 2001)

The rapid growth of the organic market, see figure 1, is also due to the increasing awareness of the consumers on health and environmental issues, and major retail groups are carrying out aggressive marketing and promotion for organic products, as well as supportive government policies in many countries.

b) Certification, state regulations and International Harmonisation

Of considerable importance for further growth of organic and the global market is the implementation of harmonized worldwide standards for organic agriculture.

1) IFOAM-accreditation

Official regulations exist in a few countries but differ in content and effectiveness. While they may provide some protection in the domestic market, they are unlikely to provide the kind of global assurance of equivalency the international market requires.

In 1992 the International Federation of Organic Agriculture Movements(IFOAM) established the IFOAM Accreditation Programme to provide international equivalency or organic quality claims. IFOAM accreditation is based on the international IFOAM standards, which are developed continually. The IFOAM Accreditation programme is managed by the International Organic Accreditation Service Inc(IOAS) under a licensing agreement with IFOAM. The IOAS Board of directors is appointed by IFOAM and the programme operates independently from other activities of IFOAM. In 2000 the first products with the IFOAM-accredited logo, which was presented at Biofach 1999, came on the market.

A major advantage of being IFOAM accredited is its credibility worldwide. IFOAM Basic Standards are set by the IFOAM General Assembly whose members draft and approve them. It is important that any international standards set for global equivalency is one that is set by the industry itself. Forums like Codex Alimentarius Commission are essentially inter-governmental and are influenced little by the private sector once standards are set.

IFOAM Basic Standards for Organic production and Processing(2002)

1. The principle aims of organic production and processing
2. Organic ecosystems
3. General requirements for crop production and animal husbandry
4. Crop production
5. Animal husbandry
6. Aquaculture production
7. Processing and handling
8. Processing of textiles
9. Forest management
10. Labelling
11. Social justice Appendices

IFOAM accreditation plays a vital role in import regulations for many certifiers faced with equivalency issues. Accredited certifiers commission detailed IFOAM reports which address provisions of specific regulations and how the certifier has met the requirements outlined. Country to country recognition remains problematic, the agreements are slow in implementation, often several years away, and may not be in place in all countries with whom the certifiers operator want to trade.

Accreditation reports are now regularly issued to competent authorities in the European Union and have been fundamental in securing import licenses. IFOAM accreditation is recognised as an effective oversight by authorities such as these.

2) Codex Alimentarius

During June 1999 the FAO/WHO Codex Alimentarius Commission passed the guidelines for production, processing, labeling and marketing of organically produced foods. These were developed in co-operation with IFOAM. In June 2000 these guidelines were supplemented with standards for organic animal husbandry.

The guidelines are intended to guide and promote the establishment of definitions for organic food labeling, to assist in their harmonization, and in doing so, to protect consumers and to facilitate international trade.

The guidelines are a useful instrument in assisting countries to develop national regimes regulating production, marketing and labeling of organic foods. They do not prejudice the implementation of more restrictive arrangements and more detailed rules by member countries in order to maintain consumer credibility and prevent fraudulent practices, and to apply such rules to products from other countries on the basis of equivalency to such more restrictive provisions.

Codex Alimentarius guidelines for the production, processing, labeling and marketing of organically produced foods

1. Scope
2. Description and definitions
3. Labeling and claims
4. Rules of production and preparation
5. Requirements and criteria for inclusion of substances
6. Inspection and certification systems
7. Imports
8. Ongoing review of the guidelines Appendices

