From malnutrition to radiation
Reviewing food security and food safety in Japan (1945-2013)

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Abstract  This paper looks into three aspects of food security in Japan from the 1940s to the present. It starts with the food shortage during the immediate post-war period, then moves on to the issue of a dramatically declining food self-sufficiency ratio and the safety of imported food, and finally concludes with the 2011 Tōhoku earthquake that led to anxieties about radioactive contamination of domestically-produced food.

1 Introduction

Since 1918, the year of the Rice Riots (Kome Sōdō), the issue of food security has remained at the forefront of public concern in Japan. The riots, which erupted in major Japanese cities after the outbreak of World War I when export restrictions on Southeast Asian rice by the British and French colonial authorities caused rice shortages, provided the first incentive for structural changes in the pattern of rice imports in Japan. They served as a direct stimulus for the Japanese Government to aim to make the Empire self-sufficient in food, a goal achieved by the 1930s, with the colonies of Taiwan and Korea supplying over 95 per cent of Japanese rice imports (Cwiertka 2006, p. 121).

A decade after reaching a critical point in the late 1940s, the food shortage disappeared as a problem. The issues that would now haunt Japan were food self-sufficiency and food safety. This paper provides an overview of these three aspects of food security in Japan from the 1940s to the present. It starts with the food shortage during the immediate post-war period, then moves on to the issue of a dramatically declining food self-sufficiency ratio, and the safety of imported food, and finally concludes with the anxieties about radioactive contamination of domestically-produced food following the 2011 Tōhoku earthquake led to.

2 Food shortage

The food shortage is a key factor in the history of the immediate post-war period. It features as a backdrop in practically every monograph that deals with the second half of the 1940s, regardless of research focus. All but
a few studies do not recognise food shortage as the fundamental condition that affected political and economic strategies of the time, as well as leaving a lasting imprint on the social and cultural development of Japan. The quest for food stood central to post-war life: from orderly lines at rationing points and meal coupon restaurants to rowdy food stalls at the black market (yamiichi) and crowded trains carrying city dwellers to the countryside to barter their belongings for food (kaidashi). Taking a variety of different forms, the 1940s food shortage assumed a prominent place not only in the everyday practices of the time, but has also become engraved in the public memory of the decade (See Havens 1978; Cook and Cook 1992).

When describing the food-supply situation in urban Japan between 1945 and 1947, expressions such as near-starvation, «on the verge of crisis», and «narrowly averting famine» are frequently used (Takemae 2002, p. 409). It is the clamour associated with the prospect of famine – rather than reliable statistics sustaining such predictions – that is responsible for leaving a historical impression of large-scale starvation among urban Japanese during the early years of the Occupation. Following the surrender, the Japanese authorities repeatedly issued warnings of mass starvation; one of the first, announced on 15 October 1945, predicted that 10 million Japanese might starve to death if food imports were not immediately forthcoming. Such announcements, along with understatements of crop yields and underestimates of stocks of staple crops, were the strategies employed by the Japanese Government to ensure sufficient flows of food aid. Warnings about impending famine, as Chris Aldous explains, «shaded into declarations of actual starvation, with the imminence and scale of the problem perhaps escalating the rhetoric» (2010, p. 255). Although the actual food relief had fallen far short of the minimum amounts requested, the predicted disasters did not occur.

While mass starvation did not take place, hunger and malnutrition did prevail in the immediate post-war years, especially in the cities. Symptoms such as weight loss, anaemia, chronic diarrhoea, delayed menstruation, and stunted growth in children were recorded in nutritional surveys conducted by the Welfare Ministry between 1946 and 1948. The urban populations experienced the severest food shortages. While available food was becoming increasingly scarce, over six million Japanese were repatriated from the colonies and occupied territories during the first two years following the surrender – additional mouths to feed that had thus far relied on the food resources produced outside of the four main islands (Cwiertka 2013).

Taking a variety of different forms, the food shortage of the 1940s not only assumed a prominent place in the everyday practices of the time, but has also become engraved in the public memory of the decade. During the 1950s and 1960s, the return to a rice-based diet served as the symbol of economic recovery, while the rising prosperity of the following decades was expressed in culinary gentrification and the increasing appreciation of foreign culinary trends.
3 Food self-sufficiency

As the Japanese economy began to recover after the outbreak of the Korean War, the food supply situation stabilised. However, a new problem began to emerge. Japan’s food self-sufficiency ratio declined at a steady rate of nearly 2 per cent per year, dropping to 55 per cent by 1973 (MAFF 2008, p. 88; Kako 2009, p. 2).

The major reason for this decline was a steadily diminishing consumption of rice combined with a considerable increase in the demand for animal foods. Livestock production made Japan increasingly dependent on imported animal feed – mostly maize and soybeans from the US. The Japanese Government charged low tariff rates on imported animal feed with the intention of providing the Japanese livestock industry with a boost by using cheap imported animal feed. The same rationale was used to justify low tariffs on oilseeds, which enabled production of inexpensive oils and fats, which were also in high demand.

