

# **Formation of Japan's food security policy: Relations with food situation and evolution of agricultural policies**

August 1st, 2017

Norinchukin Research Institute Co., Ltd.

HIRASAWA Akihiko, Senior Chief Economist

## **■ Abstract**

Japanese people have been able to reach the current level of food consumption by increasing imports of agricultural products due to its limited farmland resources. As a result, however, Japan is exposed to a risk of overreliance on importation of food. Japan's food self-sufficiency ratio can be regarded as an indicator of the risk. Every food crisis suffered by Japan since the mid-twentieth century was caused by disrupted import or restricted export by trading partners. Around the end of the Pacific War, the Japanese government was required to take food-supply control measures in various ways because of a severe food shortage deteriorated by a poor harvest of the staple rice in the country, which even endangered a continuous rationing for the people. In 1973, when the so-called "soybean crisis" was provoked by an embargo on soybean exports imposed by the United States in the normal times, the Japanese government implemented emergency measures to stabilize the domestic soybean market as well as secure stable imports of soybean and other farm commodities. At the same time, furthermore, large-scale international cooperation for agricultural development was initiated by the government and development of a world food supply-demand model was launched as well. The existing Food, Agriculture and Rural Areas Basic Act enacted in 1999 provides that the basic principle of the Act should be primarily to secure a stable food supply for the public. Some of the emergency measures implemented in past years were developed into measures to be taken in normal times in preparation for future emergencies according to the degree of the emergency. Other measures have been improved in a direction toward reducing various factors of instability and uncertainty that take place with higher frequency. Although Japan's food supplies are partly dependent upon the importation from other countries, the country has been maintaining its supply capacity of minimum food for its people with domestic agricultural production that is within the national sovereignty. In recent years, however, Japan's agricultural production base has been revealing its vulnerability, in which situation it is now vital for the country to restructure its production base in order to cope with trade liberalization and a future decline in its population.

## **■ Introduction**

This paper analyzes a historical outline of how Japan's existing food security policy has been formed since the Pacific War (1941-45) ended, by tracing back changes in the situation surrounding the Japanese food security (Note 1).

The food security is a fundamental factor of the agricultural policy in Japan that is not

---

blessed with land resources. This has been reflected also in the Food, Agriculture and Rural Areas Basic Act of Japan providing that the basic principle of the Act should be primarily to secure a stable supply of food for the Japanese people. Japan's food security-oriented policy is derived from its past experiences on food crises. Today's food security policy measures have been formed on the basis of these experiences. It should also be noted that basic movements, including changes in food supplies and import reliance, and agricultural policy responses made in accordance with these movements have been directly linked to the food security. A review of details about those movements and policy responses will be useful to understand how significant Japan's food security policy is as well as how this policy is functioning in the country.

In the following pages, information on the basic situation surrounding Japan is to be first reconfirmed, which is followed by chronological reviews of major food crises faced by Japan since the end of the Pacific War as well as by major changes in governmental policies related to food supplies and agricultural production. Furthermore, an outline of the food security policies coping with these food crises and policy changes will also be discussed in this paper.

**(Note 1)** This analysis is mainly based on the author's contribution, Hirasawa (2017), made to the results of an international joint study on postwar food security policies in Asian countries that was jointly conducted by researchers of several Asian countries from 2014 to 2015. Hirasawa (2017), with special reference to Japan's food security policy, has more detailed information and relevant data. With regard to the above-mentioned joint study itself, including Hirasawa (2017), refer to Zhou and Wan (2017). See the record of Professor Zhou's lecture as well, which was published in this issue of *The Norin kinyu* [70(8)pp. 65-75], so as to find out details about an international comparison of food security policies implemented in Asian countries covered by the joint study.

## 1. Problems confronting Japan: limited land resources and large population

Heavily populated Asia, which has many countries with larger population, is deemed as a huge region of food shortage. Japan is one of the most densely populated nations with its per capita arable land being so limited. Japan's per capita area of arable land is the smallest among such countries in the world as have a respective population of more than 100 million.

Due to the scarce land resources, Japan significantly lacks farmlands necessary for producing food currently consumed by the people. The total area of its farmlands is only less than one third of those lands required to fully feed the Japanese people (Note 2). Geographic factors such as a mountainous landscape and limited farmland resources, coupled with a higher average income of the people, have made Japan's agriculture less competitive in the international market, and its domestic production tends downward mainly due to severe competition with imported farm products.

In order to maintain the current diet of the Japanese people, therefore, food importation is essential for Japan. By purchasing foods from abroad, the people can enjoy a rich and varied diet. When the food importation turns to stagnate, nonetheless, they will have to fall into a serious situation of food shortage due to extreme overreliance on the importation. Therefore, it is regarded as a great challenge for Japan to secure a stable import of food.

From a viewpoint of reliability of food procurement, however, the food importation from abroad beyond the extent of Japan's sovereign control is behind the domestic production, which is to say that, when an emergent event suddenly takes place, a sovereign country can control its domestic agriculture by implementing various measures such as crop conversion, compulsory delivery of farm products and rationing of foods, while it cannot

---

conduct such measures against farm commodities to be imported from other countries. Furthermore, every serious food crisis faced by Japan since the middle of the 20th century was brought about by disrupted import or restricted export by trading partners as will be mentioned later. For this reason, discussions on food security in Japan have been focusing an issue of how to ensure food supplies at national level in combination with dependence on food imports (Ohga 2014; Koyama 2007).

Japan is importing a huge amount of agricultural commodities, which makes it difficult for the country to find out alternative suppliers of those commodities in the international market at least in a prompt manner. When some sort of trouble occurs in the regular trading partner, it will be possible for a city state with a small population to conduct a spot purchase of farm products in the world market. In the case of Japan with its population exceeding 100 million, however, there are concerns that it will not be able to continuously purchase an adequate amount of foods when the world market faces an emergent event. A higher qualitative level of foods required by Japanese consumers will be an additional obstacle to changing suppliers of the food products.

Neighboring Asian countries, moreover, are mostly food importers which do not have any agreement with Japan on close cooperation for coping with the emergency. This provides a marked contrast to Western countries, among which European Union's member countries have a joint system of such cooperation.

Therefore, it is considered desirable for Japan to maintain domestic production that at least meets a minimum requirement of food for the public. Due to repeated trade liberalization and other reasons, however, Japan's agricultural production base has been undermined, under which situation the domestic agriculture is gradually reducing its production capacity for fully providing the people with food to be required in the emergency.

**(Note 2)** According to the Ministry of Agriculture, Forestry and Fisheries of Japan (MAFF 2007), Japan's total demand for farm products can be met by devoting agricultural land resources, including those in countries exporting foods to Japan, to food production for the Japanese people, all of which resources are equivalent to more than 3.5 times of Japan's farmlands. According to another estimate (Fujimoto 2009), on the other hand, Japan will need nearly 4.8 times as many farmlands as it now has, if the country wishes to substitute its total imports of farm commodities with domestically produced ones, because consideration should be taken into lower yields particularly of Japanese grains than those in the exporting countries.

## 2. Food shortage and governmental controls before and after the Pacific War

Japan seriously suffered from a remarkable shortage of food in the wartime and post-war period of the Pacific War. The "staple food policy" in the wartime grew its urgency along with the worsening food situation, resulting in implementation of various policy measures for controlling the food market. These experiences have had a significantly great influence on Japanese philosophy on the food security.

### 2.1 Difficulty of ensuring food supplies during the War

Prior to the outbreak of the Pacific War, Japan had begun to increase imports of rice from the South-east Asian region since Korea, one of Japan's then colonies, was severely attacked by drought in 1939. At the same time, the Japanese government was changing direction of its food policy toward strengthening its regulations by directly controlling food supplies (Tama 2013). At that time, approximately 20 percent of the total supplies of rice

---

were dependent upon imports, while import dependency ratios of wheat, pulses and sugar all exceeded that of the rice (Minister's Secretariat Research Division of the Ministry of Agriculture and Forestry, MAF, 1976). A number of measures taken for the food control were completely integrated into the Staple Food Control Act of 1942 as part of the wartime state control. Major measures conducted under this Act included the mandatory shipment of agricultural products from farmers to the government (compulsory delivery), rationing for consumers and price control. Farmers' organizations called *Nogyokai* (Agricultural Associations), one of the state control agencies, played a function of collecting rice and other commodities produced by farmers, while industries of wholesalers and retailers were reorganized into semi-governmental rationing organizations named *Shokuryo Eidan* (Tanabe 1948).

It is pointed out that a decision on the outbreak of the Pacific War was made in the course leading to the War on the basis of optimistic outlook for an increase in domestic production of food as well as continuous imports by securing transport vessels and sea lanes without fully considering the possible supply-demand imbalance when the war was prolonged (The followings mostly refer to Unno (2016)).

Shortly after the outbreak of the war, food supplies began to decrease because of stagnated domestic production and import disruption. The agricultural output in Japan continued to decline not only due to shortages of farm labor and fertilizers, but also extreme weather disasters attacking the country since 1943. In the same year, furthermore, imports of rice from the South-east Asian region were sharply reduced, and were finally disrupted in 1944. The complete stop of rice transportation to Japan was caused by several factors such as more-than-expected loss of Japanese transport ships, requisition of rice by Japan's military force stationed in the region, and lost command of the sea under the offensive of the U.S. army. Before the war broke out, deep concerns about the shortage of food supplies had been expressed not only by the Total War Research Institute founded under the leadership of the then prime minister, and the Institute of the South Manchuria Railway Company, but also even by some leaders in the center of both the Imperial Army and the Imperial Navy. They had foreseen the deterioration of food supplies during the wartime. None of these concerns, however, was taken into consideration.

With a view to tackling the shortage of rice supply, the government introduced a number of policy measures. For instance, farmers were allowed to substitute their rice delivery with wheats, miscellaneous grains and sweet potatoes. In order to prevent citizens' feeling of war-weariness from prevailing in the home front, government's rice stockpiles were almost depleted and some of newly harvested rice was also put on the ration earlier than scheduled so that rationing cuts would be postponed as late as possible.

