A Comparative Analysis on Organic Certification Standard System Between China and the USA

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Abstract. The USA and China are both one of countries owned the largest organic agricultural land. China's organic products are mainly export-oriented, and domestic consumption is complementary; on the contrary organic products in the U.S. is mainly for the domestic consumption, and the export is complementary. Organic production and sales of the two countries complement each other strongly. This paper provides an insight into a wide range of organic certification standard system and mechanisms in China and the USA; and compared the different between the two countries. It shows that the standards and certification regulations of organic products in China and the U.S. are similar, but there exit some differences in the certification standards, specifically in the environment quality control of the organic site, conversion date to organic products, the use of sewage sludge, the use of organic feed and grazing in livestock, organic certification standards of aquatic products, and the roster of organic certification products. It is estimated that the two countries will discuss the mutual recognition of organic food sooner or later, so this paper may lay the foundation for promoting the bilateral trade for both countries.

Introduction

Organic is a labeling term that indicates that the food or other agricultural product has been produced through approved methods that integrate cultural, biological, and mechanical practices that foster cycling of resources, promote ecological balance, and conserve biodiversity[1]. Organic agriculture has developed rapidly worldwide during the last few years. Although production of organic crops is increasing across the globe, sales are concentrated in the developed parts of the world. The European Union (EU), USA and Japan in Asia comprise the bulk of global revenues, which offer excellent marketing opportunities to exporting countries, and developing countries in particular [2]. However, whether through mandatory regulation, voluntary public programs or by the private sector, one organic standard shall be applied by all organic operators. The number of differences in standards, certification and accreditation systems interfere the continuously growth of the organic import and export market. For international markets, certification can be considered a must as all major markets require certification for products marketed as organic. But there is no direct evidence that third-party certification is what the market or the consumers really ask for. Domestic bodies normally dominate the certification for the local markets, while the foreign ones are oriented towards the export market sector. As organic products accepted in one country may not be accepted in another. If operator wants to export the organic products to different countries, they must comply with different export market standards. Multi-certification should be the best choice. So bureaucracy in the organic certification sector leads to a barrier for the organic imports and exports and even to high costs because of the need of multiple certifications, which were noted as already existing and increasing where the certification body (CB) conducts one inspection against a number of organic standards [3].

There is much extant research that investigates the organic standards and certification in the developed world. However, little emphasis is given to the comparative between developed and developing world, especially China, the highest growing organic market. This paper focuses on the issues surrounding the organic certification system and standards of China and the USA.
The Organic Producing and Trade

By the end of 2011, there are 162 countries having organic production; 37.2 million hectares of agricultural land are organic (including conversion areas), and, 8 million producers were reported; In addition to the agricultural land, there are 32.5 million hectares of non-agricultural areas, mainly wild-collection. The regions with the largest areas of organic agricultural land are Oceania and Europe; followed are Latin America; Asia; North America and Africa (Figure 1). 9 countries have more than 1 million hectares organic agricultural land (Figure 2).

In Asia, China is the leading country by organic agricultural area (1.9 million hectares). And the USA is the country of most organic agricultural area in North America (1.9 million hectares).

There were 1.8 million producers in 2011. Thirty-four percent of the world’s organic producers are in Asia, followed by Africa (30 percent), and Europe (16 percent). In spite of the slowdown in the global economy, international sales of organic products continue to rise. Organic food & drink sales reached almost 63 billion US dollars in 2011.[4,5]

The organic sales in the USA grew rapidly in recent years. The by far largest market was the USA with 29.22 billion US Dollars of organic food sales, almost 44% of the world. Compared with 2000, the sales of organic food had almost five times, from 4.1 billion to 29.22 US Dollars, and shared total food form 1.2% to 4.2% (Figure 3).

Growth in organic agricultural production is taking place in both developed and developing countries worldwide, and the competition for major consumer markets in developed countries is increasing. Preliminary USDA estimates show that the value of organic imports into the U.S. far exceeds the value U.S. organic exports.

