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FACTORS AFFECTING INTERNATIONAL DEMAND AND TRADE IN ORGANIC FOOD PRODUCTS

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ABSTRACT---
This paper describes important markets for organic foods in Europe, Japan, and North America. The effects on demand of price premiums, distribution channels, consumer characteristics, and key consumer issues (price-quality trade off, country of origin, GMO content, and social process) are discussed.

-----KEY WORDS-----

organic agriculture, international trade, demand statistics, certification, Fair Trade

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Factors Affecting International Demand and Trade in Organic Food Products

Introduction

The organic foods market is supported by consumers in nearly every developed country in the world, with 1997 sales of nearly $10.5 billion in Europe, the United States (US) and Japan (ITC 1999). Many of the conclusions previously presented regarding consumer behavior also apply in the organic market. Preferences change in response to income changes (chapters 1 and 2) and lifestyle decisions (chapter 3), and are dependent on the age of consumers (chapter 3). As discussed (chapter 7), food safety concerns are also shaping consumer food habits. Interest in organic foods is partially attributable to this consideration.

Organic foods are distinguished from non-organic foods by the methods used in their production and processing, rather than by observable or testable characteristics. Although there is no single international organic production regulation, all generally accepted organic rules prohibit use of synthetic fertilizers, pesticides, growth regulators, and livestock feed additives, and require long-term soil management, emphasis on animal welfare, and extensive record keeping and planning. Certain activities such as use of genetically modified stock, application of sewage sludge to organic acreage, and food irradiation are also prohibited.

To be **certified organic**, a farm or processing facility must be inspected by a credible third party state or private organization to verify that all requirements of the certifying body are met. **Conventional or non-organic** foods would not meet organic standards, if subjected to certification criteria. Intermediate categories of **eco-labeled** foods, such as certified IPM (Integrated Pest Management) in the US, Low-Chemical foods in Japan, and some classes of Green Food in China, fall short of the strict prohibitions of organic certification.

Most studies characterize organic consumers as affluent, well-educated and concerned about health and product quality (Richter et al. 2000, ITC 1999, Thompson 1998, The Hartman Group 1996, HealthFocus, Inc. 1997, The Packer 2000, 1998, Wittenberg 2000). Many are parents of young children or infants. Most regular consumers favor locally grown organic products, when available, in an effort to support local farmers and insure freshness.

There is some variation in age and gender of purchasers across countries. In the US, younger aged (18 to 29 years) and middle-aged (40 to 49 years) consumers are more likely to buy organics, but men and women are equally likely to buy organics (Thompson 1998, Lohr and Semali 2000). The typical Japanese organic buyer is female and in her 30s or 40s (Wittenberg 2000). In the Netherlands, typical purchasers are between 25 and 50 years old and either living alone or in a dual-income household with children (ITC 1999). This cross-country variation is most likely related to cultural differences in who is responsible for household shopping as well as the respondents' level of commitment to the environment and personal health.

Reasons for purchasing organics are similar across countries. In Europe and the US, taste, freshness and quality rank among the top reasons for organic purchases, especially for produce (ITC 1999, The Packer 2000, 1998). The perception that organic foods are healthier is widespread among buyers, even though some countries prohibit advertising that suggests this. Food safety is the top reason driving Japanese interest in organic food, and was listed as the main concern by 80 percent of 1,000 consumers surveyed in 1995 (MAFF 1996). Secondary factors for Japanese consumers are healthfulness (nutrition) and taste.

Food scares such as mad cow disease, E. coli contaminations, and pesticide poisonings, as well as concerns over genetically modified organisms (GMOs) in foods have stimulated interest in

organic foods. Until recently, consumer response to such incidents was localized or at most affected a single country. With trade liberalization, the impact of these events on consumer behavior are more widespread as more sources are utilized for imports and food safety inspectors are charged with checking more shipments.

European retailers have responded by advertising food safety and health aspects of organic foods, with this theme dominating retail messages in 12 countries (Michelsen et al. 1999). Environmental protection is the second most important argument presented by retailers in Europe, although consumers do not consistently select food products according to environmental impact of the production and processing systems. The ITC (1999) noted inconsistencies in several countries between political views of self-described environmentalists and their shopping habits. Taste and freshness are not important parts of retailer's message in Europe, although consumers rate organics higher in this regard (Michelsen et al. 1999).

Japanese retailers have focused store promotions on food safety issues, touting perceived advantages of organic foods, which corresponds to the greatest concerns of their clientele (Wittenberg 2000). Japanese consumers also are very concerned about freshness, which is believed to be linked to nutritional content and functional value of foods (MAFF 1996). This is also part of the message that Japanese retailers deliver to promote organic foods. Overall, Japanese retailers appear to be more attuned to their consumer interests than European retailers.

In the US, retail managers who demonstrate personal interest in environmental and human health are more likely to offer organics in their stores (Lohr and Semali 2000). Conflicting data on nutritional, environmental and human safety qualities of organic foods coupled with strict truth-in-advertising regulations in the United States has limited the ability of the industry to

promote organics on these grounds. Some states even prohibit comparisons that disparage conventional products by suggesting they are inferior in any way to organics. Retailers can educate about production methods, which may be interpreted by consumers as safer, healthier or better for the environment than conventional production methods. Consumer groups have tended to be more direct in their information campaigns as they are not selling the products they are evaluating.

This chapter describes the current organic market situation in major consuming countries. The effects on demand for organic foods of price premiums, price-quality trade offs, GMO content, country of origin, and consumer social goals are explained. Prospects for future market growth in the next decade are discussed.

Market Status

Worldwide markets for organic foods are expanding, with annual growth rates of 15 to 30 percent in Europe, the United States (US) and Japan for more than five years. Using 1997 sales data and annual growth rates from the International Trade Centre (ITC 1999), and assuming a linear trend, projected market size in 2010 will be at least $46 billion in the European Union, $45 billion in the US, and $11 billion in Japan. In a review of the literature, Lohr (1998) documented that as many as 20 to 30 percent of consumers surveyed in Europe, North America, and Japan claim to purchase organic foods regularly.

While there is interest in organic foods among higher income, better educated population segments in nearly every country, consumers in the US, Europe, and Japan drive demand expansion. The current value of the European organic market is estimated at $5.255 billion, of

which US imports contribute $200 million to $300 million, or about 4 to 6 percent (ITC 1999, Achilles 1999). The current value of the Japanese organic market is estimated at $3 billion, of which US imports constitute $100 million, or about 3 percent (Wittenberg 2000).