Most information on the food situation was not unveiled during the war (Note 3). Such information was not made available even among policymakers or opinion leaders, under which situation those people significantly delayed in sharing a sense of crisis about the food shortage. In August 1944, just after the cabinet of Prime Minister Koiso was inaugurated, the fact was that all the cabinet members, including the Prime Minister himself, were terribly shocked when the tight supply-demand balance of food was disclosed to them.

Soon after, an amount of the standard rations was cut down to less than resting energy requirements (Note 4). It became vital, therefore, for every family to procure foods other than the rations by many means like cultivation of its own garden. The food situation was much more deteriorated toward the end of the war, when the then Minister of Agriculture and Commerce decided to express his remark at the cabinet meeting, saying "Starvation will take place at many places in the country (if the war continues)" (Unno 2016, p.400).

These changes in Japan's food situation from the outbreak to the end of the war suggest that both of accurate information and its effective utilization are extremely important for

---

the national food security.

**(Note 3)** Supply-demand balance sheets of foodstuff in a period from 1940 to 1945 are not available. During these years, figures concerning the rice harvest were revealed in the spring of the following year.

**(Note 4)** The standard quantity of rations for an ordinary adult (the standard amount of total rations converted into milled rice for both male and female) was reduced by 10 percent down to 297 grams per person per day in July 1945 (The Food Agency 1951). This is equivalent to 973 kilocalories (converted on the basis of data derived from pp.365-366 in (Tanabe 1948)). According to the Ministry of Health, Labour and Welfare (2014), meanwhile, basal metabolic rate or minimum resting calorie requirement, is respectively a little more than 1,500 kilocalories for a male adult and a little over 1,100 kilocalories for a female adult. Even if it is taken into consideration that 20-year-old males increased their average weight by 16 percent in a period from 1950 to 2012, the standard quantity of rations for males seems to have fallen short of their basal metabolic rate before the standard quantity was cut in 1945.

## 2.2 Food crisis right after the Pacific War

The food situation in Japan was further deteriorated immediately after the Pacific War ended in 1945. In the following year, there were growing concerns that it would be difficult even to retain the rationing system itself due to direct factors of a serious failure of rice crop in the autumn of 1945 and a decrease in compulsory rice delivery. It was significantly difficult for the Japanese government to overcome the situation since Japan's importation of food was strictly restricted. Countermeasures against the food crisis could be finally put into practice, as the Japanese government not only promptly requested the occupation army to allow Japan to import foods, but also took many steps in an expeditious manner. It can be understood that prompt information was so useful to effectively implement these measures.

### (a) Occurrence of large-scale food shortage

In 1945, rice yield sharply declined to two thirds of the yield in an average year, causing the poorest crop in the previous forty years. As of the end of August in the same year, the total supply of rice was initially estimated to be 1.48 million tons less than the necessary amount of 9.88 million tons particularly because of disrupted imports and damages caused by cold weather in the northeast region of the country. The initial estimate of the rice shortage, however, finally rose by more than double to 4.01 million tons, because a forecast of the total rice production extremely worsened in the autumn when a typhoon attacked paddy fields at the western part of Japan in the middle of September, while strong winds and floods brought about serious damages to rice crop at many places facing the Pacific Ocean in the beginning of October (See Figure 1). It was also pointed out, meanwhile, that some producing areas underreported their harvests of rice (Oda 2012).

In addition, many farmers were considerably slow in delivering their harvested rice to the governmental agency. With the food shortage being estimated to get further severe in 1946, the government had raised the proportion of rice to be delivered in the total production of respective farmers higher than the previous year in spite of the seriously poor harvest. When the compulsory delivery season began, however, a number of farmers became reluctant to swiftly deliver their products to the governmental agency. Although the government provided producers with such special advantages as will be explained later, their final achievement of the delivery declined to the lowest level of 77.5 percent, which reduced the total delivery of rice shipped to the government by 20 percent in comparison with wartime years when the delivery plan was successfully carried out every year (The

Institute of Statistical Research 1969).

This sluggish delivery took place against some backgrounds. If farmers delivered their rice to the governmental agency as ordered by the government, they would be required to substantially reduce their own stocks to be kept for family consumption (Tanabe 1948). Farmers themselves had already reduced their rice stocks by considerably increasing deliveries shipped to the government during the war (Matsuda 1951). Those backgrounds include, moreover, a reality that the governmental agency lost its authority after Japan was defeated in the war (Minister's Secretariat Administration Division of MAF 1972), in addition to a sharp rise in prices of goods and the like.

Figure 1 Japan's estimated rice production and changes in its supply shortages in 1945



SOURCES: Data derived from Oda (2012) and the Food Agency (1960).

Rice prices of the black market greatly exceeded the official price paid to farmers by the government. Besides, rice production costed much more than the governmental producers' price, because farmers themselves had to purchase production inputs at the black market (Tanabe 1948). Hyperinflation occurred with many kinds of goods seriously running short. In Tokyo, for instance, the consumer price index in 1945 rose by six times in 1946, further jumping up by almost 50 times in 1948 (Sakurai 1989). As of June 1946, black market prices of rice in the major cities of Japan were skyrocketed by averagely 23.6 times as high as the official price (The Institute of Statistical Research 1969). In the outside of the black market, therefore, sales of rice through other illegal channels were greatly boosted (The Institute of Statistical Research 1969).

There are many estimates on how much rice was sold at the black market in 1946, ranging from 0.3 million tons to 1.5 million tons. In any case, the illegal sales of rice were far from sufficient to offset the national shortage of rice, which forced the Japanese people to depend upon various kinds of substitute foods. A heavy economic burden of purchasing foods was imposed on many consumers. The Engel's coefficient, accounting 40 percent in

---

average during the prewar years from 1935 to 1941, rose to as high as 73 percent in the latter half of 1946. Consumer's spending on non-rationed foods was nearly 5 times as much as that on rationed ones (Matsuda 1951).

### **(b) Governmental policy measures and development of the food situation**

Under the Allied military occupation, the Japanese government, facing a critical shortage of food, entreated the General Headquarters of the Allied Powers (GHQ) to permit Japan to import rice and other foodstuffs. While the entreaty was not readily granted, the government soon decided to aim at retaining its own rationing system by taking various measures including a heavy-handed one against local farmers.

On September 29, 1945, right after the 1945 rice crop severely damaged by the typhoon before it was harvested in autumn as mentioned above, the Japanese government submitted a request to GHQ for the food import of 3 million tons on the basis of its own estimate of how much Japan would be required to make up the shortage with importation of grains and other foods. Although GHQ refused the request at first, it made its own survey on the food situation in Japan and prepared a report in November, in which GHQ admitted that Japan would need to import 3 million tons of food in order to ensure adult citizens' average calorie intake of 1,800 kilocalories per day including non-rationed foods. GHQ also carried out an on-the-spot survey in several Asian countries since late December to seek for their possibility to export foods to Japan, which survey found out that those countries did not have any surplus food to be sold to Japan mainly due to their own poor crops. From January to February 1946, GHQ eventually changed its policy which had not permitted Japan to import any food, and decided to request the government of the United States to export foods to Japan. However, the U.S. government initially responded to GHQ's request in a negative way. This was because the U.S. government made a judgement that it would be unaffordable to send foods to a defeated country like Japan when many countries throughout the world including the European region were suffering an acute shortage of food (Oda 2012 ; The Institute of Statistical Research 1970).

Especially in big cities and the northern part of Japan, the food shortage was further exacerbated owing to rice producers' delayed shipment of the compulsory delivery. Already in September 1945, the governmental agency had found it difficult to distribute rations as scheduled in Tokyo. At the end of December, the government's stockpile of rice sharply fell down to a level of three-day consumption, which was only one fifth of the minimum stockpile for fifteen-day consumption to be required for effectively operating the rationing system. The situation was more deteriorated with the population in Tokyo being increased by more than 30 percent in a short period from July 1945 to October 1946 because a number of evacuated people returned to the capital city (Tanabe 1948; Publishing Association of History of the Tokyo Metropolitan Rationing Organization 1950; and Oda 2012).

With a view to securing sufficient deliveries of rice and other foodstuffs, the government made an announcement to farmers in November 1945 that it would take special measures such as a fifty-percent hike in producers' price of rice, revised system of delivery allocations for farmers, approval on farmer's limitless shipment of non-rice substitute commodities in the delivery program, and a special rationing of production inputs for farmers completing their own delivery assignment. However, these special measures failed to produce any remarkable results (The Institute of Statistical Research 1970).

On the other hand, Douglas MacArthur, the Supreme Commander of the Allied Powers (GHQ/SCAP), informed the U.S. government that the rationing system in Japan would collapse by May 1946 unless Japan's request for food importation was approved, calling on his government to permit Japan to import foods. General MacArthur added in his statement sent to the U.S. government that the food aid to Japan would be less expensive

---

to the U.S. than deployment of additional U.S. troops to be required to suppress a catastrophe in Japan which could be accompanied by serious starvation, malnutrition, epidemic diseases and spread of a social disorder as well when the rations were disrupted (Oda 2012).

Under such circumstances, the Japanese government issued in February 1946 a staple food emergency measure ordinance concerning compulsory expropriation of rice from farmers, which ordinance was put into practice at some prefectures mainly in the following months of March and April. Implementation of this compulsory measure had been expected to create a demonstration effect by which a number of farmers, who were not targeted in the expropriation scheme, would spontaneously fulfill their delivery assignments as early as possible. The national achievement ratio of the delivery assignments was as low as 52 percent as of late February 1946, compared to delivery ratios ranging from 85 percent to 95 percent in the same month during the war years. Since the compulsory expropriation scheme was launched in the early spring, the delivery ratio rose by 25.5 point, equivalent to 1 million tons of rice, up to 77.5 percent in June when the delivery season for the year ended (The Institute of Statistical Research 1969, 1970; Tanabe 1948; and Oda 2012). Aside from the delivery of rice shipped by farmers, foodstuffs returned by the Japanese military forces after the war as well as those transported from China just before the end of the war were also added to resources for the rationing. Nevertheless, frequent delays in distributing the rations had increasingly occurred at many places throughout the country in the spring of 1946. During April and May, rations of foods decreased to 80 percent of the standard quantity in some of major cities including Tokyo. A number of demonstrations were organized against ration offices and city halls. On May 19, furthermore, about 250 thousand people joined the rally of “Food May Day” held in Tokyo (Oda 2012). In northern cities of Sapporo and Aomori, distribution of food rations was extremely delayed respectively for as long as 50 days and 32 days in June and July (The Institute of Statistical Research 1970).

