

# GREEN FOOD IN CHINA

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## INTRODUCTION

“Green Food” is a Chinese food production innovation, and has been described as “one of the most successful eco-labelling programs in the world” (Giovannucci, 2005, p.12). Green Food provides a “middle way” between chemical and organic farming. China’s development of the Green Food concept resolves issues with both chemical and organic agriculture - for the former by offering reduced pesticide use, and for the latter by providing a stepped pathway for conversion from chemical to organic agriculture while simultaneously providing a Green Food price premium. After nearly two decades of development, Green Food is by now well known to Chinese consumers, and is readily available for retail purchase in China.

## WHAT IS GREEN FOOD?

Green Food is a Chinese eco-certification scheme for food. It certifies both the production process and the outcome. Green Food is produced with a controlled and reduced use of pesticides, together with a testing regime for pesticide residues. There is a contrast between Green Food, which is a certification of both production and outcome, and organic certification, which is a certification of production process alone.

For production of Green Food, four environmental criteria, need to be met:

1. “Area should meet the highest grade of air standards in China”;
2. “Heavy metal residues are restricted in irrigation, water and soil (tests for mercury, cadmium, arsenic, lead, chrome, etc.)”;
3. “Processing water must meet the National Drinking Water Standard”;
4. “Chemical applications are restricted and regulated, and some of the most poisonous pesticides and herbicides are banned” (Giovannucci, 2005, p.12).

Certified Green Food bears the Green Food logo which is a green circular graphic of a stylized bud accompanied by “Green Food” text, below or to the right of the graphic, in Chinese, or in Chinese and English. The distinctive Green Food branding can readily be seen on a variety of food items in Chinese supermarkets.

## **HISTORY AND DEVELOPMENT OF GREEN FOOD**

Green Food in China dates from 1990. In that year China's Ministry of Agriculture (MOA) created the Green Food program (Aiguo, 2005, p.1). Under the control of the MOA, the China Green Food Development Centre (CGFDC) was founded in 1992, to be "responsible for national development and management of Green Food" (Aiguo, 2005, p.3). The CGFDC owns the Green Food logo, develops and maintains the Green Food standard, coordinates inspections and monitoring, is responsible for certification, and draws income for certification fees.

Signalling the future direction for Green Food, in 1993, the CGFDC joined the International Federation of Organic Agriculture Movements (IFOAM), based in Bonn, Germany (Lianfu, 1999). The CGFDC subsequently split Green Food certification into two grades, Grade A and Grade AA, "in the late 1990s" (Giovannucci, 2005, p.12). This strategy recognised that Green Food "lays very good foundations for the development of organic food" (Lijuan, 2003, p.19). In 2005 the first Chinese national organic standard was issued by China's Environmental Protection Agency (SEPA) (Mei et al., 2006). Green Food Grade AA now excludes synthetic pesticides and fertilisers, and is harmonized with China's national organic standard as well as international organic standards.

Green Food provides farmers with a stepped path from chemical farming to Green eco-certified farming, as well as a pathway onward to organic certification. These developments have facilitated the rapid adoption of organic agriculture in China (Paull, 2007).

## **ADVANTAGES OF GREEN FOOD**

Green Food in China is a response to a complex milieu of factors. These factors include: environmental pollution; pesticide contaminations; the desirability of maintaining good health for the population of both farmers and consumers; the need to produce safe and nutritious food for the world's most populous nation; the goal of raising farm incomes; the excesses and eco-blowback of the so called "Green Revolution"; the desire to keep farmers on the land and stymie the drift of the workers to the cities; the bad press and image of China-produced food in both the local and the international market; and so called "green barriers" to China-produced food in international trade.

Green Food certification serves as a reassurance to both domestic consumers, and to international food manufacturers sourcing ingredients in China.

The benefits of Green Food are multifactorial. An objective of China's 11<sup>th</sup> Five Year plan is to "increase farmers' income" (NRDC, 2006, Ch.2). There is

currently a substantial gap between rural-dweller and urban-dweller incomes, and this is a potential source of social unrest, and creates an incentive for rural to urban migration. Green Food reduces chemical input costs, and delivers a 10% to 50% price premium to producers (Youfu,2002; Lijuan, 2003) without sacrificing productivity, and can thus serve to increase farm incomes.

Green Food goes some of the way to resolving many problems and challenges for China - and benefits that accrue to China ultimately accrue to the world. China's Ministry of Agriculture states bluntly that: "The food security in China will have an important bearing on world food security" (MOA, 2004, p.31), and it is food security that underpins every other form of security, safety, and global well-being.