Few governments keep statistics on sales of organic foods, necessitating reliance on industry estimates collected by the USDA Foreign Agricultural Service (FAS), the International Trade Centre (UNCTAD), and various consultant reports. Estimates of retail value and market shares of organic foods vary considerably depending on the source of information. This lack of consensus is reflected in the data presented in this chapter.

Retail value, market share, import share, and projected growth rates are typically used to assess a country's organic market. The retail value is the estimated total sales of organics in the country, including both domestically produced and imported foods. The retail share, also referred to as the market share, is the percentage of all food sales composed of organic, again both imported and domestically produced. The import share is the percentage of organic sales that is attributed to imported foods. Market growth is the expected annual percentage change in organic retail sales over the next five years. These statistics are related to each other, but are not equivalent measures due to the way they are constructed.

Total retail value indicates the absolute size of the organic market and is the product of price and quantity sold. The retail share is this value divided by the retail value of all food, and suggests how well organic foods sell compared to conventional foods. Import share is the value of imports divided by the total retail value, and is a function of domestic production as well as demand for organics. The annual market growth is a compounding factor over five years, based on each previous year's retail sales. From these descriptions, it can be seen that macro- and

microeconomic factors do not necessarily result in a uniform change across these statistics. For example, population growth in a market might not result in all organic statistics improving, even if total retail sales are higher.

An increase in population, *ceteris parabis*, would increase total retail value if the same or a greater percentage of consumers bought organic foods. For retail share to increase, the ratio of spending by new consumers on organic to conventional foods would have to be greater than for existing consumers. For import share to increase, those consumers' ratio of spending on imports to spending on domestic organic food would have to be greater than for existing consumers. Population growth would only increase market growth if spending on organics increases in all years, that is, if the new consumers increase their per capita spending in subsequent years, or if they stimulate the existing consumers to do so.

Growth will occur if organic food demand, whether in terms of volume or variety, is not being currently met, and if there is a means of supplying this demand, whether from domestic or imported sources. Historically, organic foods were first available in raw or lightly processed form – fresh produce, unmilled grains, meats, eggs, dairy, coffee and tea, and spices and herbs, so domestically produced or processed versions of these commodities were most consumers' first exposure to organic foods. Organic production, with its reliance on local ecology, exacerbates the comparative advantages due to climatic and soil factors that are observed in conventional production. Thus, most countries best produce organically what they best produce conventionally. For example, Austria, Belgium, Denmark, France, Germany, Sweden, Switzerland, the Netherlands and the United Kingdom are major producers of milk and dairy products, while Canada, Australia, and the United States are significant producers of grain (ITC

1999). However, as the sophistication of the market has increased, consumers have demanded more variety, mimicking what is available in conventional form. This demand pressure has greatly expanded organic trade, while further segmenting market share into product categories.

Viewed in this context, it can be seen that markets cannot be unambiguously ranked across all market statistics. The following discussion is divided into the European market and the Pacific and North American markets, which seemed a natural delineation. Europe has had international and national standards for organic production in place for nearly a decade, and many countries have instituted programs to encourage transition to organic production. The Pacific and North American markets have lagged in setting national standards, and have relied on the market system to stimulate the organic sector. As a consequence, less government oversight has occurred and there are fewer official data on these markets.

The European Market

Table 1 shows the extent of European, Pacific and North American organic markets for which data are available. Many developed and developing countries that produce and consume organic foods were excluded from table 1 due to their small size, low income, or emphasis on value-added export and tourism markets.

Four countries in Europe account for 63 percent of the total retail value in Europe, yet have relatively small shares of organic as a percentage of retail sales. These countries are Germany ($1.6 billion, 1.2 percent share), Italy ($750 million, 0.5 percent share), France ($508 million, 0.4 percent share), and the United Kingdom ($445 million, 0.4 percent share). The highest organic market shares are in Austria ($225 million in sales, 2 percent share), Denmark

($190 million in sales, 2.5 percent share), Sweden ($110 million, 3 percent share), and Switzerland ($350 million, 2 percent share). Total population has a significant impact on these figures, with higher population countries tending to have larger organic retail value but lower market share. Yet, the presence of more potential consumers does not necessarily imply the likelihood of greater annual market growth as discussed previously.

TABLE 1 GOES HERE.

There is substantial variation in market share across product categories, as documented by Michelsen et al. (1999) and the ITC (1999). Cereals and baked goods, fresh produce, especially vegetables, and milk and dairy products hold the largest organic market shares by product category in Europe, topping 10 percent in some categories. For example, in Denmark, six to 10 percent of vegetable sales, 3.5 percent of cereal sales and 14.2 percent of milk product sales were organic (Michelsen et al. 1999). Rapidly growing sectors include organic meats and seafood, frozen foods, beverages, and home replacement meals (PSC 1998).

To the extent that domestic production can meet demand, there is little reason to import foods. Currently organic acreage accounts for 10 percent of farmland in Austria (30 percent import share), 4 percent in Denmark (25 percent import share), 7 percent in Sweden (30 percent import share), and 8 percent in Switzerland, compared to an average of 2 percent of farmland in the European Union (ITC 1999, Krucsay 1999). These countries are self-sufficient in many staple commodities, but are facing short-term market growth rates of 10 to 40 percent per year. This could place greater pressure on imports in product categories not domestically supplied.

Countries that have a significant presence in the food processing industry, such as Germany, Italy, Sweden, and France, also face greater demand for organic ingredients. European

Union regulations require that 75 to 95 percent of a certified processed item be composed of organic ingredients. Spices and herbs, nuts, dried and powdered fruits, sugar, cocoa, and sauces are growth categories (PSC 1998, ITC 1999). For many countries, this will mean greater reliance on imports to meet demand. For example, Germany and Italy have two of the largest organic food processing sectors in Europe (ITC 1999), and each has a 40 percent import share composed primarily of raw commodities and lightly processed ingredients.

In addition to excess domestic demand, institutional factors affect market growth and import shares. National level demand promotion campaigns initiated and financed by retailers, wholesalers, or processors continually remind consumers of claimed benefits of organic foods, steadily recruiting new organic consumers so that demand growth is more predictable. Austria, Denmark, Sweden, and Switzerland have benefited from such campaigns, as have Germany and Italy (Michelsen et al. 1999). Both European Union and national subsidy programs have aided supply more than demand, especially assisting market development in Belgium and to a lesser extent, France, Germany, Italy, and Sweden (Michelsen et al. 1999). Denmark additionally has aggressively supported market development, and research and development. Except for Germany, all these countries are expected to see short term market growth of 20 to 40 percent.