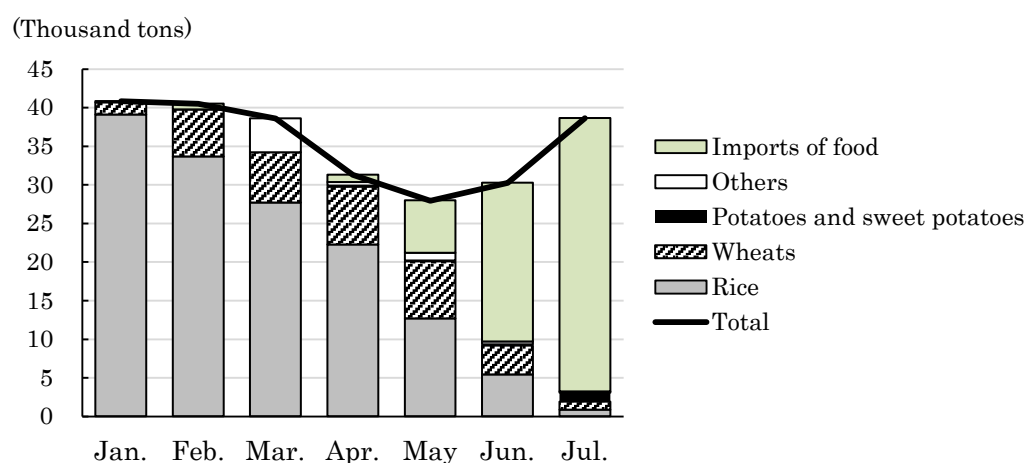
During this period, the Japanese government forced the prefectural governments in rice producing regions to transport some of their public stocks to rice-consuming prefectures in addition to the originally planned compulsory delivery of rice. In this special scheme called “compulsory deficit-delivery,” governments of rice-producing prefectures were compelled to provide the rice-consuming prefectures with their stockpiled rice excluding that to be consumed by respective prefectural people until a new crop was harvested in the autumn season. The national government committed itself to compensate these prefectural governments with food commodities after foodstuffs were actually imported from the U.S. Amid much resistance from the rice-producing prefectural governments against the unprecedented special scheme, the Japanese government managed to carry out the transportation of almost a half of the planned quantity of rice, or a little more than 60 thousand tons, to the rice-consuming prefectures by the middle of May. The “compulsory deficit-delivery” was so helpful for rice-deficit prefectures to overcome the worst food crisis in May and June (The Institute of Statistical Research 1970; Minister’s Secretariat Administration Division of MAF 1972).

In spite of these emergency measures, the rationing system was soon driven to the edge of collapse. In Tokyo, domestically-produced foods to be distributed in the system began to rapidly decrease in March 1946 and almost ran out during the month of June (See Figure 2). In the capital city of Japan, daily calorie intake per person averagely fell to 1,352 kilocalories in May, including 775 kilocalories of rationed foods. The rations distributed in Osaka were reduced by as much as 40 percent in June over those in the previous month.

What really helped Japan get through this seriously difficult situation was importation of food, which began to increase in May 1946. In Tokyo, wheats and other foodstuffs imported from the U.S. occupied more than 90 percent of rationed foods in July, when these

imports accounted for more than 70 percent of rations in the six largest cities of Japan. The food importation was promoted intensively in the rice pre-harvest season from July to September. Thereafter, rice shipped from early-harvest areas and early-ripening sweet potatoes produced in Japan both played a vital role in maintaining the rationing system (The Institute of Statistical Research 1970). At that time, Japan did not have any foreign currency to purchase farm commodities from the U.S. What made it possible for Japan to import the foodstuffs was a U.S. financial help of the Government Appropriation for Relief in Occupied Area (GARIOA) that provided Japan with an emergency aid in kind. Almost 90 percent of this GARIOA fund allocated for Japan during the two years of 1945 and 1946 was disbursed just for importing foods.

Figure 2 Actual amounts of rations in Tokyo (January to July, 1946)



SOURCES: Compiled from the Institute of Statistical Research (ISR) (1970).

Even though Japan could barely maintain the rationing system in this way, the total food imports in the 1946 rice year from November 1945 to October 1946 amounted to only 0.7 million tons (The Food Agency 1951), which was less than one-fourth of what the Japanese government initially requested GHQ to allow Japan to import. “Front-loaded consumption” of early-harvested rice eventually brought about a result of reduction in the total supply of rice for the following rice year (Minister’s Secretariat Administration Division of MAF 1972). Therefore, the food crisis situation continued in 1946 as well, when the annual average of calorie intake dropped to 1,316 kilocalories per capita per day (The Food Agency 1952). Many urban residents were required to often come out of their cities to neighboring villages for purchasing foods directly from farmers. While such barter trades of farm commodities like rice and potatoes were popularized, a number of workers who were absent from work for visiting farmers to buy foods increased much enough to bring about an outcome of remarkably lowering the productivity of many industries in the country (The Food Agency 1960).

During these years of food shortage, a large number of people died of diseases like tuberculosis predisposed by malnutrition in Japan. Annual deaths from tuberculosis for both 1942 and 1947-50 exceeded 100 thousand. In a period from 1943 to 1946, when the relevant survey was discontinued, much more people reportedly died of the same disease

---

(Dower 2004) (Note 5).

The tight balance between supply and demand of food began to relax gradually in late 1946 because of a recovery of rice production as well as an increase in food imports. In the autumn of 1946, the total output of rice increased by as much as 3 million tons over the previous year thanks to favorable weather conditions as well as recoveries of inputs of both materials and farm labor. Food imports also increased from 0.7 million tons in 1946 to 1.9 million tons in 1947, further growing up to 2.7 million tons in 1949.

In 1949, when the tight supply-demand balance further eased, marketing controls on potatoes and sweet potatoes were lifted, which was followed by removal of regulations on marketing miscellaneous cereals in 1951. In the same year, rationing organizations were privatized and government-run food controls were replaced by indirect controls. It was simultaneously taken into consideration to abolish the rice control system, which plan was not put into practice because of GHQ's objection (Sakurai 1989).

In addition, prefectural governments' work of statistical researches on agricultural production, some of which had been blamed for underreporting on rice outputs, was transferred to the national government. This was because these production statistics had traditionally tended to be inaccurately reported with local interests being reflected into announcements of those statistics by prefectural governments, which had been an obstacle to the national government in making a right decision on allocation of compulsory deliveries to each prefecture by precisely grasping the total amount of production in the country (Oda 2012). This also suggests us that availability of accurate information plays a significant role for the government in coping with the emergency.

(Note 5) In October 1945, for instance, a survey of the Ministry of Health and Welfare reportedly revealed that the number of deaths from epidemic diseases like tuberculosis was sharply increasing owing to malnutrition and lowered resistance to infection (Tanabe 1948).

### 3. Post-war Japan facing a risk of food import dependency

#### 3.1 Selective expansion farm policy promoted under dependence on food importation

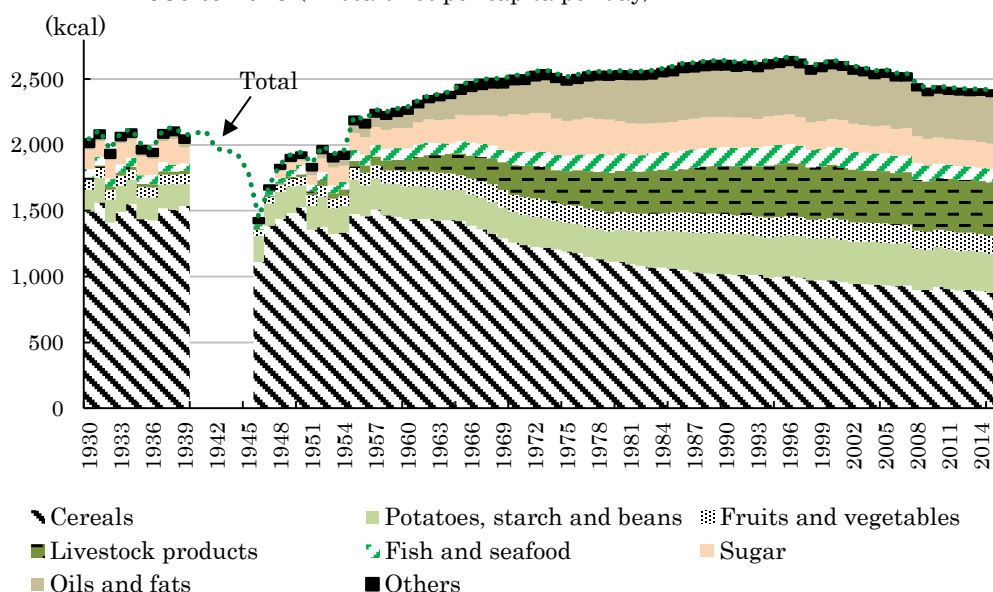
Since Japan was defeated in the war, it lost colonies that had been sources of food procurement. On the other hand, the U.S. began to increase its surplus of agricultural commodities in 1948 because most of European countries, major importers of U.S. farm products, were recovering their food production (Kishi 1996). At the pre-war negotiations between Japan and the U.S., moreover, the U.S. government had already made a proposal to export foods to Japan (Unno 2016). Just after the war ended, the above-mentioned GARIOA fund made it possible for Japan to import U.S. farm products, which was followed by a rapid increase in imports particularly of wheat, soybeans and corn from the U.S. in 1950s mainly in the form of food aid promoted by mutual agreements made under the Mutual Security Act (MSA) and the Agricultural Trade Development and Assistance Act (PL480) of the U.S.

