The Origin of Organic Food

Rising of Organic Movement in the U.S.

The underlying principles of organic farming is the idea of land stewardship to keep the land productive for generations are century old. However, organic farming as we know it now came about as a reaction to the wide adaptation of input intensive farming around the time of WWII, as a result of technological advances made earlier in the century and food shortages experienced during the war. During the first half of the last century, synthetic fertilizers were affordably produced and machineries were quickly replacing manual labor. Farmers around the world saw the potential detriment of this industrialized farming to environment and health, rejected the idea that this was advancement in agriculture, and began to study and develop methods that increased the long term productivity of their farm system but on the proposition that human, animal, and environmental health were not worth sacrificing for greater production. [1]This type of farming soon came to be known as "organic."[2]

In modern agriculture, the intensive use of insecticides and pesticides were used and displaced the use of manure to ensure a higher yield on a fixed quantity of land. This growth comes with a cost to consumers' health and to the environment. A scientific research shows that long-term exposure to these chemicals will increase the risk of neurobehavioral damage, cancer and reproductive disorders and thus organic food is healthier.[3] Later on, the organic ideal wanted to push the linkage between organic and health further, by proving that organic food is better for human health. The industry funded scientific studies to further strengthen the benefits of organic farming and to make a health claim for organic foods that could meet the legislation. Currently, the "organic" label does not reflect a health claim. According to the USDA regulations, the "organic" label only means that the food was produced using organic methods. To consider whether organic foods are healthier than conventional food, various factors need to be considered. The effects of pesticides in the diet, or studying the nutritional makeup of the foods. A recent study by Stanford, which looks into both health aspects, shows that there is little health benefits from organic foods comparing them to conventional foods.[4] No significant extra nutrients are found in organic food nor there is ample evidence showing that pesticides in conventional food are above the safety level. Yet, the long-term effect of chemical fertilizers and pesticides in diet are still unknown and a person's health is affected by a myriad of factors, like exercise, wealth to have a balanced diet.

Detriments to the environment were first recognized in 1938, as topsoil blew off the Great Plains, leaving tens of thousands of farmers destitute, a USDA report, *Soils and Men*, discussed the way agricultural practices depleted the soil. This report an early argument for a sustainable alternative in agriculture. Later in 1945, J.I. Rodale, perhaps the mot influential figure in the American organic food movement published an article warned about the dangers posed by DDT and later Rachel Carson expanded the criticism of DDT in her book *Silent Spring*. All these milestones, created a platform upon which the American organic movement could grow.

Organic Movement in Hong Kong

1. Decline of Local Agriculture with Massive Chinese Food Supply

In the 1950s, Hong Kong has undergone rapid industrialization under the British colonial rule. There were land shortages for commercial and residential development, taking farmland for development to accommodate the rapidly growing populations was one of the solutions. Than in the 1960s, the government has started to develop new towns in Hong Kong, to gradually convert the farmland rural land to infrastructure, factories and public housing for the industrial development and the growing population. With the rapid urbanization happening in the rural area, land owners were more inclined to sell the land to property developers for a higher profit, rather than to rent the land out for agricultural use. The land development and urbanization in the 1950s and 60s have led to a sharp fall of farmland area from 1974 to 1984.[5]

Year	Area of vegetable and flower grower (hectares)	Area of abandoned land (hectares)	Total area (hectares)
1963/64	3335 (only vegetables)	955	13618
1973/74	4258	3484	12723
1983/84	2760	4110	9630
1993/94	1600	4040	7900

Sources: Hong Kong Government the Agriculture and Fisheries Department, Agriculture and Fisheries & Conservation Department Annual Report, Financial years 1963/64, 1973/74, 1983/84 and 1993/94.

As Hong Kong was moving towards a commercial city, there were more better ob opportunities, education and living conditions in the urban area. The younger generations moved out from the rural area and look for jobs in the urban area. Farming was no longer a career that was chosen by the new labour force, and this led to a decline in the number of farmers in Hong Kong.[6]

Year	Number of Farmers
1961	47135 (including foresters and trappers)
1971	34013
1981	24722
1991	24877 (including fisheres)
2001	5800

Sources: Hong Kong SAR Government the Census & Statistics Department, Hong Kong Statistics 1947-1967 (1969); Hong Kong 1971 Census Main Report; Hong Kong 1981 Census Main Report volume 2: Tables, Hong Kong 1991 Population Census Main Report. Hong Kong SAR Government the Agriculture, Fisheries and Conservation Department, Agricultural, Fisheries and Conservation Department Annual Report, for the Financial year 2001/02, available on-line from http://www.afcd.gov.hk/misc/download/annualreport2002/pdf/24-33.pdf; Internet; accessed on 6th March 2008.