A unified minimum production standard for the European Union is perceived to have had the strongest influence on market development (Michelsen et al. 1999). However, despite attempts to harmonize organic regulations internationally, there is substantial variability in ease of import entry. Trade may be impeded across national boundaries within the European Union. Even with a common minimum standard, stricter rules are permitted in individual countries and may give rise to protectionism to insure integrity of domestic standards (Michelsen et al. 1999).

Organic certification equivalency required for most countries exporting to the European Union is granted by the competent authority in the importing country, and transactions costs vary by country.

In an unpublished telephone interview of importers and exporters conducted by the University of Georgia in July and August 1999, relative difficulty of market entry was assessed by respondents. European countries considered easy to enter were Belgium, Denmark, the Netherlands, Sweden, and the United Kingdom (A. Graf, personal communication). Of these, several have limited domestic organic production shares of total agricultural land and large import shares - Belgium (0.48 percent acreage share, 50 percent import share) and the United Kingdom (0.34 percent acreage share, 70 percent import share). The Netherlands' 60 percent import share is driven by its role as Europe's major re-exporter, rather than by its relatively low projected annual market growth of 10 to 15 percent (ITC 1999).

The conflict between cultural and market forces is evident in two examples. France (10 percent import share) is considered very difficult to enter reflecting significant cultural differences, particularly strong nationalism, language barriers, and regulatory approaches. However, France's projected growth of 20 percent is unlikely to be supplied by domestic production, which was only 0.4 percent of agricultural land in 1997 (ITC 1999). Germany's consumers are considered the most discriminating in the world with respect to organic credentials, and apply several political criteria beyond certification to their purchase decisions, which has resulted in a relatively small base of committed consumers. Combined with excess domestic supply for many commodities, this has resulted in projected growth of 5 to 10 percent (ITC 1999). Yet, as a major food processor, certain ingredients must be purchased abroad to satisfy manufacturing needs.

This discussion illustrates that there is no simple way to characterize the European organic market, even with extensive statistics at hand. It is certain that demand is growing and that a greater variety of organic products is desired. Both domestic production and trade in Europe should increase over time to meet consumer demand.

The Pacific and North American Markets

The Pacific (Japan, China, Taiwan, and Australia) and North American (United States, Canada, and Mexico) markets are even more difficult to describe than the European market. As mentioned, there has been little attempt by government agencies to record statistics for these markets, so private sector organizations provide most of the data. These are less mature markets and national standards have not yet been fully implemented in most of these countries. Consumer awareness of organics is lower in most of these countries than in Europe. Statistics presented are for the largest markets by retail value.

The lower portion of table 1 reveals that Japan ($3 billion, 1 percent retail share) and the United States ($6.6 billion, 1 percent retail share) dominate markets in the Pacific and North American markets. The Japanese market value presented includes eco-labeled product classes such as "low chemical" as well as organic. The organic portion of total value may be as low as $1 billion (ITC 1999), which can be more accurately measured when products are classified according to strict national organic definitions to be implemented in 2001 (Wittenberg 2000).

Seki (1997) estimated that 60 percent of the Japanese organic market is fresh produce and 40 percent processed foods. Japanese organic consumers buy mostly frozen vegetables, dried fruits, vegetable juice, soybeans, and fresh produce (Wittenberg 2000). Domestic production in

Japan includes acreage devoted to fresh produce, which is primarily sold directly to consumers via a subscription service called tei-kei or by home delivery distributors, and rice and soybeans for processing (ITC 1999). Only one percent of vegetable acreage is in organic production (Sidiropoulos and Putland 1997). The amount in organic rice and soybean is not known. Japan imports only 10 percent of its market value, and in the limited range of products mentioned.

US statistics are collected by retailers and wholesalers, and so are delineated by sales category rather than by commodity, as is done in Europe. In the US, fresh produce, packaged grocery items (cereal, sauces, etc.) and bulk/packaged (pasta, grains, beans, etc.) were the top three categories in 1999, accounting for 49 percent of retail sales in natural products stores (Natural Foods Merchandiser 2000). The Organic Trade Association (1998) projects average annual growth from 1997 through 2002 will be highest for grain snacks and candy (60 percent), cereals (54 percent), dairy (44 percent), and frozen foods (40 percent).

The US is a net exporter of many organic commodities, although certified organic acreage and pasture make up less than 0.2 percent of total US farmland (Greene 2000). By acreage and category, 0.2 percent of grains, 0.1 percent of oilseeds and dry beans (including soybeans), 0.3 percent of hay and silage, 38 percent of herbs, 1.3 percent of vegetables, 0.9 percent of fruits and tree nuts, 0.2 percent of peanuts, and 0.3 percent of potatoes are certified organic. Livestock production is increasing, with largest gains in milk, egg, and poultry production between 1992 and 1997 (FAS 2000), although the organic share of total production is even lower than for crops.

While quantity produced is sufficient to meet demand in major organic food items, except for some tropicals such as coffee and bananas, the US nevertheless imports organic food items. Although the quantity is unknown, imports are needed to satisfy food processing needs

(flavorings, nuts, fruit concentrates and purees, dried fruits, cocoa, sugar, etc.) as well as to meet off-season demand for fresh fruits and vegetables, and to replace production allocated to foreign contract sales. American tastes for foreign foods also drive demand for imported processed items such as cheeses and wines. No estimate of the import share of the US organic market is available, but it is probably not above 10 percent.

Growth in the US and Japanese markets is anticipated to be strong, at 20 percent and 15 percent, respectively. However, regulatory changes may alter these expectations. As mentioned, Japan's national organic standards will be implemented in 2001. The US released its Final Rule for public comment in late December 2000. Pending approval, the rule will become the national standard in 2001. The Japanese rule is expected to reduce import supply because it will impose stricter standards than most importers have been used to (Wittenberg 2000). This could slow market expansion domestically since organic production in Japan is not anticipated to increase at the same rate as demand. In the US, final rules are expected to harmonize trade with other countries, and should ease import entry by introducing a simplified certification equivalency process through accreditation of foreign certifiers. [1]

The other markets listed in table 1 are not currently large. China and Mexico both are net exporters, with export values of $600 million and $70 million, respectively (ITC 1999, Russell 2000). Depending on development of food processing in these countries, which is currently heavily constrained by lack of capital and infrastructure, their import needs could grow. The China Council for International Cooperation on Environment and Development (CCICED 1996) suggested that the Chinese retail market could reach $1.2 billion due to increasing education and affluence of its middle class, but domestic production capacity should easily meet this growth.