In this situation, the Agricultural Basic Act of 1961 set forth a vision of “selective expansion of agricultural production” (hereinafter referred to as “selective expansion”) as the primary agricultural policy to be pursued by the Japanese government, which vision substantially confirmed the above-mentioned dependency on the food importation as an established fact. A concept of the selective expansion was made up of “boosting the production of farm commodities with growing needs, diverting the production of commodities with declined demands, and streamlining the production of commodities in competition with foreign products” (Article 2, para. 1, item 1 of the Basic Act). What the vision of selective expansion actually aimed at was promotion of outputs especially of

livestock products, vegetables and fruits, and higher dependency on imports of commodities to be produced in the land-extensive farming, excluding rice, as well as improvement in rice farming productivity by expanding producer's management scales. This policy change made it possible for Japanese agriculture not only to maintain production of the staple rice and concentrate production of crops other than rice into cultivation of land-saving farming commodities, but also to expand the production of livestock farming on the limited land resources by heavily depending on imported compound feeds. This was a rational policy direction from a view point of saving precious land resources in the country. The structure of agricultural commodity composition in Japan, which continues to exist up to the present time, was established in this way.

In 1950s, per-capita daily calorie supply recovered to the pre-war level in terms of the statistics (Note 6). Until the middle of 1970s, thereafter, the calorie supply continued to swiftly increase along with growing dependency on food importation. The content of Japanese citizens' diet that had been grain-based was also progressively diversified (See Figure 3). The food importation from the U.S. was highly effective for the farmland-deficit country of Japan not only in improving people's diet, but also in holding down workers' wage level with supplies of inexpensive foods imported from abroad. As will be discussed in the next section, however, a risk of overreliance on the food importation began to surface shortly.

Figure 3 Long-term commodity-wise changes in composition of calorie supplies, 1930 to 2015 (Kilocalories per capita per day)



SOURCES: Compiled from data of Minister's Secretariat Policy Division of the Ministry of Agriculture, Forestry and Fisheries (MAFF) (2017), and Minister's Secretariat Research Division of the Ministry of Agriculture and Forestry (MAF) (1976).

(Note) Data on total calorie supplies from 1941 to 1945 are derived from Matsuda (1951).

When the Agricultural Basic Act was enacted in 1961, the selective expansion policy of the Basic Act was consistent also with agricultural policy direction recommended by an international organization. The Food and Agriculture Organization of the United Nations (FAO) had advocated a new policy concept quite similar to Japan's selective expansion at its 1953 Conference (Note 7). The first agenda of agriculture and food-related policies

---

presented at the Conference was “selective expansion of production”, which proposed “Production must be increased in the areas of greatest needs, and in the commodities for which expanded consumption is needed and for which effective demand can be developed” (FAO 1953: item 23). Resolution Number 6 of the Conference concerning this agenda was titled as “Selective Expansion of Agricultural Production”, which had exactly same terms with the selective expansion of Japan’s Agricultural Basic Act, although they were written respectively in English and in Japanese. The Resolution was made to aim at “reducing the danger of new surpluses arising” (FAO 1953: item 16). By the time of this Conference held in 1953, “surpluses of many agricultural commodities had emerged in some areas, notably North America” (FAO 1955: item 12). On the basis of this Resolution, regional consultations were organized in the Far East and other regions between two FAO Conferences held in 1953 and 1955 for the purpose of “exploring the extent to which a complementary development of national agricultures in these regions might be possible, with a consequent expansion of trade” (FAO 1955: item 20).

**(Note 6)** During this period around 1950s, a form of the food balance sheet was repeatedly revised, which makes the continuity of data doubtful.

**(Note 7)** This similarity was pointed out for the first time by Isoshi Kajii in Honma (2003). Hirasawa (2013) confirmed that exactly same terms of “selective expansion of agricultural production” had been used in both the report of the FAO 1953 Conference and the Agricultural Basic Act of Japan. Besides, at the 1953 Conference, it was also highly recommended that consumer policies should be initiated to enable consumers to purchase foods which were already sufficiently supplied in the world market. At the 1955 Conference, progresses of selective expansion policies in member countries were confirmed. Japan had joined the FAO in 1951. The Japanese delegation consisted of officers and ex-high ranking officials of the Ministry of Agriculture and Forestry (MAF) participated in both the 1953 Conference and the 1955 Conference.

### 3.2 U.S. soybean embargo of 1973

In the summer of 1973, the U.S. administration imposed a complete embargo on exports of soybeans as part of its domestic policy to control inflation, suggesting the possibility of banning corn exports as well. Even though the embargo was lifted fortunately only three months later, recognition on a risk of the food importation dependency was newly deepened by this “soybean shock” in Japan. The term of “food security” made its debut in the country at this time (Oga 2014). As will be explained later, the Japanese administration introduced various kinds of new policy measures to cope with this situation, some of which have been lasting long until today.

In 1973, the total volume of international trade in wheat and corn rose by 50 percent over 1971. During the same period, the U.S. boosted exports of those commodities by 2.5 times. It was considered as a main factor for these increases that the Soviet Union suddenly joined the world market to purchase a huge amount of wheat for two consecutive years. Japan and other countries, moreover, also increased imports of grains. On the other hand, the U.S., a leading exporting country of farm products in the world, had been promoting sales of those commodities until the beginning of 1970s to dispose its surplus in the international market.

A poor catch of anchovy (Note 8) in the sea off the coast of Peru and poor harvests of grains in some countries other than the U.S. coincided with the above-mentioned situation, which caused simultaneously price hikes of soybeans, corn and wheat in the U.S. As of June 1973, the price of soybeans in the U.S. domestic market was raised by as much as three times over November in the previous year. Just at the beginning of the year 1973, the U.S. administration had begun to strengthen its efforts to control inflation. Since price

---

ceilings were placed on beef and pork in March 1973, price hikes in livestock feedstuffs including soybeans squeezed the management balance of U.S. livestock farmers. At the same time, the price increase of soybeans brought about serious problems among food manufacturers, feed industry and a livestock sector in Japan as well.

On June 13, 1973, U.S. President Richard Nixon announced in his address for the American citizens that his administration decided to immediately freeze prices of consumer goods for 60 days as well as to control exports of food.

A sharp rise in food prices was the most significant factor of the U.S. inflation. Farm-yard prices of agricultural commodities, however, were excluded from the list of the price freeze, because there were concerns that farmers would be discouraged to produce and market these commodities if prices of farm products were frozen by the government, which could further worsen the tight supply-demand balance of food. Although 16 million hectares of set-aside farmlands had been already put back into production in early 1973 in order to boost supplies of the commodities, effects of increasing planting acreages remained unknown yet, depending upon the harvest in the autumn of 1973.

U.S. President Nixon expressed his views in the above-mentioned address, saying “Over the long run, increased food exports will be a vital factor in raising farm income, in improving our balance of payments, and in supporting America’s position of leadership in the world.” He emphasized, moreover, “We must put the American consumer first” when farm products in short supply were to be distributed among consumers because food prices were sky-rocketing in the domestic market due to a major factor of unprecedented enormous demand for exports. At the same time, the U.S. President reiterated that his administration would keep the export commitments as a nation that the U.S. had already made with other countries, adding that the U.S. government planned to consult with other countries to seek their cooperation in resolving the worldwide problem of rising food prices (Nixon 1973).

The U.S. administration requested exporters to notify their export orders. It was found out by the survey on these notifications that the amount of soybeans scheduled to be exported from July 15 to August 30, 1973 reached 1.8 million tons, which was almost double the amount expected to be a domestic surplus available for export during this period (Oki 2008; Destler 1978).

On the basis of the survey, the U.S. imposed an immediate embargo for 60 days on all the exports of soybeans and cottonseeds on June 28. Moreover, U.S. Secretary of Commerce stated that the U.S. would need to control corn exports as well if the export demand for U.S. corn showed any big increases. Although the soybean embargo was replaced by a system of validated export licenses on July 2, it was announced that the amount of existing contracts for soybean exports were to be cut respectively by 50 percent. It was also suggested that the U.S. might consider further strengthening its export controls of soybeans and their products, depending on a size of harvest in the autumn of 1973.

With regard to Japan, domestic production of land-extensive crops such as soybeans and non-rice grains had been reduced to a negligible level since the selective expansion policy measures continued to be implemented many years. Consumption of these commodities in Japan was highly dependent on imports primarily from the U.S. Soybeans and corn purchased from the U.S. had already occupied respectively as much as 88 percent and 84 percent of Japan’s total imports of these commodities, which dependency aggravated Japan’s concern about difficulty of finding out alternative suppliers in the international market.

The Japanese government and the domestic industry community were both optimistic about the U.S. embargo just after President Nixon made the announcement, expecting U.S. special treatment would be given to them because Japan had been the largest importer of U.S. farm products, and the U.S. administration had committed itself to provide Japan

---

with exports in a stable manner when the U.S. formerly urged the Japanese government to purchase more American foods. Therefore, Japan was even more deeply shocked by U.S. cancelation of existing contracts without any prior consultations that President Nixon had committed to have with other countries in his above-mentioned address (Yamada 2012; Oki 2008) (Note 9).

Destler (1978), however, expresses a different view that the above-mentioned U.S. export controls were originally unnecessary. Destler's judgment was made on the basis of a fact that a number of export contracts regarded as export demands were speculative orders and many contracts did not actually apply for export licenses.

On July 1 and August 1, the U.S. administration respectively made an announcement that it would fully license the existing export contracts for soybeans destined for Japan as well as for other countries. Moreover, all of the restrictions imposed on exports were finally removed on October 1, 1973.