Further hit to the local agriculture in Hong Kong was the regulations and anti-agricultural pollution measures launched in the 1990s. These regulations were started to tackle the agricultural pollution problems in the early 1980s, where agricultural wastes like manure were poured into the rivers and caused pollution and foul smell.[7] Regulations, for example, the Livestock waste control scheme (1994) was to provide loans for livestock farmers to invest in waste treatment facilities. However, the requirement to install these facilities placed a heavy financial burden for the farmers to operate.

The famous avian flu in 1997 in Hong Kong raised a public fear of raising poultry in Hong Kong. In 2006, backyard poultry operations was banned, and this accelerated the decline of local agriculture in Hong Kong.

With the huge decline of local food supply in Hong Kong, and the opening of the Chinese market in 1979, the massive import of Chinese vegetables had satisfied the large demand of Hong Kong citizens. There is only a small amount of land (18 km2) are used for farming in Hong Kong now. Over 90% of food are imported, with 92% of vegetables are imported from China. Most of the imported fresh vegetables come from Guangdong area and later extended to Yunnan, Hainan, Gansu to have a stable supply of varieties throughout the year.[8] From 1970 to 2007, the supply of local vegetables was increasingly trivial to the Hong Kong food market compared to the imported vegetables. The ratio of local vegetables and imported vegetables was 0.2: 9.8 in 2006-2007.[9] The food supply from China was further stabilize when China resumes its sovereignty of Hong Kong politically in 1997.

2. Food Safety Crisis and the Rise of Organic Food

In the 1990s, people in Hong Kong are more aware of the nutrition and medical functions of vegetables. In the traditional knowledge of Chinese food, vegetables are well-recognized for its medical function, and in the 1990s, the notion of Western scientific nutritional values were more popularized. Further with the rising of vegetarians in Hong Kong for environmental and health purpose, and the food and health campaigns in schools and news of mass media, the demand of vegetables rose, health awareness and the symbol of health with vegetables were established.

There were repeated food safety crisis in China such as melamine found in infant formula and milk, formaldehyde on cabbages and poison in pork in the 2000s, [10] all these news broke the confidence of Hong Kong people consuming food imports from China. This crisis led to a surge in demand for foreign fresh food items from Europe, America, Australia, New Zealand, etc. Amid growing public concerns over food safety and environmental protection, the Hong

Kong government set up the Food Safety Center in 1988 to monitor and test the vegetables' pesticides residue and heavy metal from imports, wholesalers and retailers.[11]

Organic food was another solution to the food safety problem in Chinese food imports. Organic food imported from the U.S. and Europe in the early 1990s was a high-class consumption good. Organic farming was a foreign idea, and was started in Hong Kong in the early 1990s by a few urban dwellers as a leisure activity. The first large-scale organic farm in Hong Kong was started in 1988 by Produce Green Foundation aiming to promote green living and environmentally friendly farming practices to cultivate crops. In the 1990s, organic farming gained more popularity and the Hong Kong Organic Farming Association, which is now known as the Sustainable Ecological Ethical Development Foundation was set up. Kadoorie Farm is another pioneer organic farm in Hong Kong. In 1992, Kadoorie Farm has converted to organic farming and became one of the active farm to promote organic agriculture in Hong Kong by organizing seminars, demonstrating organic farming and providing organic farming trainings and setting up farmers' market.

With the demise of local agriculture because of the strong competition of imported vegetables from China, organic farming also opens up a niche market for local farmers to compete with and charge a premium over the food from China. The local organic food differentiated themselves as safer and higher quality food than Chinese produce. This is a similar reasoning to the development of organic movement in the U.S.; organic was developed as a surviving strategies for the small-scale farmers as a differentiation to the industrialized conventional food production systems.