The $9.7 million retail value of the Taiwanese market is expected to quadruple in the next three years (Perng 2000), but still represents only a niche for exporters who can recover transportation costs on small shipments. Growth in Australia ($123 million retail value) and Canada ($200 million to $500 million) will be supplied domestically as production capacity is realized. Australia and Canada are both net exporters of organic grains and specialty commodities such as maple syrup and beer (Canada), and fruit juices (Australia). Thus, Europe, Japan and the US should remain the primary markets for at least the next five to 10 years.

Factors Affecting Demand

Demand for organic foods has increased for reasons discussed in the introduction. Market expansion depends on the outcome of a number of evolving issues, which are discussed in this section. Key issues for consumers are organic price premiums, the price-quality trade off, country of product origin, GMO content, and social goal integration into the production process.

Price Premiums

The percentage of consumers who purchase organic foods affects the relationship among the market statistics, as explained previously. Widespread acceptance among consumers stabilizes demand and generates economies of scale so that costs are lower. Table 2 describes demand conditions in Europe, Japan, and the United States in terms of consumer share, defined as the percentage of consumers who buy organic food items at least once a week, and price premiums, expressed as the percentage that organic price is above conventional price for the same item. This table shows that the percentage of consumers who claim to buy organic foods regularly ranges from lows of 4 percent in Italy and 5 percent in the Netherlands to 32 percent in Denmark and

Germany and 40 percent in Switzerland. In Japan and the US, consumer studies have identified regular buyers by product category, resulting in a range of values on table 2. In both Japan and the US the greatest percentage of regular buyers is for fresh produce.

TABLE 2 GOES HERE.

More consumers claim to "occasionally" purchase organic foods, where this time period may be "once a month" to "at least once in the last six months," depending on the definition applied by the particular consumer survey. About the same percentage of consumers are occasional buyers as are regular buyers in Denmark (38 percent buy occasionally) and Germany (32 percent) (ITC 1999). There is a greater percentage of occasional buyers in France (38 percent), the Netherlands (34 percent), Sweden (40 percent), Japan (38 percent), and the US (50 percent) (ITC 1999, The Packer 2000a). No data were available on occasional purchasers in Italy, Switzerland, and the United Kingdom.

These data suggest a slight positive correlation between percentage buying regularly (table 2) and retail market share for organics (table 1). A stronger correlation might be observed if the retail and consumer shares were decomposed into product categories, so that a weighting between higher priced, less frequently purchased items and lower priced, more frequently bought foods could be constructed. If a significant portion of occasional users were to become regular buyers, the retail share and retail values presented in table 1 would increase dramatically. The market growth predictions on table 1 assume recruitment of regular users from among current occasional buyers and non-buyers.

Richter et al. (2000) surveyed 2,600 consumers in the border region of Switzerland, Germany and France to determine why frequency of purchase is not higher among occasional

buyers. They found that these buyers are more price conscious and mistrust organic labels and enforcement more than regular purchasers. Both regular and occasional buyers use labels and retail sales personnel for information, but regular buyers are more informed about production methods and more concerned about local origin of foods purchased. Nonbuyers are most influenced by price considerations of the three groups.

In the US, surveys of 1,000 households by The Packer, a trade journal for the fresh produce industry, found that 19 percent of organic produce buyers in 2000 rated themselves as very or extremely likely to buy again in the subsequent six months, down from 62 percent in 1998 (The Packer 2000b, 1998). Analysts speculated that this could be due to an influx of occasional buyers, which made the total number of produce buyers much higher. With about the same absolute number of subsequent purchasers, this made the percentage much lower. In 2000, 49 percent of nonbuyers named price as a barrier to purchase compared with 33 percent in 1998.

Retailers in the US also cite price as a barrier to offering organic foods, with 13 percent of 90 retailers surveyed in Atlanta, Georgia in 1999 saying they believed they could not sell organic foods if they charged a price premium and only 17 percent believing they could charge more than 20 percent over conventional prices (Lohr and Semali 2000). Consumer price observations in 14 conventional groceries in Europe documented price premiums averaging 35 percent in Denmark, 43 percent in Austria, 53 percent in France, 54 percent in the United Kingdom, 64 percent in Italy and 67 percent in Germany (Schmid and Richter 2000).

Michelsen et al. (1999) documented that consumer price premiums are lowest in countries with large organic market shares and a high percentage of distribution through supermarkets. The combination of market size and supermarket involvement is thought to reduce distribution costs,

exerting downward pressure on consumer price premiums. Due to their large customer base, supermarkets can generate turnover more quickly, thus saving money and maintaining product appearance and quality (Lohr and Semali 2000, ITC 1999).

In general, supermarkets are more resistant to charging high premiums than specialty stores. Occasional buyers of organics in Europe, the US and Japan are more likely to seek organics in supermarkets (HealthFocus, Inc. 1997, Wittenberg 2000, ITC 1999). This group is more price conscious than regular buyers of organics, who tend to seek out organics even if that means using specialty stores and paying higher prices. Insuring that organics are available in supermarkets has been argued to be the fastest way to convert occasional to regular users of organic products in major markets (Lohr and Semali 2000, ITC 1999).

Market saturation, seasonality (for fresh produce), outlet type, and marketing strategy as well as costs of production, are determinants of price premiums (Lohr and Semali 2000; Schmid and Richter 2000). Negative premiums may result, meaning that the organic version sells for less than the conventional version of the product. Typically, the premiums exhibited in the market are higher than what most consumers believe they should have to pay (ITC 1999). Since consumer surveys are conducted across regular and occasional buyers as well as nonbuyers, this supports the hypothesis of a relationship between the average price premiums and percentage of occasional buyers. In most countries, the average premium is no more than 50 percent, and the percentage of occasional buyers is 30 to 50 percent. This relationship does not hold for the percentage of regular buyers, as may be seen from table 2 by comparing the premiums with the consumer share for the Netherlands and Italy. This, too, is consistent with previous research showing that regular buyers have less concern about price.