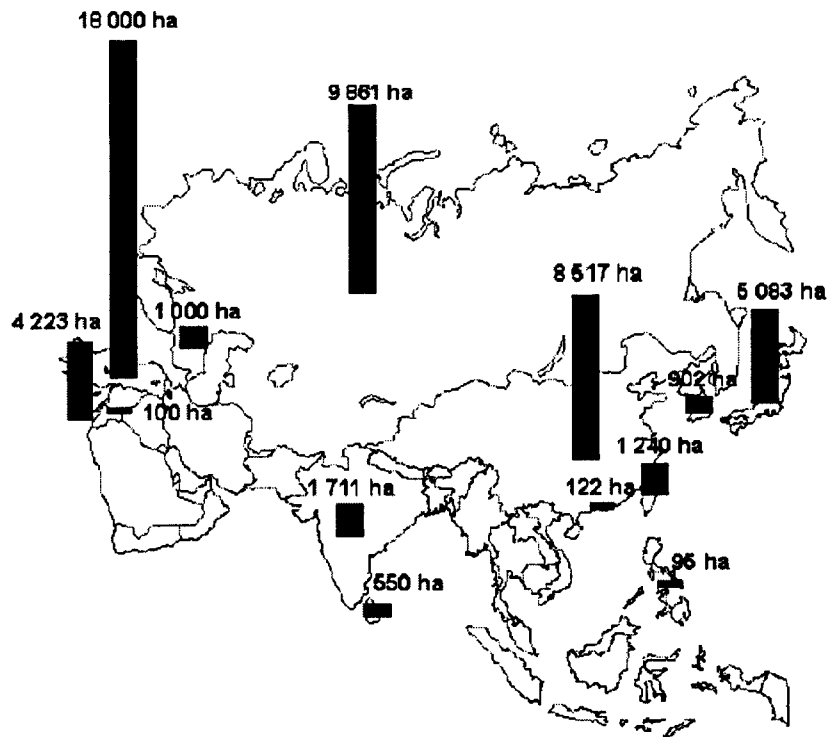
3) State regulations on organic farming

In many countries organic products are protected by law (e.g. the countries of the European Union, Switzerland, Argentina, Canada, Japan). In many other countries work on regulations about organic agriculture is in progress.

II. Organic Agriculture in some continents

a) Asia

Certified organic production takes place in most Asian countries although on a very small scale. It is practiced in order to reach self-sufficiency in food, to improve soil fertility, but mainly for export.



Graphic: M. Yussen, SÖL, 2001
Graph: M. Yussen, SÖL, 2001

Quelle: SÖL-Erhebung, Februar 2001
Source: SÖL-Survey, February 2001

Fig 2. Organic agriculture in Asia

In most Asian countries the area under organic management is still very low, see figure 2.

For many countries no exact figures are available, but it may be assumed that no country has reached one percent yet.

In Eastern Asia significant producing countries are China, India, The Republic of Korea and Sri Lanka.

The largest Asian market for organic products is located in Japan. The Japanese name for organic produce is Yuki directly translated from the English word Organic. However products that are called Yuki also include conventional products, which are produced in a more environmentally friendly manner, but nonetheless are not certified organic.

Japan is considered to be an important importer of organic products. In particular, Australia, New Zealand, the US and Canada supply the Japanese market. The demand for fresh products such as fruit and vegetables is particularly large, which is founded in traditional Japanese food culture.

One of the most important imported organic products are soybeans, which largely originate from the US, but China currently sells organic soybeans at cheaper price.

China exports organic products with a value of 15 million US\$, and the size of the domestic organic market amounts to approx 12 million US\$.

The demand for organically produced products in Hong Kong is growing. Since domestic production is practically non-existent except for a small amount of vegetable production, imported goods from Australia and Europe supply the market. The most important organic products include baby foods, fruit juices and grain products.

The demand for products from organic agriculture in Taiwan is also increasing. The annual turnover is expected to double in the next three years. The most predominant importing countries are Germany and the US, with 43% and 40%, respectively. Native products include tea, fruit, sweet potatoes, taros and jams. Nuts and dried fruits are imported.

Lack of certification and lack of organic regulation is leading in many Asian countries to consumer confusion. Most of the organic products are certified by foreign certification agencies. China and Japan, are few of the countries, which have established certification bodies.

The seals of the comparatively young Japanese certifiers are relatively unknown to consumers. They have much more trust in the producers and trademarks of well-known

companies or foreign labels. This explains why, apart from vegetables and rice, organic products, which are offered in the Japanese supermarkets, are predominantly of foreign origin.

In Japan, the Ministry of Agriculture announced to implement inspection and certification system of organic products under JAS (Japan Agriculture Standard) law. There are already some products carrying this label on the market.

China, India, the Philippines, Thailand and Malaysia are now working on organic laws as well. This development is related not only to export opportunities but also to increasing domestic consumption.

b) Europe

Since the beginning of the 1990s organic farming has developed very rapidly in almost all European countries. At the beginning of 2001 in the 15 EU countries, organic farming constituted almost two percent of the agricultural area. In the EU between 1986 and 1996 the land under organic management grew annually by 30 percent. The strongest growth is demonstrated in Scandinavia and the Mediterranean countries.

During the past twenty years organic marketing has developed a long way in several European countries, starting from early neighbourhood small organic stores to the first organic discount stores. Organic sales account for about 2 percent of the total food market.

Organic food today is sold through various types of marketing chains. Direct marketing by farmers, has a market share of about 20%, specialized organic stores and discount stores for more than 35%, Health food stores, 10%, Conventional food stores, 25% and a small market share for internet and mail order.

In 1991 the EU passed regulation 2092/91, which laid down in detail how crop products must be produced, processed and packaged to qualify for the description organic. The regulation also specified detailed criteria for the inspection and subsequent certification of food producers and processors. Provision was made for member states to implement organic livestock production standards at national level. However in 1999, EC1804/99 was passed which detailed European Standards for products of livestock origin. This regulation also prohibited genetic modification from use in organic production and food products. The legislation has now been incorporated into EC2092/91 and came into force on 24th August 2000 ; however the prohibition on genetic modification became effective immediately from August 1999.