Even though the U.S. export controls were ended this way in a relatively short period, their influence made on Japan's recognition of the food security remained strong over the long term. Many people in the Japanese society began to widely share an opinion that some necessary measures should be taken to minimize the risk of extremely higher dependency on imports of U.S. farm products (Note 10). However, it was not easy for Japan, one of the largest food importers comparable with the Soviet Union in the world, to take the necessary measures for reducing the risk, because the country was not endowed with abundant resources of farmlands and the U.S. had been continuously the stable and largest exporter of farm products to Japan.

In spite of these difficult conditions, two kinds of outstanding projects were initiated by the Japanese government: international cooperation for agricultural development and development of a world food supply-demand model.

In 1974, the Japan International Cooperation Agency (JICA, today's Japan International Cooperation Agency, JICA, reorganized as an incorporated administrative agency in 2003) was founded to strengthen the international cooperation for agricultural development particularly for the purpose of promoting development imports as well as diversification of food import sources. In particular, a large-scale project of the agricultural development at the Cerrado region in Brazil was successfully carried out by JICA during a period from 1979 to 2011. This project has made a profound contribution toward developing Brazil into one of the major soybean exporters in the world. Since the Cerrado project was completed, Brazil grew up to be a reliable supplier of soybeans to China. This trade development between the two countries is now playing a role of easing the tight supply-demand balance of soybeans in the international market, and consequently contributing to Japan's stable procurement of soybeans from the global market.

The Ministry of Agriculture and Forestry of Japan (MAF), meanwhile, which newly developed the world food supply-demand model, announced the forecasts made on the basis of the model for the respective years of 1980 and 1985 (MAF 1975). The development of this model made it possible for Japan to implement a scenario analysis for the future supply-demand balance of agricultural commodities by its own method different from those of the U.S. Department of Agriculture (USDA) and FAO. Further efforts have been continuously made by the Japanese administration to develop new models in the following years. The Ministry of Agriculture, Forestry and Fisheries of Japan (MAFF) is now taking leadership in analyzing the future scenario not only by reflecting the actual conditions of the food supply-demand balances in Japan and Asian countries, but also by providing other countries with results of these analyses forecasting the future supply-demand balance from a viewpoint of the food importing countries. During the first half of 1990s, moreover, MAFF made a great contribution to the international community by handing over its own analysis methods to FAO and the International Food Policy Research Institute (IFPRI)

---

(Ministry of Agriculture, Forestry and Fisheries, MAFF, 2009).

In addition to above-mentioned two national projects, Japan took emergency measures for releasing some foods from the governmental stockpiles, providing financial support to the Feed Price Stabilization Fund, and regulating acts of speculative buying up or holding back sales of goods related to everyday life of the public. Mid- and long-term measures were also initiated to secure stable imports of farm products. The government persuaded Japanese trading firms to work out long-term import contracts with business partners in other countries. In 1975, Japan agreed with the U.S. to import 8 million tons respectively of feed grains, wheat and soybeans in a three-year period. In the same year, the Special Fund for Compound Feed Price Stabilization (today's Compound Feed Supply Stabilization Organization) was established as a system of compensating feed users for their loss occurred when the sharp rise in feed prices increased their costs of livestock production. Policy measures were also implemented to encourage farmers to increase their production of wheat and feed crops. However, outputs of these commodities failed to return to the pre-war level. Although targets of raising self-sufficiency ratios of the commodities were set up, they also failed to be achieved. As one of the mid- and long-term measures, on the other hand, the government made efforts to replenish its stockpiles of food (Publishing Association of Japan Agricultural Yearbook 1974, 1975).

The U.S. administration, thereafter, imposed a sanction of a grain export embargo against the Soviet Union in 1980 right after Soviet troops invaded Afghanistan in late December 1979, when an article published in Time magazine said, "Grain becomes a weapon" (Time, January 21, 1980). It was possible, nevertheless, for the Soviet Union to purchase grains from countries other than the U.S. because the tight supply-demand balance of grains had eased in the world market before the U.S. embargo was invoked. The U.S. could have only limited effects in the grain embargo imposed against the Soviet Union. What is more, the U.S. had to bear an unexpected result of declining its share in the international export market of grains, which result has made the U.S. take a cautious attitude toward the export controls of agricultural commodities in the following years. Since this happened in the grain market, meanwhile, many Japanese people were further inclined toward becoming more conscious of how the food importation dependency would be risky for their society.

**(Note 8)** Anchovy is a kind of sardine belonging to the Engraulidae family. Fishmeal made from Anchovy is mainly used as a material of feedstuff and others.

**(Note 9)** Oki (2008), with reference to an example of this embargo, pointed out that consumers' discontent stemmed from trade policies as well as political consideration for their discontent could occasionally take priority over diplomatic interests in food exporting countries.

**(Note 10)** Refer to the Round-table on Agricultural Issue Corresponding to Internationalization (1974), for instance.

### **3.3 Japanese agriculture losing its international competitiveness by trade liberalization**

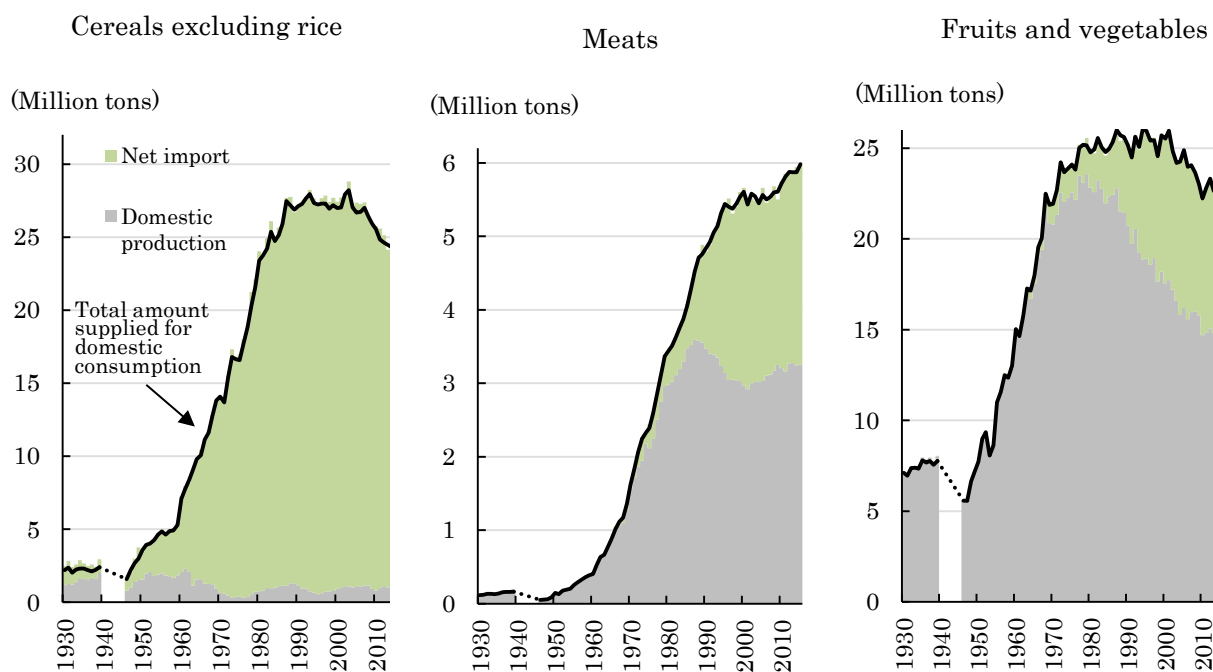
In addition to an increasingly tangible risk of dependency on food imports, the selective expansion policy began to collapse in two aspects of Japan's food supply-demand situation; an overproduction of rice and import liberalization of farm products. These aspects were both linked to overreliance on the food importation. Japan's economic growth also played a great role in triggering those problems, both of which have not been solved even today.

Rice consumption of Japanese people turned to decrease along with their income growth. The yield of rice production, meanwhile, continued to rise, which began to burden Japan

with rice surplus since 1970s. Under the selective expansion policy, however, it was difficult for the Japanese government to persuade rice producers with policy measures to shift their cultivation into production of other land-extensive crops, supplies of which had been largely dependent on importation. As a result, implementation of policy programs for production adjustment or rice acreage reduction has been prolonged so many years.

At the same time, Japanese producers of livestock and dairy products, vegetables and fruits, outputs of which had been encouraged under the selective expansion policy, were all damaged by import liberalizations, resulting in a growing dependency on importation even of these commodities. Namely, Japanese agriculture fell into a comparative inferior position during a period of the high growth of economy, and further lost its international competitiveness due to thereafter appreciation of the yen against the dollar. Import liberalizations agreed at trade negotiations sponsored by the General Agreement on Tariffs and Trade (GATT) as well as deals made between Japan and the U.S. continuously increased Japan's imports of livestock and dairy products, vegetables and fruits which had been previously protected with boarder measures. The domestic production of these commodities was forced to head toward stagnation or reduction (Note 1). With regard to Japanese livestock farming, for instance, an upward trend in the domestic production almost stopped in 1980s. A part of Japan's livestock market that thereafter continued to expand together with increasing population and economic growth was mostly dominated by

Figure 4 Changes in supply-demand balance of major farm commodities, 1930 to 2015



SOURCES: MAFF and MAF (See Figure 3.).

(Note) 1. Data for 1940 to 1945 are not available.

2. "Cereals excluding rice" show a total of wheat, soybean and corn. "Meats" show a total of poultry, pork and beef.

boosted imports of meats and other livestock products (See Figure 4). While Japanese livestock farming lost an opportunity to grow, imported livestock products have been increasing their market shares in the country up to 30 to 60 percent depending on the items of those products.