Table 3 shows the distribution of sales by market outlet. Comparing these data with information on tables 1 and 2 reveals some conclusions related to other research. Those countries with the highest share distributed through supermarkets (Austria, Denmark, Sweden, Switzerland, and the United Kingdom) also have the highest retail shares and percentages of regular buyers, except for Sweden, but not necessarily the lowest average price premiums. The US and the Netherlands have the lowest average premiums, but the highest percentage of sales in specialty stores and among the lowest percentage of regular buyers of organics. This supports the hypothesis that supermarket availability, rather than lower price premiums, stimulates consumers to become regular buyers.

TABLE 3 GOES HERE

Price-Quality Trade Off

Consumers look for the highest affordable quality, given their household budgets and perceptions of product quality. Labels are used as quality cues, to the extent that they are understood by consumers. Universal labels, such as national organic certifications, reduce search costs. Easy identification of quality makes price comparison and choice easier.

Organic labels can be confusing to consumers, especially if different labels signify different production standards. Establishment of minimum standards through accreditation of certifiers is expected to clarify the meaning of "organic" in the marketplace. However, most accrediting organizations permit certifiers to affix their own labels in addition to the accreditation label. This does not necessarily improve clarity for the consumer unless he or she is trained to focus on the accreditation (minimum standard) label.

Examples of multiple standards and labels are found in some of the largest organic markets. Until 2000, in Japan there had been six grades of reduced chemical foods, including organic, all carrying the same label. China recognizes several classes of "green food" including organic. In Germany and the United States, there are so many regional and local certification agencies that learning about each is burdensome, so consumers choose the most familiar label. This is typically the first one that appeared in their regular shopping place or the one promoted by the most aggressive advertising efforts. National (US) and international (EU) accreditation logos may reduce this confusion.

Even when a label is well understood, it may lack credibility. Japanese consumers are particularly skeptical of imported products, in part due to an administrative scandal associated with the key exporting certifier in the US (Wittenberg 2000, Mergentime 1997). Michelsen et al. (1999) reported cases of rejected shipments or refusal of traders to handle foreign product, even when both the exporting and importing countries were in the European Union. Many consumers will still view their country's standards as stricter and "more organic."

The implications of label recognition and acceptance for international trade are explored by Lohr and Krissoff (2000). They note that consumer perceptions of product homogeneity are critical to product acceptance. Even with harmonization of accreditation standards at the country or market level, consumers may still reject imported organic products. Reassuring foreign consumers of import certification quality and maintaining cost-competitiveness are as important as legal considerations in international marketing.

Not all consumers view the price-quality trade offs in food choices the same way, and not everyone wants organic foods Surveys show 10 to 20 percent of consumers in Germany are not

willing to pay any premium for organic foods (ITC 1999). As many as 18 to 35 percent of US consumers would not purchase organics even if there were no price difference between organic and conventional foods (The Hartman Group 1996). For these consumers, organic foods do not represent a superior product.

Country of Product Origin

Where and how food is produced matters to a significant portion of organic consumers. This local preference incorporates ethical views toward farming and local growers. Interest in supporting regional producers is strong among regular buyers of organic foods (Richter et al. 2000). Many consumers are also troubled by the long distances that food has to travel from farm to table. Greater distances increase net energy input for food production and marketing through transportation fuel use.

Organic fruits and vegetables are in demand partly because they are perceived as fresher than conventionally grown foods. With longer distances between producer and consumer, this advantage declines. Consumers surveyed in the US and Sweden preferred local conventionally grown products over organic products, if the organics were brought in from outside the region (Burress et al. 2000, Ekelund and Fröman 1991). In Japan, organic imported soybeans sell for 14 percent less than domestically produced conventional (non-GMO) soybeans (Wittenberg 2000).

At the national level, fears of food safety problems have prompted country-of-origin labeling requirements. This issue is shaping consumer acceptance of imports in the Japanese and some European markets (Wittenberg 2000, ITC 1999). As Lohr and Krissoff (2000) showed, even if a domestic certifier approves an imported product, if country of origin is known to the

consumer and is not acceptable, the product will not be marketable and losses will be incurred by both domestic consumers in the importing country and producers in the exporting country.

Programs that support domestic or regional organic production systems in developed countries are typically implemented for environmental or for extensification reasons. Direct subsidies have been widely use in the European Union and by individual countries in Europe, as well as in Minnesota (US). Cost-sharing to assist in transition has been used in Iowa (US) in the state-administered federally funded environmental protection program known as EQIP. Such subsidies have been successful in promoting domestic supply, which in turn limits imports, in countries such as Switzerland, Sweden, Austria, and Denmark.

Consumers have taken direct action to support local organic farming by enrolling in subscription programs in which they pay a preseason fee for delivery of fresh produce through the growing season. These programs are known by various names - Community Supported Agriculture (CSA) in the US, tei-kei farming in Japan, and vegetable boxes in Great Britain. In the US, those who subscribe to CSA farms mention produce freshness and support for local farmers as two main reasons for enrolling (Kane and Lohr 1997). Expansion of these programs would be unlikely to alter major market opportunities for exporters because they are usually limited to fresh produce that is available in-season. There is insufficient land near most urban areas, where such programs are most popular, to serve all organic consumers.

GMO Content

GMO labeling is foremost in many consumers' choice of organic products. Prohibition of GMOs in organic food production standards is nearly universal. GMOs are perceived as risky by

a vocal segment of consumers in almost every developed country except Canada, the US, and Argentina. Market effects are sometimes exhibited in price differentials. In Japan, imported organic soybeans sell for 500 percent more than imported GM-soybeans (Wittenberg 2000).

Through low-cost protein testing, GMOs can be detected in raw commodities, making it possible to detect organic foods that have been modified through cross-pollination or product mixing. Regardless of whether such commingling occurs, importers may require organic products to be tested and certified as "GMO-free" if they are from countries where this is possible.

Social Goals

Consumers who want to advance social goals such as equitable income distribution and sustainable development have the option of supporting Fair Trade labels. The Fair Trade model operates by direct purchase and import of crafts and tropical food items from small, democratically organized producers in the Southern Hemisphere (EFTA 1995). The Northern Hemisphere importer pays producers the cost of production plus a locally competitive wage, typically higher than world commodity prices. The importer is not permitted to cancel its contract with the grower and must pay part of its contract price up front. Usually the importer also contributes to local causes in the producing region, such as a school or health clinic or cultural preservation. Through the higher wages offered by Fair Trade importers, the producer group is able to reduce reliance on natural resource extractive activities and to insure fair labor practices and an acceptable standard of living.