Chinese imports of organic foods were about US$ 20 million in 2009, a limited amount compared with the size of the population, but the market has been growing rapidly and may become promising for least developed country exporters. There is no clear and comprehensive statistical information about the volume and value of organic production in China. Organic production was valued at about US$ 2.4 billion in 2008, of which US$ 500 million went for export and the rest was sold locally. Organic imports were estimated at about US$ 3 million – US$ 8 million per year, and a maximum of US$ 20 million in 2009.
In China, the majority of organic products are exported to foreign markets, mainly to the EU, US, and Japanese markets. According to the China Organic Food Certification Center (COFCC), the value of exported organic products increased from 0.3 million USD in 1995 to 800 million USD in 2006 (Figure 5)[6,7].

The Analysis on Organic Standards between China and the U.S.A

The basic ideas and framework of Organic product standards in China and the United States are consistent, which involves all aspects of the organic production chains, including crops and wild crops, livestock, handling and processing, labeling and management system.

The Roster of Organic Products Certification

In China, roster of organic products certification was published by CNCA and put into effect on March 1, 2012. The roster includes plant production (including wild crops collected), livestock and poultry breeding, edible fungus cultivation, aquaculture, bees and bee products, et al., adding up to 127 kinds of products of 37 categories. According to the principle of risk assessment, excludes the products which are not appropriate to be certified as organic product. The organic certificates of products which have certified before and not in the roster of organic products certification will expire automatically. At the same time, CNCA will amend the roster of organic products certification dynamically based on risk analysis principle.

In the U.S.A, all scopes of organic certification maintained by the operation include crops, wild crops, handling and livestock. It is not divided in details exactly. But based on the USDA Organic Regulations, the documents from the Handbook can be added, edited, and removed as needed to reflect emerging issues and policy decisions, and all changes will be listed in the Summary of Changes document by date and reflected in the Table of Contents.

Requirements for Organic Crops and Wild Crops

Plant production is the main part in the organic production, and is also the most kinds of the current organic certification. The basic requirements of organic producing in China and the United States
standard’s settings are basically identical, which include the seeds, breeding material, buffer zone, parallel production, pest control, crop rotation, banning the use of irradiation and genetic engineering etc. But also there exist some differences, such as the use of sewage sludge, in Chinese standard, can be allowed to some plant producing after thoroughly decomposed and biosafety disposed, and prohibited to leaf vegetables, tuber and root plant. While in the United States’, it is banned. In terms of producing area environmental requirements, before applying for organic certification, the test report of the soil environmental quality, farmland irrigation water and environmental air quality must be issued in China. While in the US, the certifying land must have been free of prohibited substances for three years.

Wild crops are only plant or portion of plant collected or harvested from a site that is not cultivated or otherwise managed agriculturally. Requirements for wild crop operations in China and the United States are also basic same, which must have a defined area, maintain or improve natural resource, guarantee the sustainable harvesting and do not damage the environment from.

**Requirements for Organic Livestock**

Organic livestock breeding are rather difficult in the organic production. The principle requirements of organic livestock breeding in standards of China and the USA are basic consistent, both from the date of breeding, nutrition (including source of feed, feed ratio, lactation, additives, etc.), animal vaccines, grazing and housing. But as a result of production conditions and methods of the two countries are different, there are some differences.

In China, conventional feed can be used when shortage of organic feed, the ratio of conventional feed is less than 10% in herbivorous animals, 15% in none herbivorous animals, and the diet of livestock and poultry is less than 25% (above all accounted by dry matter); In the USA, it stresses 100% organic feed, and provides access to the outdoors and good living the conditions year – round. For ruminants, in the USA, they must have access to pasture during the grazing season; 30% of the animal’s dry matter intake must come from pasture; grazing season must be at least 120days; in China, 50% of the animal’s dry matter intake must come from pasture or from organic farm which has cooperation relationship, but no grazing date controlled.