By 1999, there were only about ten local organic farms with small acreage, and the output was insignificant. The organic farming industry has grown steadily, dated in 2011, there were 405 organic farms cultivating 110 hectares altogether in Hong Kong. These farmers appeared in a myriad of forms, including, the family-operated farms, enterprise-operated farms, educational hobby farms and self-claimed organic farms. The rise in local organic supply was to meet the growing demand of organic food in Hong Kong. In 2012, about one-third of the 7 million people in Hong Kong now buy organic food at least once a week, according to a survey released today by the Hong Kong Organic Resource Center, the territory's first certification body.

Principles of Organic Agriculture

The philosophy of organic food production maintains certain principles: biodiversity, ecological balance, sustainability, natural plant fertilization, natural pest management, and soil integrity. Since farms vary in product and practice, there is also a wide variety in how these principles are applied. However, generally, organic food products:

Traditionally, organic food production has certain characteristics, including:

•Are grown or raised by a producer who uses practices in balance with the natural environment, using methods and materials that minimize negative impact on the environment.

The organic farmer is committed to replicating the ecology of the natural environment by maintaining biodiversity and fostering healthy soil and growing conditions.

•Are produced on land that has been free of known and perceived toxic and persistent chemical pesticides and fertilizers for at least three years prior to certification, and synthetic fertilizers and pesticides are not used in production.

•Are planted on a rotating basis within the farm system. Crops are rotated from field to field, rather than growing the same crop in the same place year after year. Cover crops such as clover are planted to add nutrients to the soil and prevent weeds.

•Organic meat, poultry and egg products come from farms that use organic feed, do not administer added hormones to promote growth or any antibiotics and they allow animals the space and freedom to behave naturally.[12]

Trends and Consumer Preferences of Organic Agriculture in the US

1. Regulations

The production and marketing of organic food was regulated under the USDA National Organic Program in 2002. This regulation defines organic agriculture as "an ecological production management system that promotes and enhances biodiversity, biological cycles and soil biological activity. It is based on minimal use of off-farm inputs and on management practices that restore, maintain and enhance ecological harmony."

Before the establishment of the federal standard, each state or region has its own standards to certify that foods labeled as organic were actually grown according to the practices that they followed. These standards differed slightly from certifier to certifier. The certification regulations can help protect the integrity of the organic products, to ensure they are in compliance with US regulations, and to provide a guarantee to consumers. Under the regulations, all products using the word "organic" required a national certificate. Many smaller organic farmers groused about the costly and time consuming certification process, although with the cost-share funds for farmers to help cover their certification fee from the 2008 Farm Bill. Eventually, they stopped using the word "organic" but other phrases like "pesticides free" instead of certifying their farm.

Considering the origins of the organic movement, the regulations are unrelated to the underlying meaning of organic food.