Just after the worldwide food crisis in 1973, a number of Japanese business leaders had supported a notion of increasing domestic production of agricultural commodities. In 1980s, however, Japan's business community assumed a different attitude seeking for trade liberalization of farm products and rationalization of domestic agriculture as well. In the

---

international business market, Japan was required by many countries to open its farm market in return for “flooding exports” of Japanese automobiles and other industrial products. In the Japanese government, Prime Minister Masayoshi Ohira set up his private advisory panel on the national policy implementation in 1980, named the Panel on Policy Research in the Comprehensive Security Study Group, which offered a package of policy recommendations to the Ohira’s administration. In the recommendations, the panel urged the government to improve its food and agricultural policy by taking a series of measures not only for Japanese agriculture’s co-existence with international trade, but also for national consensus on reasonable food self-sufficiency ratio, preservation of agricultural production potential, stockpiling of foods, and strengthening of activities for collecting global information concerning supply-demand balance of farm commodities. It should be noted here that this panel outlined the basic direction of Japan’s agricultural policy implementation, which still remains as today’s farm policy basis. The agricultural policy direction recommended by the panel, furthermore, was reflected in a report on “The Basic Direction of Agricultural Policy in 1980s” submitted in 1980 by the Agricultural Policy Council, an advisory body to the prime minister, which also emphasized necessities of stable importation of farm products, stockpiling and preservation of food self-sufficiency potential (Kabuta 2012).

**(Note 11)** Under these conditions, Japanese farmers were required to aim at improving quality of their products as well as marketing higher value-added commodities.

#### **4. Systematized and expanded policy measures for food security under the current Basic Act**

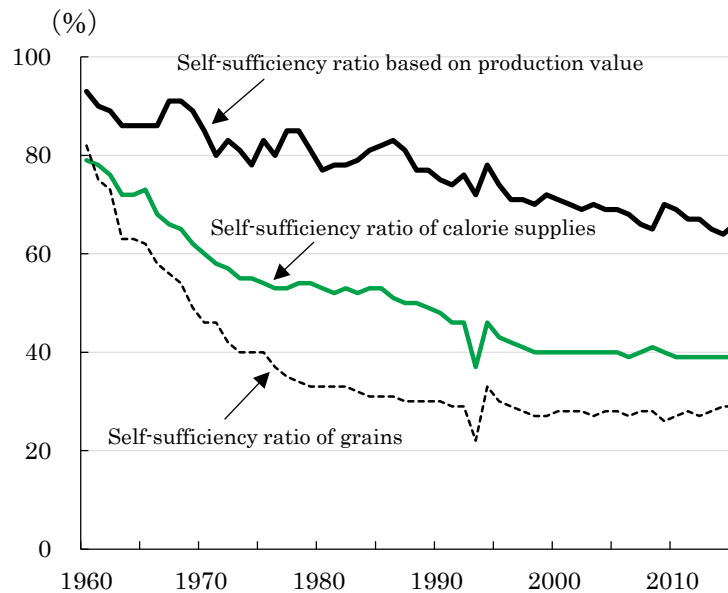
The current Food, Agriculture and Rural Areas Basic Act of 1999 basically had food security-oriented contents, in which a target rate of Japan’s food self-sufficiency was introduced. Under the Basic Act, the Basic Plan for Food, Agriculture and Rural Areas has been established every five years to gradually develop concrete measures specified for the food security. A number of measures implemented before the Act was enacted were systematized for the purpose of preparing for the emergency. The scope of the food security policy, furthermore, has been expanded by initiating preparatory and precautionary measures against various kinds of possible risks.

##### **4.1 The Basic Act of 1999 and food security**

In 1999, the Food, Agriculture and Rural Areas Basic Act replaced the previous Agricultural Basic Act of 1961. Japan had been required to create a new framework for its agricultural policy not only to respond to the rules of the World Trade Organization (WTO), which took over GATT in 1995, but also to revitalize the domestic agricultural sector that was increasing vulnerability year by year.

Before the Basic Act was enacted, an essay of “Who Will Feed China?” (1995) written by Lester Brown, expecting China to emerge as a massive grain importer in a near future, triggered many arguments both inside and outside of Japan (Note 12). In 1996, when grain prices jumped up in the international market, Japanese people deepened their concerns about an unstable supply-demand balance of food in the volatile world market. By the same time, Japan’s food self-sufficiency ratio, which declined to the lowest level among developed countries in the world (See Figure 5), had become a subject of considerable controversy in the country. An extremely poor harvest of rice in 1993 had also made the Japanese people raise awareness of the necessity for stable supplies of foods.

Figure 5 Changes in various types of food self-sufficiency ratios since 1960



SOURCE: Compiled from data of Minister's Secretariat Policy Division of MAFF (2017).

As a result, the Food, Agriculture and Rural Areas Basic Act was incorporated with wide-ranging provisions based on the multilateral principles established not only for the food security (securing a stable food supply), but also for multifunctional roles to be fulfilled by agriculture, sustainable development of agriculture, and development of rural areas in order to achieve its main purpose of supporting the agricultural production in Japan.

The Food, Agriculture and Rural Areas Basic Act primarily sets forth securing of a stable supply of food (Article 2) as a fundamental principle of the Act (Article 7), providing that high quality food must be stably supplied into the future at a reasonable price, given that food is indispensable for maintaining human life and important as a basis for healthy and fulfilling life. The Basic Act also provides that a stable supply of food must be ensured by increasing domestic agricultural production as basic food resources as well as by appropriately combining importation with stockpiling, given that the world's food supply-demand balance and farm trade involve some uncertainties (Article 2, para.2). This provision is followed not only by the Para.3 of the Article 2 providing that food must be supplied in accordance with the ever more sophisticated and diversified demands of the citizens, but also by the Para.4 of the Article 2 providing that "supply of the minimum food necessary for citizens must be secured in such a manner that no serious hindrance will be caused to the stability of citizens' lives or to the smooth operation of the national economy" even in the case when the domestic food supply and demand balance becomes extremely tight. These Articles of the Act can be considered to provide a basic framework of policy measures for achieving Japan's food security to be required both in normal times and in unexpected times.

In addition, the Basic Act provides for more concrete measures to be taken for securing stable imports (Article 18), food security in the emergency (increasing food production, restricting distribution and other necessary measures) (Article 19), as well as for

---

promoting international cooperation like technical cooperation in order to make contribution to ensuring the stability of the world's food supply and demand balance into the future (Article 20). It will be confirmed that above-mentioned policy measures provided in the Basic Act include not only some emergency measures implemented around the Pacific War, but also other measures conducted at the time of the 1973 food crisis as already explained in previous sections of this paper.

Moreover, it was provided to set the target rate of food self-sufficiency in the Basic Plan for Food, Agriculture and Rural Areas which is to be revised approximately every five years (Article 15, para.2). Under the provision of this Article, the target rate of “general food self-sufficiency based on supply calories” was set respectively in the 2000 Basic Plan and the following Basic Plans (Note 13). This general food self-sufficiency rate can be regarded as an appropriate indicator of food security, since it is worked out on the basis of substantial quantities of food supplies and their nutritional values (Note 14).

From a viewpoint of food security, it is supposed that a higher dependency on food importation will be a serious risk to Japan. Namely, the food self-sufficiency ratio can be regarded as a significant indicator reminding the Japanese people of the risk. The concept of the self-sufficiency ratio is consistent with the fundamental principle of the Basic Act aiming at achieving a stable supply of food with domestic production in consideration of unstable trades of agricultural commodities in the world market.

When a panel of experts, named the Investigative Council on Basic Problem Concerning Food, Agriculture and Rural Areas, discussed the Basic Act to prepare for the legislation, a proposal on introduction of the target rate of food self-sufficiency was supported by representatives of farmer's organizations and consumer groups. Both of these organizations emphasized the importance of food security as well as stability and gradual expansion of agricultural output in the country. On the contrary, Japan's business community, which put more emphasis on trade liberalization of farm commodities and strengthened competitiveness of Japanese agriculture, opposed the target rate because the target itself would lead to implementation of more protective policy measures for domestic agriculture. The final settlement arrived in favor of the former party. In addition, experts of the panel also developed their argument on another proposal that agricultural production potential in the emergency should be taken more seriously rather than the food self-sufficiency ratio. The argument on this viewpoint has led to the food self-sufficiency potential indicator introduced in the 2015 Basic Plan as will be mentioned later.

A target of raising the food self-sufficiency ratio was set forth in the past Basic Plans. Every target, however, was not achieved under such conditions as the production base of domestic agriculture was gradually undermined. The general food self-sufficiency ratio based on supply calories has bottomed out since the Basic Act was enforced (See Figure 5). However, this is because the total calorie consumption has been decreasing mainly due to aging of the Japanese society.

**(Note 12)** This triggered China's full-scale efforts to increase its food production.

**(Note 13)** In addition to the target rate of general food self-sufficiency based on supply calories, target rates of grain self-sufficiency and the like were also set forth in the Basic Plan.

**(Note 14)** In the respective Basic Plans established since 2005, a target rate of general food self-sufficiency based on output value was also set forth. The target rate has an advantage that domestic production of fruits and vegetables, which are indispensable for keeping and improving health in spite of their relatively low calories, is more properly reflected in the self-sufficiency. This indicator focusing economic values of these crops, however, is not directly showing the level of food security. In addition, the indicator has been inflated by higher prices of domestically produced fruits and vegetables. As a fact, promotion of value-added agricultural production concentrating on such crops as produced in land-saving farming is hard to be evaluated, because those crops do not make a large

---

contribution toward raising the self-sufficiency rate based on calorie supplies. In this context, however, a basic question arises as to whether the food self-sufficiency ratio itself will be an effective means of evaluating achievements in the promotion of value-added crop production? One of the provisions of the Basic Act provides that the target rate of food self-sufficiency shall be established as a guideline for overall production of the domestic agriculture (Article 15, para. 3 of the Basic Act). It can also be seen that some “unreasonableness” was inevitable with this provision being put in the Basic Act.