By the first oil crisis of 1973 a shift had already taken place from a grain-based diet characteristic of low-income societies to a diet relatively high in protein (characteristic of high-income countries), accompanied by a slow down in the income growth rate. These two developments resulted in a stagnating decline of the food self-sufficiency rate; between 1974 and 1984 it only declined by 2 per cent, from 55% to 53% (Kako 2009, p. 5).

According to Kako Toshiyuki, who is affiliated with the Department of Food and Environmental Economics at Kōbe University, the main cause of the further decline of Japan’s food self-sufficiency during the late 1980s and early 1990s – 53 to 43 per cent (2009, p. 6) – was the rising value of the yen (from 235 yen per US dollar in 1985 to 94 yen per dollar in 1995). The price index of imported agricultural products declined by 44% during this period, and imports of livestock products, fish, shellfish, and fruits increased due to the sharp decline in the prices of these products. The average daily per capita supply of calories from rice further declined, as Japanese population embraced global culinary trends.

After the burst of the bubble economy in the early 1990s, the rate of increase of food imports decelerated due to the loss of the high yen effect. Yet, as Kako explains, Japan’s food self-sufficiency ratio continued to fall, reaching 42% in 1996 and 40% in 2005 (2009, p. 7). Other factors were at play here. While the Japanese agricultural and fishery production increased in the first and second period (1960-1984), it experienced a sharp decline after 1986. This decline in agricultural production was intricately related to the reduction in rice production, since the demand for rice had been continuously falling since the end of the 1950s. The second important factor was the rise of food processing and restaurant industry. By 2000, pre-prepared foods and eating-out comprised 27% of the total food expenditure of Japanese households. The percentage of imported agricultural...
products used in the food processing and the food service industry has been steadily increasing. A related factor was a worldwide trend towards agricultural trade liberalisation, exposing Japanese agriculture to growing international competition.

Japan is not the top net importer of agricultural products in the world (it follows the EU, US and China), but it ranks lowest in terms of food self-sufficiency among countries with a population of more than 100 million (MAFF 2013). The Japanese Government has taken various steps to tackle the problem. In 1999, it enacted the Basic Law on Food, Agriculture, and Rural Areas, followed a year later by the Basic Plan on Food, Agriculture and Rural Areas (Kako 2009, p. 11). Since no results were achieved, in 2005 the Food Self-Sufficiency Ratio Improvement Council was established, and the so-called New Basic Plan (Shin Kihonhō) was conceived, setting a new target intended to raise food self-sufficiency ratio to 45% by 2015. For example, the Basic Plan for Food, Agriculture and Rural Areas, the Japanese Government aims to increase feed self-sufficiency to 38% by 2020 through the production of eco-feed via the implementation of recycling loops. Since domestically raised livestock fed on imported feed does not count as domestic in origin, the high imports of feed also caused a decline in the self-sufficiency rate for livestock products (Marra 2013).

In 2005 the Government passed the Basic Law on Food Education (Shokuiku Kihonhō), which aimed to convince the Japanese public to buy local food products, and to develop a greater consciousness for a distinct Japanese food culture as part of Japanese national identity, and thus to counterbalance the high dependency on food imports by returning to domestic food products (Assman 2009, p. 4). An important tool in this strategy was the so-called Food Action Nippon campaign, launched by the Ministry of Agriculture Fisheries and Forestry (MAFF) in 2008, with the objective of promoting the image of the domestic product as ‘safe food’. As Assmann explains, the launch of the campaign coincided with the outbreak of a food poisoning scandal over frozen dumplings (gyōza) imported from China (2009, p. 6). The scandal involving Chinese dumplings confirmed the conviction of many Japanese consumers that domestic products (kokusan) were safe, while imported food was not.

4 Food safety

The Japanese consumers’ trust in the safety of domestic produce did not develop overnight, but was the result of a steady process to consolidate food safety awareness in Japan. It was inspired by widely publicised food poisoning cases in the 1950s and 1960s, such as the Morinaga milk incident of 1955 and Kanemi rice-oil case of 1968, all of which involved domestic food processing companies (Jussaume et al. 2000, p. 218). The rising
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awareness of the issue of food safety led to the phenomenal growth of organic farming movement. The key to its success lay in the very diverse networks of grassroots organic food distributors, retailers and, above all, consumer co-operatives that worked together, jointly attracting a wide section of Japanese society. For example, in 1990, the Japan Consumers’ Co-operative Union (JCCU, commonly known under the name Seikyō), the largest consumer co-operative alone had a national household membership of 14.14 million. If the family members of each co-op member are counted, this translates into more than 40 per cent of the Japanese population (Cwiertka 2006, p. 169).