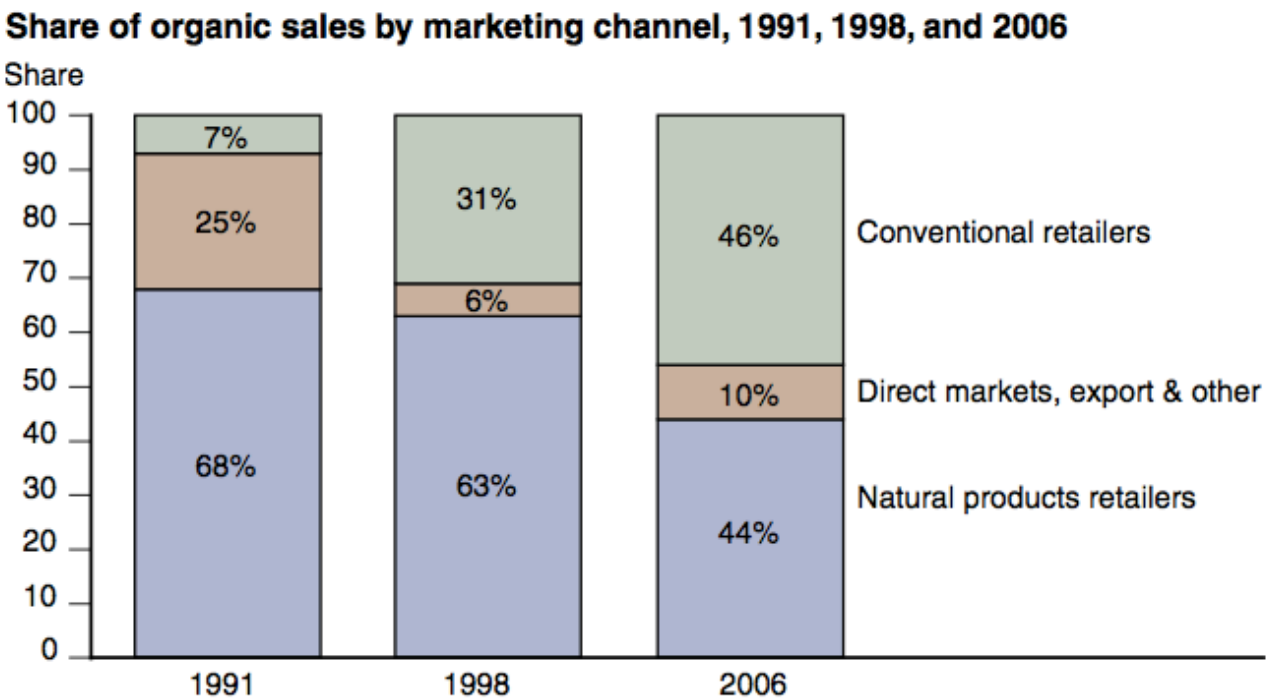
2. Organic Food Market

Organic agriculture was started as an alternative method to the conventional mainstream agriculture. With the rising of conventional industrialized agriculture, the number of small-scale farms declined, and the size of the surviving farms are larger. It was first adopted by small-scale farmers, who were seeking creative ways to sell their produce outside of supermarkets, because they could not produce enough volume at a cheap enough price to make purchases worthwhile for a large chain.They mainly sell through farmers' market, their own stall or using a Community Supported Agriculture (CSA) model. The transition to organic from conventional farming produce allow small-scale farms to charge a premium over conventional products and to survive against the increasingly low price undercutting by the large conventional corporations who can exploit the economies of scale and a low cost.

The Organic Market is Growing and Shifting Distribution Channels

Consumer demand for organic products has risen quickly with a double-digit growth over the past decade in the U.S. Organic products are widely available in the US in nearly 20,000 natural food stores and nearly 75% of conventional grocery stores. Organic sales account for more than 3% of total U.S. food sales.[13] U.S. sales of organic food and beverages have grown from $1 billion in 1990 to $26.7 billion in 2010. Sales in 2010 represented 7.7 percent growth over 2009 sales.[14]

The booming of the organic market in the U.S. is contributed to the declining price gap between organic and conventional products, more widely available distribution channels and partly due to the development and success of USDA's organic regulatory program and label. There are two factors contributing to the declining price gap: 1) non-organic food prices were rising faster than organic equivalents due to heavier dependance on fossil fuels and government subsidies to keep their prices artificially low; and 2) lower-priced private label products are available, creating more downward pressure on the organic/ conventional price-gap.



Source: Natural Foods Merchandiser, various issues; Nutrition Business Trade Association, 2006.

The distribution channel of organic food has shifted from natural products retailers, that accounts for 68% organic sales in 1991 down to 44% in 2006, and direct markets (e.g. farmers' market, CSA) down from 25% in 1991 to 10% in 2006. Conversely, the sales from conventional retailers has increased from 7% in 1991 to 46% in 2006.

3. Organic Consumers

In the U.S., there are 78% of consumers who buy organics at least occasionally. 40% are buying more organic than the previous year. The drivers for them are 'health and nutrition', concern about effects of pesticides, hormones and antibiotics on children, to avoid highly processed food and to avoid artificial ingredients.[15] According to another report done by Food Marketing Institute (FMI), 45% of consumers buy organic foods for their nutritional value, followed by long-term personal health (29%) and nutritional value (15%) as the most important reasons for buying organics. For the consumers, the organic attribute is simply not only perceived as healthier but also less risky. Food safety concern is an important motivating factor in choosing organic foods. They perceive residues from fertilizers, artificial additives and preservatives as possible risks. [16]