## **4.2 Development of food security measures systematized by the Basic Plans**

In 2002, a “Food Security Manual in Case of Unforeseeable Events” (Note 15) was compiled on the basis of the first Basic Plan made in 2000 to specify “basic contents of necessary measures, grounds laws and ordinances of the respective measures, implementation procedures of the measures, and other relevant matters” (page 1 of the Japanese version). The contents of the Manual were composed of measures to be taken in normal times, classification of food-shortage emergency phases, organizational system to be built up in emergent events, and measures to be implemented according to the degree of the emergency. This document has made it possible for the Japanese government to get prepared for future emergencies by well-organizing various measures to be conducted at each level of the emergency phases.

With regard to the measures to be taken in normal times, the followings are listed in the Manual; securing and reinforcing food supply capacities of domestic agriculture and fishery, appropriate and effective management of food stockpiles, securing stable food imports, collection, analysis and publicity of relevant information on the food situation both inside and outside of the country, as well as promotion of understanding on the food security among the people at all levels of society.

Levels of possible emergent events are classified into three phases from Level 0 to Level 2 according to the degree of the emergency. How to take necessary measures at each level is demonstrated in the Manual (See Table 1).

Level 0 is a phase of emergency, which may be possibly stepping up to Level 1, with significantly poor harvests of major crops being forecasted both inside and outside the country. Initial and precautionary measures against the coming emergency are to be mostly undertaken at this Level 0.

The next phase is Level 1, in which people’s diet is highly likely to be seriously influenced by a poor harvest of rice in the country and/or a tight supply-demand balance of a specific commodity with an embargo and other export control being imposed by major exporting countries. At this Level 1, minimum controls are to be imposed on the market, while the market is basically allowed to continuously play its own functions.

Level 2 is the most serious phase, in which there is a danger that minimum calories of 2,000 kilocalories per capita per day is expected to be hardly supplied to the public due to an emergent event like a considerable decrease in imports of grains and soybeans. Measures are to be taken for securing minimum supplies of food as well as providing the people with foodstuffs by rationing, while the government imposes wide-ranging controls and regulations on the market from production to distribution, as well as on consumption of foods throughout the country.

The Basic Plan of 2005 introduced additional measures as effective ways to ensure a stable food import not only for collecting necessary information, but also for removing possibilities of embargoes and export duties to be imposed by exporting countries through conclusion of an Economic Partnership Agreement (EPA) with the trading partners.

Table 1 Necessary measures to be taken according to the degree of the emergency in the Food Security Manual (Level 0 to Level 2)

Level 0	Level 1	Level 2
<ul style="list-style-type: none"> <li>• Collection, analysis and publicity of information on forecasted supplies of food</li> <li>• Utilization of food stockpiles and securing food importation</li> <li>• Minimization of food wastes and distribution of substandard agricultural commodities</li> <li>• Monitoring and administrative guidance on prices and distribution of food</li> </ul>	<ul style="list-style-type: none"> <li>• Emergency increases in agricultural production</li> <li>• Request to be made to manufacturers by the government for ensuring supplies of production inputs, allocation of their quotas, and introduction of rationing system of those inputs[1]</li> <li>• Governmental instructions concerning food imports [1]</li> <li>• Governmental instructions concerning selling, transportation and storage of food in order to correct a regional supply-demand imbalance and rectify buying up and holding back sales [1][2][3]</li> <li>• Introduction of standard pricing system [1]</li> </ul>	<ul style="list-style-type: none"> <li>• Production diversion to crops with higher calorie efficiency</li> <li>• Utilization of lands other than existing farmlands</li> <li>• Implementation of allotment and rationing of food [3][1]</li> <li>• Price control [4]</li> <li>• Securing petroleum supplies by priority for domestic agricultural production[5], and changing farming methods</li> </ul>

SOURCES: Compiled from “Food Security Manual in Case of Unforeseeable Events” (2002), MAFF.

(Note) Parentheses [ ] in the Table respectively shows grounds laws and ordinances as follows;

[1] Act on Emergency Measures for Stabilizing Living Conditions of the Public (1973)

[2] Act on Emergency Measures against Acts of Buying Up or Holding Back Sales of Goods Related to Everyday Life (Act against Buying Up, etc.) (1973)

[3] Act on Stabilization of Supply, Demand and Prices of Staple Food (1994)

[4] Prices Control Ordinance (1946)

[5] Petroleum Supply and Demand Adjustment Act (1973)

Since prices of grains soon began to soar in the world market in 2006 autumn, development of policy measures for the food security was accelerated in Japan. The Ministry of Agriculture, Forestry and Fisheries (MAFF) convened a panel of experts called “International Food Problem Study Group” in 2007 to consider how to tackle a challenge of the tight supply-demand balance of food on the globe. In the latter part of the fiscal 2007, MAFF started to operate its own continuous monitoring system by targeting major food producing countries all over the world. In 2008, the Food Security Division (Note 16) was newly established in MAFF.

In the Basic Plan of 2010, a policy goal for “establishing a comprehensive food security” was launched, emphasizing “MAFF is required to establish a comprehensive food security by making a wide-ranging consideration from food supplies to demands and availability of physical accesses to foods not only for coping with emergencies, but also preparing in normal times for future emergencies, as well as by seeking for collaboration with relevant Ministries and Agencies” (page 20 in Japanese version). Concrete measures to be taken for the comprehensive food security were listed in the Basic Plan as follows;

- ensuring supplies of production inputs,
- strengthening measures for import quarantine, domestic control and epidemic prevention,
- preparing measures for a large-scale disruption and other disorders in food distribution channels by using capacity of the private business sector,
- considering how to reserve rice and wheat as well as how to manage those stockpiles in appropriate and effective ways,

- 
- developing medium to long-term models to present scenario-based forecasts for the global supply-demand balance of food,
  - monitoring and regulating markets in collaboration with other countries,
  - promoting international cooperation for agricultural development in developing countries in Africa and other regions,
  - establishing a system of the ASEAN Plus Three Emergency Rice Stockpile for ASEAN member countries and three countries of Japan, China and Korea, and
  - supporting corporations by promoting their foreign agricultural investment projects and establishing a set of international principles on conduct for agricultural development in other countries.

The list of these concrete measures can be characterized by its structure that includes a number of medium and long-term measures as well as precautionary measures. Conventional patterns of policy measures against the emergency had been limited to those for dealing with disorders in the distribution channels and stockpiling of foods. As the Basic Plan emphasized the importance of preparatory practices “in normal times” for future emergencies, it can be seen as another characteristic of these concrete measures that they aim not only at preparing for possible serious shortages of food supplies, but also addressing factors of disturbance that are likely to occur more frequently in the market and distribution channels. It should be added here that a similar movement toward expanding the scope of food security measures is taking place in the United Kingdom as well, which aims at tackling these problems of frequent occurrence as well as maintaining smooth distribution and sales of foods by the private sector.

In addition, the Japanese government launched an agricultural development project in the savanna area of Mozambique in 2009, following the Cerrado development program in Brazil. Since the savanna area has soil and weather conditions similar to those in Brazil, the huge area in Mozambique was expected to achieve its great potential for agricultural production in the African country by taking advantage of Japan’s experiences of the Cerrado development (Note 17). In the private sector, a number of Japanese trading firms and other corporations coincidentally promoted direct investments in South-American countries and Australia.

Moreover, after taking a lesson from the experiences of the Great East Japan Earthquake and Tsunami as well as the Fukushima Daiichi Nuclear Power Plant Disaster in 2011, the Emergency Food Security Guideline was added in 2012 with a chapter of “localized and short-term food insecurity”.

The latest Basic Plan of 2015 not only demonstrated various policy measures against diversified risks, but also introduced a “food self-sufficiency potential indicator” for the first time.

In a section of the 2015 Basic Plan named “Establishment of Comprehensive Food Security Challenging Various Risks,” a number of policy measures have been prepared. The important measures are newly added as follows;

- Various risks related to food supplies are to be analyzed and assessed every year, a result of which must be made public,
- Concrete procedures of implementing measures on the basis of the Emergency Food Security Guideline are to be made well known to citizens, and a preliminary exercise program is also to be put into practice against hypothetical emergencies,
- Long-term food supply-demand forecasts are to be made on the basis of the latest evaluation of the impacts of climate change on agricultural production,
- Technologies are to be developed to increase domestic production of feedstuffs and fertilizers as well as exploit unused domestic resources for manufacturing these materials,

- 
- Development of food value chains is to be promoted as part of international aids for developing countries in collaboration with domestic companies engaged in agricultural development projects in those countries, and
  - In order to maintain distribution of foods even in the emergency, necessary measures are to be undertaken not only for making food industry companies work out their respective business continuation plans in emergent events, but also for establishing a system of cooperation and coordination between these companies and local municipalities, constructing food distribution hubs fitting the earthquake-resistance standards, and promoting food stockpiling at home.

Among these measures, regular risk assessments and long-term forecasts for the supply-demand balance of food are deemed as measures advanced from previous ones for collecting and analyzing relevant information. Publicity on the concrete procedures of implementing measures and the preliminary exercise against hypothetical emergent events on the basis of the Emergency Food Security Guideline are efficient practices of the Guideline. Both of them can be regarded as being further deepened in comparison with previous measures. Efforts to be made for increasing supplies of domestically produced feeds aim at curbing a heavy dependence on imported feed grains and other materials in the light of possible impacts of those grains' price hikes in the international market. The measure for maintaining food distribution channels in an emergent event is exactly what is based on experiences of the Great East Japan Earthquake.

Besides these measures, a food self-sufficiency potential indicator has been introduced in the Basic Plan together with the conventional target ratio of the food self-sufficiency. MAFF has made it a rule to publicize the potential indicator for the latest fiscal year every year. The food self-sufficiency potential indicator shows an amount of calorie supply per capita per day that can be available when the calorie efficiency of foods produced in the domestic agricultural, forestry and fishery sectors is maximized with maximum utilization of production resources such as farmlands in the country. In other words, the indicator can be regarded as a domestic agriculture's capacity for boosting food production or its production potential when Japan's food imports are completely disrupted. Behind the introduction of this indicator, there are concerns that Japanese agriculture's potential for food supplies has been undermined as its production base is growing vulnerability.