Although overhead is minimized by direct importer-producer contacts, the higher wages translate into retail markups that are about the same as for organic foods. The Fair Trade

Federation (2000), an umbrella organization for coalitions and foundations that certify products, listed Fair Trade sales totaling $400 million annually, with $35 to $40 million in North America. The Food and Agriculture Organization (FAO 1999) cited estimates for the European Fair Trade market of $140 million in food annually, with participation by 70 import organizations, 3,000 world shops dedicated mostly to craft items, and 50 supermarket chains in 14 countries. The primary food product exchanged under this system is coffee. In Germany and the United Kingdom, 4 percent of the coffee market is certified Fair Trade, and in the Netherlands, 3 percent is so designated (ITC 1999). In 2001, Starbucks Coffee, the largest retail outlet in the United States, will introduce certified Fair Trade coffee in all its stores, giving this certification a major presence in North American markets. Among food items currently eligible for Fair Trade labels are tea, bananas, cocoa, and chocolate.

The Fair Trade certification is different from organic certification, although 65 percent to 85 percent of Fair Trade imports also carry organic certification (ITC 1997). One difficulty with Fair Trade certification is that it is process-based, according to local standards for sustainability, and thus all labels do not certify the same production system. Documenting that the principles of sustainability are followed is sufficient to earn a Fair Trade label, without necessarily using the same practices as another certified producer in the same region.

The FAO (1999) compared markets for Fair Trade and organic bananas in Europe, North America and Japan. Fair Trade bananas are virtually unknown in North America and Japan, but they constitute 10 percent of banana sales in the Netherlands and Switzerland and 0.3 percent in Germany. More than 17,000 metric tons of Fair Trade bananas from Ecuador, the Dominican Republic, Costa Rica, and Ghana were sold in Europe in 1998 at prices averaging 20 percent

more than conventional bananas. Comparatively, organic banana sales in Europe in 1998 were 11,000 to 13,000 metric tons, with price premiums from 50 to 100 percent at retail. About 2,000 metric tons of Fair Trade bananas were imported into Japan from the Philippines, compared with 2,700 metric tons of organic bananas from the Philippines, Australia, and Mexico. The United States and Canada have not imported Fair Trade bananas, but organic banana imports from the Dominican Republic, Honduras, and Mexico were about 11,000 metric tons (0.3 percent of the banana market). Canada imported 1,800 metric tons of organic bananas via the United States.

With expansion of Fair Trade certification to other products and increasing awareness for the labels, which should increase dramatically after the Starbucks Coffee adoption, the United States appears to be a prime opportunity for Fair Trade products. With a growing number of eco-labels on the market that are separate from organic labels, the expense of education programs to distinguish the various products will fall on the organic industry (Lohr 1999). Eco-labeled products benefit by organic advertising, but crowd the market with more labels that are difficult for the consumer to interpret and hence, costly for the consumer to sort out. In the price-quality continuum, a confused consumer would be likely to pay a 10 percent premium for an eco-labeled food item compared to a 30 percent premium for the same food item certified as organic. Dual certifications could resolve this problem, but American consumers have not demonstrated a readiness to pay a double premium for such products.

Projected Market Growth

Many European countries are experiencing a deceleration in growth from the last decade, compared to the US, which projects continued 20 percent growth for the short term. Japan's rate

has been projected at only 15 percent due to product availability and wariness about imports' conformity with the new national regulation. The next five years should see expanded trade as well as domestic production in an effort to meet rising demand.

The exchange of organic products internationally is increasing dramatically. Import and export figures by product category are provided by the ITC (1999), Michelsen et al. (1999), and the US FAS (various reports 1999, 2000). The Horticultural and Tropical Products division of FAS publishes a monthly online periodical, Organic Perspectives, at http://www.fas.usda.gov/htp/organi cs/organics.html that tracks international market activity. The implementation of national standards in the United States and Japan, developed with deliberate consideration of existing standards in Europe, should realign trade flows so that more exchange occurs among Japan, the US, and Europe, as harmonization among the major markets takes place.

Markets are evolving to demand highly processed organic products as well as raw commodities. In Europe, markets are increasing for ready meals, frozen foods, baby food, snacks, and beverages. Ingredients needed for organic food processing include juices, fruit powders, dried fruit, meat, flavorings, essential oils, herbs and spices, and nuts. Sample trade flows into Europe are from Israel (fresh produce), Brazil-Chile-Argentina (fresh produce, soy, wheat), other European countries (baby food, processed foods, cereals, meat), Canada (wheat, soy, canola), Mexico-Central America (bananas, citrus, coffee, cocoa), Sri Lanka-India (tea), and the US (processed foods of all types, wheat).

In Japan, consumer goods in growing demand include fresh produce, frozen foods, juice, baked goods, baby food, chicken, sauces, and ready meals. The ingredients market is less

extensive, but growing for fresh vegetables for pickles, fresh fruits and sweeteners for jam, oils, and semi-finished produce. Trade flows are not restricted to countries in the Pacific region, but are dominated by them. For example, products are imported from New Zealand (frozen vegetables, fresh fruit), Australia (citrus juice), China (tea, soybeans, rice), France (jams, coffee, cereal, ice cream), Brazil (soybeans), Canada (beer), Norway (seafood), and the US (fresh produce, soybeans, rice).

Market options are expanding as well (ITC 1999). Retailers have more opportunities to introduce store label or own brand organic products as consumer awareness and market penetration increase. The food service and catering sectors are virtually untouched, although they offer higher wholesale margins than sales to brokers or wholesalers. Vegetarian restaurants, school and institutional programs, airline (Swiss Air and Lufthansa) and hotel catering are experimenting with wider organic offerings.

Markets for direct sales to consumers could be the best option for opening developing country markets in which volume is low but a segment of highly educated and high income elite are interested in organic products. Subscription and box sales enable farmer and consumer to have direct contact, but consumer buying clubs and electronic or mail order catalogs offer the opportunity to reach more consumers at higher margins. International sales via these outlets must meet all international trade regulations and importing country phytosanitary and organic standards, but with smaller shipments and with time to develop individual reputation, these obstacles may be overcome.