4. U.S. Organic Exports

export and regulations (labeling)

5. Conventionalization of Organic: From Movement to Industry

The flashy annual growth rates of organic food sales - growing at 7.7% in 2010[17] together with the premium organic food charge over conventional food, this allure more farmers or corporations, especially multinational food corporations to produce organic food. Producers see this as a great business opportunity, if they are able to use the industrialized conventional method to increase the production, packaging and distribution efficiency and driving down the bottom-line of organic agriculture. Growth advocates of the organic agriculture see the industrialization of organic agriculture as a great move to popularize and widen the access of organic food to a larger population. As price is one of a major barrier to inhibit consumers to buy organic products and prices of the industrialized organic produces are usually cheaper. However, as organic agriculture goes mainstream, this resulted in the domination of the organic sector by large agribusinesses corporations. Since federal organic standards have been in place, over the last decade, the ownership and control of the organic market have shifted from small-scale, independent producers to large corporations; who own many popular organic food brands and consumers may not be aware of this shift. A third of the top 30 North American food processing firms by sales have acquired organic brands in the past decade. For example, Silk soy milk and Horizon dairy products are owned by Dean Foods, the U.S. largest milk producer.[18] Since 1999, Kellogg (the cereal giant) has acquired many smaller organic/ sustainable brands, for example. Bear Naked, Wholesome & Hearty, Kashi and Morningstar Farms.[19] The "Big Food" entered the organic industry by: 1) Horizontal integration (through acquisitions and strategic alliances); or 2) Concentric diversification (through introductions of organic versions of mainstream brands, and the introduction of private label organics) to concentrate power and control in this sector. This phenomenon is also reflected in the shift of the organic food distribution channel from natural product retailers and direct sales to conventional supermarkets. The big brands are able to supply the large amount needed by the supermarket. Furthermore, supermarket chains have also introduced their own organic product line.

The large food companies had co-opted and compromised the vision of the organic pioneers and the quality of organic food. They often adopt a lax organic model. These large agribusinesses intend to profit from the trend and driving out the smaller-scale farms; where the principle motivation for creating the organic industry was to save small-scale farmers.

The corporate-owned organic brand can drive out the independent producers because they can easily influence consumer demand for their products with heavy marketing campaign. They can also subsidize price-cutting on organic foods with sales from other products, in order to drive their competitors out of business. The large firms also tend to obtain much better terms with organic foods distributors, as they make up a higher proportion of sales.[20] Organic companies that refused the acquisition offer and remain independent often display a strong commitment to non-market values. There are cases where principles of sustainable farming is strongly withhold by the idealist founder. The president of Nature's Path- Arran Stephens, for example, is the author of a spiritual book, and does not want to see the "soul gutted out" of his company, as he has seen happen with buyouts involving his peers.[21] [22] In some companies there are organizational structures designed specifically to discourage transfer of ownership. For instance, a worker coop - Equal Exchange, that trades directly with locally organized small farmer cooperatives, was founded with rules that if the company is ever sold, net proceedings are required to be given to another fair trade organization, not the worker-owners themselves.[23]

With these critiques, the large agribusinesses defended their "industrialized organic production" as there is an enormous demand for organic products requires a scale that only they can provide, and that there is no difference between big and small produces. "We're all certified, and we all follow the same standards," said Carmela Beck, who manages the organic program at Driscoll's, which markets conventional and organic berries. "There is a growing need for organic products because the demand is greater than the supply."[24] Demand continues to outpace supply is due, mainly, to the shortage of organic raw materials - a problem that has repeatedly hindered the growth of the organic industry and has yet to be effectively resolved. [25] In the case of the dairy industry, Aurora's Colorado Ranch, one of the largest organic dairy farm companies in the nation, selling their milk to the largest grocery chains in the U.S., including Wal-Mart, Target, Safeway, Costco, etc. Aurora was alleged primarily confining their dairy cows in giant barns and pens instead of being allowed to graze on fresh forage, and exhibit their natural instinctive behaviors, as the federal law mandates. Family dairy famers appealed to USDA Secretary for swift enforcement action in response to Aurora "gaming the system" and squeezing them out of business. They claimed they are being placed at a competitive disadvantage. A national surplus of organic milk, largely created by factory farm dairies has been driving down prices paid to farmers. [26]

6. Future of the Organic Market

However, this rapid growth shed lights on the challenges of the organic sector. The first issue is that the consumer demand outstrip the supply in the U.S. This rapid growth has led to product shortages in the organic market and led to a higher price premium for organic products. A further strain is that there is a bottleneck to expand the organic supply in the U.S. The low organic adoption rate for grain crops continues to hinder the expansion of the U.S. organic livestock sector. Finding sources of affordable feed grains are one of a major obstacles for the farmers to expand their operations.