EC 2092/91 Regulation Contains following articles :

- 1→3 Scope
- 4 Definitions
- 5 Labelling
- 6→7 Rules of production
- 8→9 Inspection system
- 10 Indications that products are covered by the inspection scheme
- 11 Imports from third countries
- 12 Free movement within the community
- 13→16 Administrative provisions and implementations

Rules of production, labelling and inspection are provided for livestock. Livestock production is providing organic matter and nutrients for the land, contributing to soil improvement. This needs to be done while avoiding pollution of crops, soil and water.

By harmonizing organic legislation throughout Europe, the EU regulation has established a level playing field for manufacturers. This in turn has led to easier transfer of organic ingredients and finished organic foods within the EU. The regulation also insures that ingredients entering the EU must have been produced to the same standards as ingredients produced within the EU. After some initial difficulties the regulation has been welcomed by the organic food industry as it has enabled consumers to buy organic produce with confidence, and has reassured producers and processors that their market will not be contaminated with fraud.

A major amendment to the original EU regulation was made in 1995. This amendment divides organic processed foods into different categories, depending on the proportion of organic ingredients present.

The legislation lays down requirements for importing food from outside of the EU and has divided non-EU countries into two groups, Approved Third Countries and Non-Approved Third Countries. Organic food produced in approved third countries can be imported into the EU without authorisation being obtained from the competent authority of the importing member state.

The permission is granted on the basis of the certifying body being ISO65/EN45011 accredited and the organic standards being equivalent to the EU minimum. Permission is usually granted for a period of 2-5 years and is granted to a specified supplier for a specific product. For each consignment of organic product that is imported, an EU import certificate must be issued by the certification body of the supplier confirming

that the specified consignment has been produced to organic standards.

Throughout the EU each member state has at least one national control body : UKROFS, OFF, Demeter(UK), Ecocert(France, Germany and Belgium), Naturland (Germany) and SKAL(The Netherlands).

Several EU countries have, in some cases long before the EU regulation on organic production came into force, developed their own national regulations and also national logos for organic products, see figure 3. The existence of these logos is one reason for the organic boom in these countries.



Frankreich / France

Belgien / Belgium

Fig3. Different organic labels
(from left to right : official EU label, French and Belgian national label)

In all EU-countries farmers are receiving support under the agri-environment programmes of EU regulation 2078/92. These subsidies are, apart from strong market growth, an important factor for the increase of the organic land area in Europe. But it has been found that subsidising individual farmers is not a sufficient incentive for conversion and those subsidies cannot guarantee the maintenance of organic farming methods in long run. Therefore some European governments have developed action programs in order to promote organic agriculture. As part of these action plans, marketing of organic products, advisory service and consumer information is supported.

c) North America

Canada, The US and Mexico are substantial producers of a wide range of organic foods. Canada and the US have well developed domestic markets, with substantial imports. All three countries are large exporters.

The supply of organic products is numerous. The assortment covers fruit and

vegetables, dairy products, frozen foods, grain products, finished goods and various beverages, among other things. 62% of organic products are marketed in the US by so called Natural Food Stores, 31% by supermarkets and only 7% through direct marketing.

Their main exporting markets are in Europe and Asia, in particular Japan and Taiwan. The US imports considerable quantities of tropical and processed organic products. The primary export markets for Canada include the US and Europe as well as Japan.

In the US organic regulations have been developed on a state-to-state basis. Currently there is no national organic legislation. The US Department of Agriculture (USDA) attempted to bring in national organic standards in 1998. These standards would have permitted the use of genetic modified ingredients, sewage sludge and irradiation in food labelled as organic. The USDA received many negative responses to these approved standards, which were then withdrawn for redrafting.

In December 2000, USDA announced the rules for the first National Organic Program (NOP), which sets standards on how agricultural products can be produced and bear the label organic. The NOP is intended to replace the individual state regulations and certifying procedures that currently regulate the industry. The final rule contains 574 pages of regulations. It prohibits use of genetic engineering, ionising radiation for preserving foods, and sewage sludge for fertilizer. The USDA organic seal cannot be put on any product until June 2002 when the programme becomes fully implemented.

III. Marketing of organic products

Marketing of the organic foods is generally the same as advertising any other foods. The thing that makes organic food different is that it is more expensive, except of some nutritional and health aspects.

Discount cards and organic coupons are used to promote buying organic foods.

Two different sales strategies are used in department stores. First, organic products can be placed on a specialized shell, for organic foods only, or secondly it can be placed within the normal food shelves, next to similar but non-organic foods.