Organic aquaculture is debatable in the USA. Debate on the topic of “organic aquaculture” began in 2000 when USDA named a task-force advisory panel, National Organics Standards Board (NOSB), to the USDA’s Agricultural Marketing Service to evaluate requests from fish farmers for organic eligibility. There are disputes over which types of fish should be included, and whether the wild fish could be labeled organic on the grounds that catching wild animals isn’t agriculture. In March 2007 NOSB recommended the USDA certify some farm-raised fish as organic. This did exclude all wild-caught fish from eligibility. They explained that the term “livestock” means any cattle, sheep, goats, swine, poultry, equine animals used for food or in the production of food, fish used for food, wild or domesticated game, or other non-plant life, so clearly, Congress considers “fish used for food” to be within the authority of this statute. NOSB came under immediate fire for approving relaxed standards for organic labeling. Under the NSOB proposal, farmed fish could carry the label even if their diets included up to one-fourth wild-caught fish and fish bi-product, perhaps from non-sustainable fisheries, and included other animal and plant feeds not produced in accordance with organic agriculture principles, as long as none of this material was from danger species. The Agriculture Department shelved those recommendations and let the issue lie fallow.

The EU Commission has approved the detailed Implementing Rules of organic aquaculture in the new EU organic regulation, on June 29th, 2009 after lengthy discussions. Thus, a legal regulation of organic fish and seafood exists throughout Europe for the first time.

In China, the standard of organic aquaculture was separated from the livestock, and was strict with the conversion date, site selection, water quality, farming, fishing and the environmental impact, etc.

**Processing and Handling**

Organic products processing mainly controlled from raw materials, auxiliary materials, processing tools, processing method, pest control, storage and transportation, etc. and ensured the organic
conformity of the product and traceability. The basic requirements of the two countries are basically identical apart from the use of some food materials, such as food additives and processing adjuvant.

**Labeling of Organic Processed Products**

In the U.S.A, only products with 95% or more organic content can be labeled with the organic seal (Figure 5); products with 70% or more organic content can be labeled “made with Organic”; products with less than 70% organic content may only have organic ingredients listed in the ingredient list.

In China, the rule of using organic seal is the same as in the U.S.A., but there exists the seal of Conversion to Organic before gained the seal of Organic (Figure 5). All the certifying organic products must be sampling detected, and only those in which the material of banning used could not be checked out can be labeled with organic seal.

![Figure 5. The USDA’s organic seal and the Chinese organic seal (The USDA’s black and white seal may be on a white or transparent background).](image)

**Conclusions /Forecast**

**Organic Production and Sales of the Two Countries Complement Each Other Strongly**

The U.S and China are both one of countries owned the largest organic agricultural land. China's organic products are mainly export-oriented, and domestic consumption is complementary; on the contrary organic products in the U.S. is mainly for the domestic consumption, and the export is complementary. Organic production and sales of the two countries complement each other strongly. It can be forecast that sooner or later, the two countries will discuss the mutual recognition of organic food.

**Although There Exit Some Differences in the Certification Standards between China and the U.S, Equivalency Will Be the Rule of the Neighboring Markets of Organic Products**

The standards and certification regulations of organic products in China and the U.S. are similar, but there exit some differences in the certification standards, specifically in the environment quality control of the organic site, conversion date to organic products, the use of sewage sludge, the use of organic feed and grazing in livestock, organic certification standards of aquatic products, and the roster of organic certification products. It is estimated that the two countries negotiations will be more argumentative and the time for achieving agreement will be relatively long. But anyhow, equivalency will be the rule of a mutual recognition, and establishing equivalency of organic regulations and standards is a means to ensure greater access to the neighboring market for domestic producers and processors, and a mitigation of new non-tariff trade barriers to importers, with a reduction in unnecessary technical barriers for all.

**Organic Market Regulation and Mutual Trust Is a Necessary Condition for the Healthy Development of Organic Agriculture**

It is reported that 150 farms in Germany had mislabeled their eggs as organic, and it became a large-scale fraud: fraud against consumers but also fraud against the many organic farmers in Germany who work honestly [8]. There also exit the similar phenomena in both China and the US, especially in China, so the existing organic production supervision system has urgent need to consummate and to improve.
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References