Supply competition is inevitable, particularly in market segments that are widely observed to be growing, and as such are attracting suppliers. Most raw commodities are now available in

organic form, as production is widespread. The ITC (1999) reports commercial production in 27 countries in Africa, 7 in the former Soviet states, 20 in Europe, 3 in Australasia, 15 in Asia, 25 in Latin America and the Caribbean, and 3 in North America. At the same time, with rising per capita income, increasing awareness of organic benefits as domestic commercial production increases, and greater government and private sector commitment, it is likely that market demand will continue to keep pace with production for the next few decades.

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Footnotes

[1] As of this writing in February 2001, the Japanese organic standards may be found online at http://www.maff.go.jp/soshiki/syokuhin/hinshitu/organic/eng_yuki_top.htm. The European Union's EC Council Regulation 2092/91 may be found online at http://europa.eu.int/comm/sg/consolid/en/391r2092/artm.htm. The Final Rule for the US National Organic Standards may be found at http://www.ams.usda.gov/nop/nop2000/Final%20Rule/nopfinal.pdf. The IFOAM Basic Standards (updated in 2000) may be found at http://www.ifoam.org/standard/index_neu.html.

References

FAS GAIN reports cited here are available online at www.fas.usda.gov. Search under Attache Reports and keyword "organic" or by report number.

Achilles, D.A. 1999. Germany Organic 1999. USDA FAS GAIN Report #GM9071.

Agriculture Trade Office Milan. 1999. Italy: Organic Food Products. USDA FAS GAIN Report #IT9719.

Agriculture and Agri-Food Canada. 1999. Tipsheet August 1999. Obtained online at www.agr.ca/cb/tipsheet/199909e.html.

Burress, D., B. Harris, and P. Oslund. 2000. Kaw Valley demands for local and organic produce: Surveys and models. In T. Alfödi, W. Lockeretz, U .Niggli (eds.) Proceedings 13th IFOAM Scientific Conference. Zurich: vdf Hochschulverlag AG and der ETH Zürich. pp. 537-540.

China Council for International Cooperation on Environment and Development (CCICED). 1996. China:s Green Food Development and Environmental Protection. Beijing: National Environmental Protection Agency.

Ekelund, L., and E. Fröman. 1991. Consumer Attitudes Toward Vegetables - A Study of Conventional and Organic Products. (In Swedish) Report 60. Swedish University of Agricultural Sciences, Dept. of Horticultural Science, Alnarp, Sweden.

Escudero, M. 1999. Spain's Organic Product Market 1999. USDA FAS GAIN Report #SP9031.

European Fair Trade Association. 1995. Facts and figures on the fair trade sector in 14 European countries. Obtained online at www.web.net/fairtrade/fair632.html.

Fair Trade Federation. 2000. Fair trade facts. Obtained online at www.fairtradefederation.com/ab_facts.html.

Food and Agriculture Organization. 1999. The Market for "Organic" and "Fair-Trade" Bananas. Committee on Commodity Problems, Intergovernmental Group on Bananas and Tropical Fruits. Obtained online at www.fao.org/docrep/meeting/XII49E.htm.

Foreign Agricultural Service. 2000. U.S. global organic dairy, livestock and poultry production: implications for international trade. December. Obtained online at www.fas.usda.gov/dlp/highlights/00%2D11/organics/intro.html.

Foreign Agricultural Service. 1998. Japanese consumers rank product labeling. June. Obtained online at www.fintrac.com/rap/news/briefs/9a.htm.

Greene, C. 2000. U.S. organic agriculture. Issues Center, Economic Research Service, USDA. Obtained online at http://www.ers.usda.gov/whatsnew/issues/index.htm, and …table5.

International Trade Centre (ITC). 1999. Organic Food and Beverages: World Supply and Major European Markets. Geneva: ITC/UNCTAD/WTO.

The Hartman Group. 1996. Food and the Environment: A Consumer's Perspective. Phase 1. Bellevue WA: The Hartman Group.

HealthFocus, Inc. 1997. What Do Consumers Want From Organics? Des Moines, IA: HealthFocus, Inc.

Kane, D. J., and Luanne Lohr. 1997. Maximizing Shareholder Retention in Southeastern CSAs - A Step Toward Long Term Stability. Research report**.** University of Georgia, Institute of Ecology, Athens, GA.

Krucsay, W. 1999. Organic Production and Marketing of Organic Products 1999. USDA FAS GAIN Report #AU9046.

Krucsay, W. 1996. Organic Agriculture and Food in Austria. USDA FAS AGR Report #AU6055.

Lohr, L. 1998. Implications of organic certification for market structure and trade. American Journal of Agricultural Economics 80(5):1125-1129.

Lohr, L. 1999. Consumer welfare effects of eco-label proliferation: too much of a good thing? Proceedings of the Food and Agricultural Marketing Consortium Annual Meeting, Alexandria, VA. unpaged.

Lohr, L., and B. Krissoff. 2000. Consumer Effects of Harmonizing International Standards for Trade in Organic Foods. Faculty Series FS00-08. University of Georgia, Dept. of Agricultural and Applied Economics, Athens, GA.

Lohr, L., and A. Semali. 2000. Retailer decision making in organic produce marketing. In W. J. Florkowski, S. E. Prussia, and R. L. Shewfelt (eds.) Integrated View of Fruit and Vegetable Quality. Lancaster PA: Technomic Pub. Co., Inc. pp.201-208.

Masuda, F. 2000. The domestic organic market and development of national standards in Asia. In Quality and Communication for the Organic Market, W. Lockeretz and B. Geier (eds.). Tholey-Theley, Germany: IFOAM. pp. 34-38.

Mathews, J. 1999. Canada Germination Equipment Market. US Department of State. Obtained online at tradeport.org/ts/countries/Canada/mrr/mark0024.html.

Matt, P. 1999a Australia- Organic Food Market - IMI990601. Market Research Reports: International Market Insights, USDOC, International Trade Administration. Obtained online at www.stat_usa.gov. Search under "Australia."

Matt, P. 1999b Australia- Food Industry News Update – IM11/18. International Market Insights, USDOC, International Trade Administration. Obtained online at www.stat_usa.gov. Search under "Australia."

Mergentime, K. 1997. Japan's blooming organic market. Natural Foods Merchandiser. September. Obtained online at www.nfm-online.com/nfm_backs/Sep_97/japan.html.