The organic farming movement, with its long-standing support across Japan, along with new Government initiatives such as the Food Action Nippon campaign, contributed to a strong conviction among Japanese consumers that domestic products were safe. This trust was to be challenged by the developments following the Tōhoku earthquake of March 2011, the most powerful recorded earthquake to ever hit Japan. The earthquake is frequently referred to as the worst crisis that Japan has faced since World War II. An important aspect contributing to the gravity of the crisis was the fact that the tsunami triggered by the earthquake caused a nuclear accident in one of the world’s biggest nuclear power stations – the Fukushima Daiichi Nuclear Power Plant, Okuma and Futaba, Fukushima Prefecture. Radioactive contamination, which has spread through the circulation of air, rain, dust, and water has left a lasting impact on Japan’s food system. It brought a completely new dimension to the issue of food safety – anxiety about radioactive contamination of food.

As Aya Kimura describes in her detailed analysis of radiation standards set up by different organisations in Japan following the Fukushima disaster, reports of contaminated food started to appear just a week after the earthquake (2013, p. 12). On 19 March, the Government ordered the governors of four prefectures in the direct proximity to Fukushima to suspend shipments of spinach and milk. Social anxiety heightened as the media began to report on the growing number of food items found to be above the provisional food radiation safety levels established by the Government on 17 March, less than a week after the disaster. Many consumers started to avoid buying produce from north-eastern Japan, causing panic among the producers and worry in Government circles.

The necessity of regulating the risk associated with radioactive substances in food appeared for the first time after the Chernobyl power plant accident in 1986. In addition to a set of guidelines levels for radionuclides in foods put together by the Codex Alimentarius Commission of the United Nations, each country was allowed to set its own standards, in accordance with its own specific consumption patterns. However, Japan had never formulated any specific restrictions on radioactive substances in food before the disaster of 11 March struck. The Food Sanitation Act, the key law
responsible for regulating food-related risks for human health, does not mention radioactive contamination at all. On 17 March the Ministry of Health, Labour and Welfare adopted the so-called Provisional Regulatory Values for radioactive contamination, following the advice of the Nuclear Safety Commission of Japan. The levels were set without any assessment of possible effect on human health. They specified 200 Bq/kg of caesium for drinking water, milk and dairy products, and 500 Bq/kg for vegetables, grain, meat, eggs and fish (Kimura 2013, p. 15). All Government agencies began to use this standard to establish whether food was contaminated or not. The legitimacy of the Provisional Regulatory Values was tenuous from the beginning. The standard was firstly criticised for being too high, and for therefore unnecessarily harming food producers in the affected areas. Indeed, the new standards for safety of nuclear contamination, which were announced in January 2012 and went into effect in April 2012, set the levels of contamination for general foodstuffs, such as vegetables, grains, meat and fish, at 100 Bq/kg – one fifth of the Provisional Regulatory Values from March 2011 (Kimura 2013, pp. 16-17).

As Bachev and Itō have rightly pointed out in their recently published paper, in addition to the short-term radiation effects described above, the implications of the Fukushima nuclear disaster include a variety of long-term, indirect consequences for Japanese agriculture (2013). Research has shown that the attitude of consumers toward agricultural products from the region affected by the nuclear disaster has changed dramatically. The «Fukushima label», which once stood for high quality and safety of organic agri-food produce, has lost its market value. Even residents of Fukushima seem to be avoiding buying local products (Bache, Itō 2013, p. 26). The multiple safety tests and certifications imposed by the authorities or introduced voluntarily by the producers themselves add up to a loss in profit (Bachev, Itō 2013, p. 33). On the other hand, experts agree that the negative impact of the disaster on the food industries in neighbouring regions is moderate, and insignificant or nonexistent in other parts of Japan (Bachev, Itō 2013, p. 45). Some farmers and agri-businesses from non-contaminated regions have even benefitted from rising prices, and from better production and sales opportunities in the wake of Fukushima disaster.

5 Conclusion

While the food shortage disappeared as the chief concern of the Japanese authorities after the 1950s, the dramatically low level of food self-sufficiency, which surfaced for the first time during the 1918 Rice Riots, remains highly relevant even today. With consumers’ trust in the safety of domestic produce unexpectedly damaged by the 11 March disaster, the problem has become more difficult to solve than ever.
As we have observed, over the course of half a century, the transformation from scarcity to affluence was accompanied by a growing public concern with food safety. As elsewhere, «the age of anxiety» has turned food safety into a major channel for articulating public anxiety represented by the feeling of losing control (Wallace 1998). This feeling stems from the growing realisation that even very mundane aspects of everyday life, such as food, have become extremely complex, affected by multifaceted factors hidden from public view and beyond the understanding of ordinary citizens.

The promotion of trust in local produce through emphasis on Japanese culinary traditions was one of the strategies undertaken by the Japanese Government to deal with both problems – food safety and the low food self-sufficiency ratio – that received particular attention. According to the clip produced by the MAFF spin-doctors, a return to consumption practices abandoned over the decades, as the Japanese embraced processed foods and foreign tastes, could be the solution to both problems (MAFF 2008). It remains to be seen whether the inscription of Japanese cuisine (washoku) on the UNESCO list of Intangible Human Heritage in December 2013 will aid the Government in reaching this objective.

References