To solve the undersupply of organic food in the U.S., there are new incentives for more domestic production .The 2008 Farm Bill funded 22 million USD to the National Organic Certification Cost Share Program (NOCCSP) for producers and handlers to help cover their certification costs up to a maximum payment of $750 per year.[27] The Farm Bill also provide financial and technical assistance for farmers transitioning to organic production and existing certified organic farmers under the Environmental Quality Incentives Prograom (EQIP) Organic Initiative. USDA allocated $50 million anually for the Organic Initiative in 2009 and 2010.[28]

The second issue is that premium-priced product sales is especially a concern in a weaker U.S. economy. Studies suggest that frequent consumers of organic products may not be price sensitive to the price premium paid, however, this will certainly affect the rate of gain for new organic consumers hence the market expansion of the organic market. Together with a higher economic cost of organic operations than conventional farming, this pose a challenge for the farmers to reduce their costs and their prices. This greater risk is also a barrier to entry for new farmers to convert to organic, further hindering the expansion of supplies and driving the prices up.

The third challenge of the organic market is the competition from other environmental labels, e.g. Locally grown, which are gaining more popularity in the recent years. A study showed that consumers in the Mid-Atlantic region in the U.S. have preferences for local over organic products and have a higher willingness to pay than organic food.[29] This is likely because the consumers are lack of full understanding to the meaning of “organic food”. For organic food market to grow, public education to the definitions of “organic food” is needed.

The fourth obstacle is the confusion about the meaning of organic and makes it hard to communicate to consumers the benefits of organic products.

Organic Food Market in Hong Kong

1. Regulations

In H.K, currently there is no regulation regulating organic standard or labeling that forbid the use of organic logos in Hong Kong, unlike in the U.S., where it is regulated. Nonetheless, the “False labeling and advertisement of food or drugs” provision under the food law in Hong Kong presumably can protect consumer against any false labeling of organic products. Moreover, the

Customs and Excise Department has legislations to tackle misleading and false trade descriptions. Also, the HKSAR government officials ruled out the possibility of developing an official recognition system for overseas certified labels due to the complex nature of the certification standards and differences between various individual standards and that official audit inspections might be required. The officials identified that if Hong Kong filtered some recognizable organic standards, consumer choices could be limited.[30]

With the growing interests of organic farming in the 1990s and responding to the trade's request for providing independent organic certification service, Hong Kong Organic Resource Centre (HKORC) was established to provide independent organic certification to local farming in 2004. The HKORC drawn up a set of organic production and processing certification standards for Hong Kong and its independent organic certification service. The standards set took into considerations of the prevalent international (IFOAM) organic standards and adaptations required for domestic situations. The standards are more or less the same as the U.S. standards.

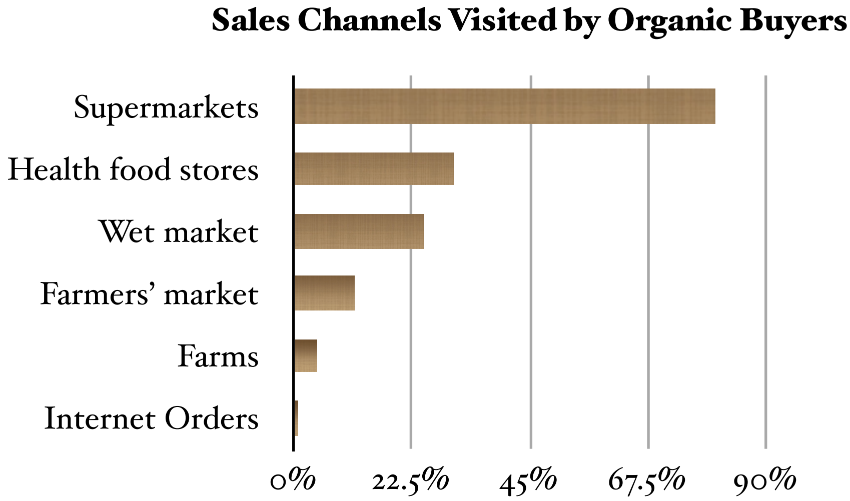
2. A Growing But Small Organic Food Market