Michelsen, J., U. Hamm, E. Wynen, and E. Roth. 1999. The European Market for Organic Products: Growth and Development. Organic Farming in Europe: Economics and Policy Volume 7. Stuttgart: University of Hohenheim.

Ministry of Agriculture, Forestry and Fisheries. 1996. MAFF Update. Number 182, September 13, 1996. Obtained online at www.maff.go.jp/mud/182.html.

Natural products stores 1999 sales by category. Natural Foods Merchandiser 21(6):20.

Organic Trade Association. 1998. Manufacturers' Market Survey. Greenfield, MA.

The Packer. 2000a. Organic produce sales gaining 10-12 percent annually. Fresh Trends 2000. Lenaxa KS: Vance Publishing Corp.

The Packer. 2000b. Repeat organic purchasers declining. Fresh Trends 2000. Lenaxa KS: Vance Publishing Corp.

The Packer. 1998. Organic produce sales gaining 10-12 percent annually. Fresh Trends 2000. Lenaxa KS: Vance Publishing Corp.

Perng, C. M. 2000. Taiwan's Market for Organic Products. USDA FAS GAIN Report #TW0008.

Piason, F. J. 1999. France: Organic Food Report 1999. USDA FAS GAIN Report #FR9070.

Pinton, R. 1999. Marketing the produce. Ecology and Farming. 22(September-December):20-21
.
Produce Studies Consulting (PSC). 1998. The European Organic Food Market. PSL 9367/JAG/KH. The Hague: USDA.

Richter, T., O Schmid, B. Freyer, D. Halpin, and R. Vetter. 2000. Organic consumer in supermarkets – new consumer group with different buying behavior and demands! In T. Alfödi, W. Lockeretz, U .Niggli (eds.) Proceedings 13th IFOAM Scientific Conference. Zurich: vdf Hochschulverlag AG and der ETH Zürich. pp. 542-545.

Russell, C. R. 2000. Mexico: The Mexican Market for Organic Products. USDA FAS GAIN Report #MX0016.

Schmid, O., and T. Richter. 2000. Marketing measures for selling organic food in European retail chains – key factors of success. In T. Alfödi, W. Lockeretz, U .Niggli (eds.) Proceedings 13th IFOAM Scientific Conference. Zurich: vdf Hochschulverlag AG and der ETH Zürich. pp. 519-522.

Seki, T. 1997. Study on Japanese organic food market. Agriculture and Agri-Food Canada. Obtained online at atn-riae.agr.ca/public/htmldocs/e1524.htm.

Sidiropoulos, L., and S. Putland. 1997. Opportunities in North Asia for Victoria's agricultural and food industries. Department of Natural Resources and Environment, Victoria, Australia. Obtained online at www.dce.vic.gov.au/trade/pubs/oppnthas.htm.

Thompson, G. 1998. Consumer demand for organic foods. American Journal of Agricultural Economics 80:1113-1118.

Wittenberg, A. E. 2000. Organic Foods in Western Japan 2000. USDA FAS GAIN Report #JA0712.

Table 1. Organic Retail Sales and Import Share in World Markets [a]

Market	Retail Value (US$)	Retail Share (% of Sales)	Import Share (% of Organic)	Annual Market Growth (% of Retail Value)
Austria	$225 - 270 million	2.0 – 2.5	30	10-15
Belgium	$75 - $94 million	0.3 - 1.0	50	n.a.
Denmark	$190 - $300 million	2.5 – 3.0	25	30-40
France	$508 - $720 million	0.4 – 0.5	10	20
Germany	$1.6 - $1.8 billion	1.2 – 1.5	40	5-10
Italy	$750 - $900 million	0.5 – 3.0	40	20
Netherlands	$230 - $350 million	1.0 – 1.5	60	10-15
Spain	$32 - $35.5 million	1.0	50	n.a.
Sweden	$110 - 200 million	0.6 - 3.0	30	30-40
Switzerland	$350 million	2.0	n.a.	20-30
United Kingdom	$445 - $450 million	0.4 – 2.0	70	25-35
Japan	$3 billion	1.0	10	15
China	$6 million	n.a.	0	n.a.
Taiwan	$9.7 million	n.a	100	200
Australia	$123 - $130 million	0.2	10	400
United States	$6.6 billion	1.0	n.a.	20
Canada	$200 - $500 million	1.0	80	15
Mexico	$12 million	n.a.	0	n.a.

[a] 1997 estimates for European markets, except 1999 estimate for Italy. 1999 estimates for Pacific and North American markets, except 1997 estimate for China. Annual growth rates are projected for the next five years, except three years for Taiwan and historical for Canada.

Sources: ITC 1999, PSC 1998, FAS GAIN reports 1999 and 2000, US DOC reports 1999, US DOS reports 1999, Masuda 2000.

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Table 2. Consumer Share and Price Premiums in Key Demand Centers

Market	Consumer Share (% Buying Regularly)[a]	Price Premium (% Above Conventional)
Austria	20	25 - 30
Denmark	32	20 - 30
France	10	25 - 35
Italy	4	35 - 100
Germany	32	20 - 50
Netherlands	5	15 - 20
Sweden	15	20 - 40
Switzerland	40	10 - 40
United Kingdom	25	30 - 50
Japan	4 - 36[b, c]	10 - 20
United States	8 – 19[c]	10 - 30

[a] "Buying regularly" is defined as at least once a week.
[b] "Occasional" purchasers; percentage of regular buyers not available.
[c] Percentage varies by product category.
Sources: ITC 1999, FAS GAIN reports 1999 and 2000, HealthFocus, Inc. 1997.

Table 3. Percentage Shares of Retail Market by Distribution Channel

Market	Supermarkets[a]	Specialty Stores[b]	Producer Direct[c]
Austria	77	13	10
Denmark	70	15	15
France	45	45	10
Italy	25 - 33	33	33 - 42
Germany	25	45	20
Netherlands	20	75	5
Sweden	90	5	5
Switzerland	60	30	10
United Kingdom	65	17.5	17.5
Japan[d]	high-end stores	widely available	widely available
United States	31	62	7

[a] Includes supermarkets and hypermarkets that offer conventionally grown foods.
[b] Includes organic supermarkets, natural products and health food stores, cooperatives, and other.
[c] Includes on-farm sales, farmer markets, box schemes, CSAs, teikei, and other.
[d] Share data are not available for Japan, but qualitative information suggests the relative availability of product in each category.

Sources: ITC 1999, FAS GAIN reports 1999 and 2000.