Where others have failed (Giovannucci, 2005), China has successfully created and implemented, on a massive scale and over nearly two decades, a certified food scheme that is a "half way house" between what Northbourne (1940) originally characterized as "chemical farming" and "organic farming" (Paull, 2006). This agricultural innovation has already led to ten million hectares of China's agricultural land being Green Food certified (Hongbin, 2007). With multiple issues driving the push to both Green and Organic food, this pathway to Green and to Organic in China can be expected to continue.

The greening of China's food is one element of a bigger vision and concern of the Chinese leadership. "It is basic national policy in China to ... improve the ecosystem. The Chinese Government has been attaching more importance to ecological development since the beginning of the new century"; while it is acknowledged that "China ... has not fundamentally reversed the trend of deteriorating ecosystem" (Jiafu, 2002). China State Forestry is implementing a 50 year program to increase forest coverage in China, from 16% to 26% of land cover, and to "rebuild a beautiful landscape", while "implementing the principle of giving the priority to ecological benefit" (Jiafu, 2002).

## **STATISTICS OF THE GREEN FOOD PHENOMENON**

Year on year, since 1992 when the CGFDC was founded, there has been a steady annual increase in all measures of Green Food production. This steady growth can be expected to continue for the foreseeable future, and at the expense of non-certified production. The past nearly two decades has witnessed a steady migration from non-certified food production in China to eco-certification including to Green Food certification, and to Organic certification (Paull, 2008). Of China's total of 122 million agricultural hectares (Yan, 2006), 10 million hectares (8.2%) are certified Green Food, and 3 million hectares (2.5%) are certified Organic (Hongbin, 2007). Government policy and economic opportunity

suggest this migration to eco-certification will continue, with the non-certified sector continuing to shrink as a proportion of the whole.

China has 10 million hectares (150 million mu) of Green Food land, with a production of 72 million tons of certified Green Food produce, for a value of US \$20.1 billion (150 billion yuan), and there are a reported 5315 Green Food enterprises producing 14,339 Green Food products (Hongbin, 2007; SCIO, 2007; CRI, 2007).

Hongbin (2007, p.8) states that Green Food is “recognized by over 40 trading partners” and that “in the past 5 years, export of Green Food “has increased at a rate of over 40 percent a year”.

### **GREEN FOOD AS AN EXPORTABLE STANDARD**

The CGFDC has accredited the Canadian production of 600,000 tonnes per annum of barley to carry the Green Food label (Lyons, 2008). With barley yield in Canada reportedly 2.9 tonnes per hectare (Burnett, 2008), this suggests that the Green Food certified area in Canada is at least 200,000 hectares. Canada’s total barley planting is 3.6 million hectares (Burnett, 2008), so the new Green Food certification accounts for 5.6% of Canadian barley production.

The Canadian Wheat Board (CWB) declared that it “is honoured to receive this respected and sought-after designation on its malting barley exports”. The CWB reported that: “The accreditation process was very rigorous, with the CWB submitting several hundred pages of technical data and information on management practices, air quality and soil analyses, Canadian food-safety and quality-control systems, malting barley selection, marketing and shipment. The application and approval process also included an inspection visit to Western Canada by the China Green Food office” (Lyons, 2008, p.3).

Companies in both Australia and France have also achieved Green Food certification for barley and whey exports to China, according to Giovannucci (2006, p.10).

China’s Green Food certification of off-shore production is an interesting example of China extending beyond its own shores its own proprietary production standards and eco-labelling requirements. There is no indication that the off-shore recipients will necessarily achieve a premium price. Green Food certification is viewed by the CWB as achieving “a marketing edge” (Fitzhenry, 2007). “It is a significant achievement to have so much of our malting barley recognised with the prestigious Green Food label” (Lyons, 2008, p.3). China’s export of Green Food standards is an example of the Golden Rule - *those with the*

*gold make the rules* - and demonstrates that China now has the purchasing power to impose its own eco-standards, and foreign producers have the motivation to meet and seek Chinese eco-certification.



Figure 1: China's Green Food label (upper left) on packaged food.

## COMMENT AND CONCLUSION

The price premium of 10% to 50% that Green Food achieves in China is a clear economic endorsement of China's Green Food strategy. The fact that Green Food certification is now proliferating to food produced both inside and outside China, and for both Chinese domestic consumption and export, is further endorsement of the value of China's Green Food strategy.

The world's twentieth-century shift to high chemical-input farming was facilitated by high labor costs and low input costs, including land and chemicals, as well as a shift away from a stewardship approach to a productionist outlook, and it has been enabled by the economic treatment of environmental degradation and pesticide contaminations as externalities, rather than as costs of production.

In the early twenty first century, as farm input costs rise, including as the transport and production costs of chemical pesticides and fertilizers rise, then eco-production and organic farming can become more economically attractive options. Couple this with the global increasing awareness of, and concern about, pesticide residues in food, water and the environment, and China appears to be on a winner with its grand-scale project for conversion from chemical to Green Food, and to organic production.

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