In Hong Kong, there is only a small amount of land (18 km2) are used for farming. Over 90% of food are imported that worth $124 billion. The local food production in 2010 worth $3 billion that is about 3% of the value of imported food. The organic food sector is a niche market when compared to other locally produced or imported food products. In 2011, it was estimated that the organic food and drink market in Hong Kong was valued at approximately HKD 450 million, which was less than 1% of local households' spending on food.[31] Local organic food production is insignificant to the overall food supply in Hong Kong. About 25% of farms in Hong Kong are organic farms, they operated in traditional family-operated farms, enterprise-operated farms, educational hobby farms and self-claimed organic farms. Similar in the U.S., local organic food charge a price premium over conventional food. In Hong Kong, this is because of the unstable supply and the limited variety available.

Although the organic market is only a tiny portion of the local food market, it holds a promising future. According to a survey by Hong Kong Organic Resource Center(HKORC), purchase of organic products jumps 3-fold and 20.8% of consumers of organic products indicated they will spend over HK$500 or US$64 on organic food monthly next year.[32] The organic market has experienced a steady growth. Jonathan Wong, the director of Organic Resource Center director and Baptist University biology professor expects the market to grow by over 10 percent per year.[33]

3. Supermarket is the Main Distribution Channel

Consumers can buy organic products in supermarkets, health food stores, wet market, farmers' market, farms and via the internet. Most of the consumers purchase organic products in supermarkets.

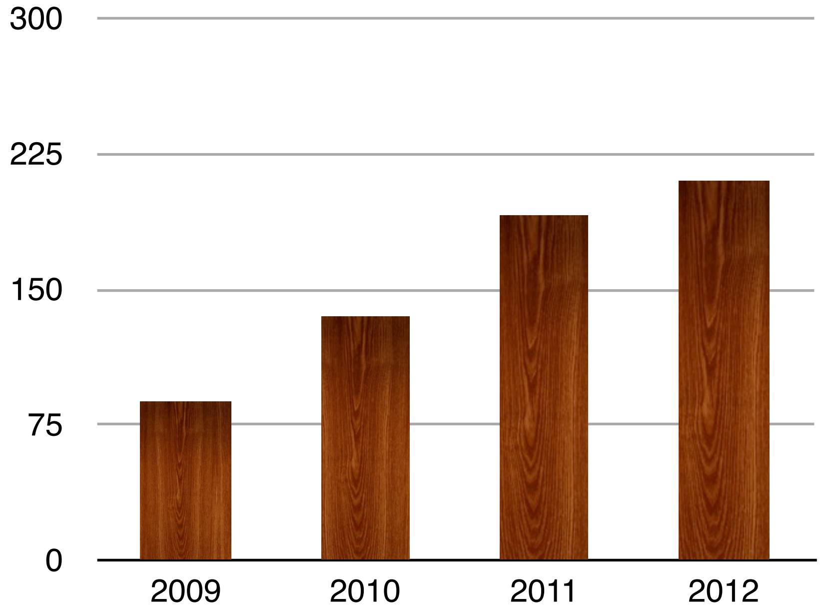


Source: HKORC Consumer Survey 2011 <Valid samples: 365>

Organic foods are sold in supermarkets, namely like ParknShop, City'super and Wellcome and specialty stores like Greendotdot and ThreeSixty. Supermarkets and specialist stores are the outlets where people usually shop organic products from. Moreover, organic food choices are limited in the conventional supermarkets. According to the two major supermarket chains in Hong Kong (ParknShop and Wellcome), organic food products accounted for less than 1% of the total food products at their retail outlets.[34] These conventional stores sell more processed food imported from other countries compare to the solely local and fresh produce distributed by the VMO. This is due to the unstable supply and higher costs of locally fresh organic produce.