Following steps are mostly kept under consideration when organic foods are marketed :

- Media outreach and public relations campaigns
 - Formulating customers profiles
 - Customer awareness
 - Plan and implement media campaigns
 - Press releases
- Sales and promotions
 - Building brand recognition
 - Price discounts
 - Create support programs
 - Retail pricing
- Special products
 - Educational programs
 - Product information
 - Public private partnership
- Distribution strategies and planning

IV. Main organic standards

Following subjects are included in most national and international standards (based on IFOAM) :

- Management and respect of the ecosystem
- Improve biodiversity and conservation of natural environment
- No genetic engineering and ionising treatments or ingredients allowed
- Conservation of the soil
- Maintain water quality and use water efficiently and responsibly
- Prevent degradation of common biotic and abiotic resources
- Sustainable use of renewable resources
- Choice of crops and varieties adapted to local soil and climate conditions
- Diversity in crop production and crop rotation
- Maintain the soil fertility and organic fertilization
- Avoiding contamination of organic soil and food
- Sustainable organic plant breeding methods
- Harmonious relationship between land, plants and livestock

- Raising and breeding of animals
- Mutilations of animals
- Nutritional needs for animals respected
- Veterinary medicine
- Transport and slaughter of animals
- Bee keeping and bee products
- Aquaculture management and location of collecting areas
- Aquaculture breeding and nutrition
- Harvest, transportation and slaughter of aquaculture organisms
- Processing methods, handling, ingredients and additives used
- Pest and disease control of processed products
- Packaging
- Cleaning, disinfections and sanitizing
- Processing of textiles
- Forest management
- Labelling
- Conversion rules and periods
- Social justice

a) IFOAM standards on labelling of Organic products

- 1) The person or company legally responsible for the production or processing of the product shall be identifiable.
- 2) Only products that are produced, handled and processed according to these Standards may be labeled as “produce of organic agriculture” or similar.
- 3) Mixed products where not all ingredients, including additives, are of organic origin shall be labeled in the following way (percentages in this section refer to raw material weight) :
 - a. Where a minimum of 95% of the ingredients are of certified organic origin, products may be labeled certified organic or similar and should carry the certification mark of the certification body.
 - b. Where less than 95% but not less than 70% of the ingredients are of certified organic origin, products may not be called “organic”. The word “organic” may be used on the principal display in statements like “made with organic ingredients” provided there is a clear statement of the proportion of the organic

ingredients. An indication that the product is covered by the certification body may be used, close to the indication of proportion of organic ingredients.

- c. Where less than 70% of the ingredients are of certified organic origin, the indication that an ingredient is organic may appear in the ingredient list. Such product may not be called "organic".
- 4) All raw materials of a multi-ingredient product shall be listed on the product label in order of their weight percentage. It shall be apparent which raw materials are of organic certified origin and which are not. All additives shall be listed with their full name.

If herbs and/or spices constitute less than 2% of the total weight of the product, they may be listed as spices "or herbs" without stating the percentage.

- 5) Added water and salt shall not be included in the percentage calculations of organic ingredients.
- 6) The label for conversion products shall be clearly distinguishable from the label for organic products.

V. Future Development

The market for organic foods is not a niche market anymore. On the major markets substantial turnover rates with organic products are achieved. All recent studies conclude that the market for organic products is growing, especially in the industrialized countries. It looks as if the demand for organic products will not be the problem in the future.

The share of organic products is, however, even on the big markets, rarely higher than 1~2% of the total market.

Even though the biggest markets of organic products are also the major producers of organic food, it can still be concluded that for many countries, especially developing countries, substantial export potential exists. Also a potential in many of these countries is the local market, which has not yet been realized.

The European example shows, that a favorable political environment including subsidies for organic farmers can help to attain substantial percentages of agricultural

land.

A favorable political environment also includes a clear definition of organic agriculture with legal enforcement. Organic laws are not only important for export, but also for strengthening consumer confidence and building local markets.

In many countries, especially those where organic farming is only beginning to emerge, the lack of credibility of organic products needs to be tackled. This can be achieved through the introduction of national standards and a clear declaration of organic products.

On an international level harmonization of organic standards is important in order to facilitate international trade with organic products. The IFOAM accreditation programme has already achieved a lot in this respect. And with the support of Codex Alimentarius it may be expected that the private sectors achievements in terms of harmonization will soon be backed with organic laws in many countries.

Because the fast globalization process of the market, organic agriculture is facing major challenges as such is not automatically an alternative to long transport distances around the globe. The standards for organic agriculture do not prescribe regional marketing or seasonal correctness of the products. Even if the marketing of organic products via supermarkets seems to be the future way for many countries, it is for organic agriculture more important than ever that locally and regionally the supply with healthy food is guaranteed. There is still a major scope for an international exchange of goods, as in industrialized countries neither coffee nor bananas can be grown. Fair trade relationships are a basis and an important link between worldwide food security and the future further development of organic agriculture.

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