To meet rising demand, there is a gradual increase of operations involving in handling, processing or selling organic products, e.g. restaurants and outlets carry organic food.[35] There are about 300 outlets carry organic foods in 2012. There is even a local organic energy-bar maker, Stephen James Luxury Organics, dreamt up by former dentist brothers Stephen and James Costello. The idea of wholesome food and to embrace the wisdom of the Ancients was spread from the western to Hong Kong. The concept of Stephen James Luxury Organics is: "the knowledge that organic, life force laden whole foods are the essential elements we need to thrive."[36] Their food are distributed throughout the luxury supermarkets and specialty stores in Hong Kong, their own store as well as their online store.

Number of operations processing/ selling organic products (excluding farms involve in processing & retailing)



Source: Hong Kong Organic Resource Center Consumer Survey 2011

[1] Lockeretz, William, Ed. Organic Farming An International History. CAB International. Cambridge, MA. 2007.

[2] Samuel Fromartz. Organic, Inc. 2006 , p.6

[3] Chensheng Lu, and others. "Biological Monitoring Survey of Organophosphate Pesticide Exposure among Preschool Children in the Seattle Metropolitan Are," Environmental Health Perspective 109, no. 3 (March 2001). The researchers theorized that urban children had higher metabolites because the rural children were not tested during days of pesticide spraying and because the urban children consumed more fruit and fruit juices.

[4]http://med.stanford.edu/ism/2012/september/organic.html

[5] See Table 1

[6] See Table 2

[7] HKRS 510 6/7, Press Cutting- Agriculture (English), 1982, Government Record Office of Hong Kong.
A letter-to-the- editor (1982) told the general impression of the farmers:
"...(the agricultural department) admitted that pig and poultry farmers are presently dumping 53,400 tonnes of manure into our streams and water courses yearly...the farmers are also dumping large quantities of other agricultural waste into the water courses, such as plastic and multi-ply paper feed bags, discarded rattan baskets and other farm materials..."

[8]"Shou Pi Hainan ZhiSshu Gua Cai Ming Di Gang,' (首批海南直輸瓜菜明抵港) Ming Pao, 30th March 2009.

[9]Hong Kong Vegetable Marketing Organization, Annual Report 2006/07

[10]"Bai Jia Hui Kang Mai Du Cai, Lu Se He Ping Diao Cha: 75% Han Nong Yao," (百佳，惠康賣毒菜 綠色和平調查: 75%含農藥) Apple Daily, 18 April 2006.

[11] See X1000590, Hong Kong Vegetable Marketing Organization, Annual Report 1990/91. Government Record Office of Hong Kong.

[12] Sustainable Table- Organic Agriculture, http://www.sustainabletable.org/253/organic-agriculture, Last accessed: 21 June 2013

[13] USDA ERS - Organic Agriculture: Organic Market Overview http://www.ers.usda.gov/topics/natural-resources-environment/organic-agriculture/organic-market-overview.aspx#.UbIPoaUppSr (Last assessed: 8th June, 2013)

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[16]

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[21] Arran Stephens, Journey to the Luminous: Encounters with Mystic Adepts of Our Century (Seattle, WA: Elton Wolf Publishing, 1999).

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[24] Cornucopia Institute - Has 'Organic' Been Oversized?
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[25] The world of organic agriculture: Statistics and emerging trends 2009; p.231

[26] The Cornucopia Institute - Largest Organic Factory Farm Operator Once Again Accused of Illegal Activity. http://www.cornucopia.org/2009/08/largest-organic-factory-farm-operator-once-again-accused-of-illegal-activity/.
Last accessed: 21 June 2013

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Last accessed: 21 June 2013

[28] NSAC- Organic Conversion Assistance
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Last accessed: 21 June 2013

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[32] HKORC Consumer Survey 2011

[33] NPR: The Salt: In Hong Kong, A Growing Taste for Organic Food
http://www.npr.org/blogs/thesalt/2012/03/06/148041832/in-hong-kong-a-growing-taste-for-organic-food
Last accessed: 24 June 2013

[34] ibid

[35] See Chart 1

[36] Stephen James Organics: Concept
http://www.sjorganics.com/concept/
Last accessed: 24 June 2013