The food self-sufficiency potential indicator is worked out for four stages, ranging from Pattern A to Pattern D, which are respectively assumed on the basis of food production in emergent events. These patterns of the food production fall into two categories: one is made up of productions mainly of major crops such as rice, wheat and soybeans, and the other one consists of productions mainly of potatoes and sweet potatoes. These two categories, furthermore, are respectively divided into two patterns. One is given with consideration to nutritional balance, while the other one is not given with the same consideration (See Table 2). With regard to Pattern A and Pattern B, concentrating on the domestic production of major grains, a result of MAFF's estimates shows that the total calorie supplies are expected to increase by 1.6 to 2 times over those of the current domestic production. Nevertheless, these calorie supplies are smaller by 20 to 40 percent than the existing total supplies of calories including those of imported foods, and they are also by 10 to 30 percent behind the estimated energy requirement. By contrast with these Patterns of A and B, the calorie supplies in Pattern C and Pattern D, concentrating on the domestic production mainly of potatoes, are likely to increase by 2.6 to 2.9 times more than those of today's domestic production. Regarding Pattern C with consideration given to nutritional balance, it is estimated possible even for this Pattern to have calorie supplies almost similar to the current level, as well as to exceed the estimated energy requirement. As far as MAFF's estimates are concerned, it can be concluded that Japan will have to be

dependent to a significant degree on an increase in potato production if its people are to be fed only with the domestic agricultural production.

Table 2 Food Self-sufficiency Potential Indicator  
(estimated figures for the 2013 fiscal year)

(Unit: kilocalories per capita per day, %)

		Calorie supply	Ratio against actual calorie supply	Ratio against actual domestic production	Ratio against estimated energy requirement
Food Self-sufficiency Potential Indicator	Pattern A concentrating on supplies of major cereals with consideration given to nutritional balance	1,496	61.7	159.3	69.7
	Pattern B concentrating on supplies of major cereals without consideration given to nutritional balance	1,855	76.5	197.6	86.4
	Pattern C concentrating on supplies of potatoes and sweet potatoes with consideration given to nutritional balance	2,462	101.6	262.2	114.7
	Pattern D concentrating on supplies of potatoes and sweet potatoes without consideration given to nutritional balance	2,754	113.6	293.3	128.3
Actual amount of calorie supply	Calculated on a supply basis	2,424	100.0	258.1	112.9
	Out of which domestic production	939	38.7	100.0	43.7
Estimated energy requirement on an intake basis		2,147	88.6	228.6	100.0

SOURCES: Data derived from the “Basic Plan for Food, Agriculture and Rural Areas” decided in March, 2015.

(Note) The Food Self-sufficiency Potential Indicator is based on a scenario assuming that crops are cultivated even in restorable portions of dilapidated farmlands.

On the other hand, however, the food self-sufficiency potential indicator itself showed a declining tendency for more than past twenty years. Supposing that this trend continues, only the Pattern D, which indicator is based on calorie supplies primarily from potato production with no consideration given to nutritional balance, is expected to barely reach the level of an estimated energy requirement in twenty years later. It can be stated that domestic agriculture’s potential of the minimum food supplies in Japan has been almost pushed to the brink.

Moreover, it should be reminded that the food self-sufficiency potential indicator is based on several optimistic assumptions. For instance, a period of time necessary for crop conversions in a future emergent event has not been put into consideration. The potential of food production is also estimated under the premise that not only both of the necessary labor and farm inputs are fully available in the emergency, but also the agricultural production base is continuously secured as well. In actuality, however, acreages and yields

---

of the assumed crops in the respective Patterns are supposed to be influenced by such factors as cultivation periods or continuous cropping hazards. In order to implement an effective planting concentrated on potatoes throughout the country, furthermore, it seems to become challenges not only to ensure supplies of insect-free and disease-free seed potatoes, but also to achieve an increase in manufactures of potato planting and harvesting machines in a timely manner. How to stockpile a huge amount of harvested potatoes is likely to be another challenge, which is not touched upon in the Basic Plan of 2015. Full consideration should be supposedly given to a challenge of how to reflect into the potential indicator a conservative estimate based on the reality. Experiences in the wartime remind us of a great danger that optimistically estimated figures will be interpreted as reliable ones by the people.

It should be noted, furthermore, that the food self-sufficiency potential indicator has a supplementary relationship with the food self-sufficiency ratio, not a competitive relationship with the ratio. The food self-sufficiency ratio indicates how much total food supplies will be curtailed when the food imports are disrupted. Namely, it shows the magnitude of a latent risk involved in a higher dependency on food importation in normal times. By contrast, the food self-sufficiency potential indicator is considered to tell the people how severe conditions the Japanese citizens will face if the dependence on the food importation turns to discontinue when a risk is realized. Japanese agriculture, nevertheless, has an experience that it could ensure minimum food supplies for the people only with the domestic output when its crop yields sharply improved during post-war years. This experience had been regarded as an implicit premise for the national food security policy. However, this premise itself has been recently undermined, in which situation it can be stated that the food self-sufficiency potential indicator is realistically increasing its significance.

**(Note 15)** The “Food Security Manual in Case of Unforeseeable Events” was renamed as the “Emergency Food Security Guideline” in 2012. In the document concerned, the wording of “in case of unforeseeable events” was changed into “in the emergency”.

**(Note 16)** The Food Security Division was later reorganized into the Office of Food Security.

**(Note 17)** The agricultural development project in Mozambique, however, is facing problems with many aspects of relationship with local societies, land ownership systems, limited availability of farm inputs, and poor infrastructure for transportation.

## 5. Observations

### 5.1 Experiences of Japan

Shortages of both farmland and food have been long-standing problems confronting Japan. After the Japanese people experienced an acute food shortage just around the Pacific War, the U.S. emerged as a stable supplier of abundant food for Japan during postwar years. In the Cold War structure, where the U.S. was facing a problem of mounting accumulations of surplus farm commodities, Japan rapidly increased its imports of farm products especially from the U.S. As a result, this enabled Japan to improve diet of its people. Nonetheless, Japan has come to be exposed to a risk of being extremely dependent on imported foods. Although the supply-demand balance of grains in the world market has been stably preserved in many years, their prices periodically soared almost every ten years. The history of such price hikes can be traced back to past events happened in the international market, including the 1973 soybean embargo as well as the 2007 global food shortage which brought about serious problems like citizens’ rallies for bread at a number of cities in many countries throughout the world. Under these conditions, Japan continued making efforts to maintain minimum production of domestic agriculture on the basis of

---

serious experiences of food insecurity around the Pacific War. So far food supplies for the people have been almost stable at the consumption level. It is desirably expected that Japan will continuously secure a stable food supply well into the future.

Even though the market mechanism can effectively function to adjust a supply-demand balance of food in normal times, it does not appropriately play the same function in the emergency and possibly causes problems of the food insecurity in many cases. The relevant government will be required to intervene in those cases by taking necessary measures. Namely, it can be stated that major significance of Japan's food security policy lies in coping with this possibility of the emergency. The war is a prime example of emergent events. The international market will not be able to smoothly function without a basic premise of peace. If an extreme shortage of food supplies similar to that in the cases of the post-war price hikes at the Japanese black market and the U.S. soybean embargo of 1973 takes place, a serious problem will also be caused to the people's diet. If foods are left to free business transactions when the market is short of supplies, their prices will tremendously jump up, making it difficult for consumers to purchase food items. When a worldwide shortage of food supplies occurs, major exporting countries of grains and other food commodities may be obliged to allocate their export quotas to respective importing countries (Oki 2008), possibly making it difficult for those countries to ensure an adequate purchase of food. On the one hand, when the world food market is in normal times or facing only a less serious problem of food shortage, private corporations have room for playing a significant role in the market to ensure or improve the food security. For instance, trading firms can demonstrate their initiatives with their foreign direct investments for agricultural development, and food manufacturers and distributors play a significant role by continuing business operations in a less emergent event and the like.

In this context, the importance of appropriate information and its effective use should be emphasized here again. Even though Japan's national staple food policy during the Pacific War was made up of various measures like food controls, its implementation plans that were formulated on an optimistic forecast diverging from reality caused the collapse of stable food supplies (Unno 2016). When the food crisis occurred right after the war, on the other hand, it can be conceived that the Japanese government's entreaty made to the U.S. for food imports on the basis of a prompt grasp of the actual situation and highly effective implementation of necessary measures against deteriorating conditions of food supplies made a great contribution to avoidance of discontinuing the rationing system. In connection with these experiences, concerns will be generated by the fact that the existing food self-sufficiency potential indicator has been worked out on the basis of optimistic premises similarly as the wartime staple food policy was implemented.

## 5.2 Previous courses pursued for expanding policy measures

Japan's food security policy implemented in previous years has gradually expanded not only its scope and coverage, but also contents of its policy measures. Under the Basic Plans for Food, Agriculture and Rural Areas, these measures have been also systematized to a certain extent. It can be generally stated that various kinds of preparatory and precautionary measures against emergencies have come to be implemented even in normal times. If these measures are reviewed in details, it will be found out that the following three courses have been pursued in the past expansion of those measures.

The first is a course of incorporating experiences of past emergencies into improvement of policy measures. First of all, some of the emergency measures, that had been initiated to deal with difficulties faced in the past emergencies, have remained in a certain form in the following years. They have been also improved in normal times to prepare for implementation in the future emergency. Next, precautionary measures or mid- and

---

long-term measures, which were introduced after the emergency was over, have also been continuously carried out in the normal times. Implementation of these policy measures, coupled with classification of those measures according to the degree of the emergency, has led to the above-mentioned systematization of the food security policy. In this background, it can be said that there are concerns over a reoccurrence of food crisis as well as a risk of heavy dependency on food importation.

The second course of the above-mentioned expansion of the policy measures is to tackle various kinds of emergencies that vary in seriousness and frequency. In the severe food crisis taking place around the end of the war, the priority challenge was how to ensure minimum food supplies for the people. After overcoming this crisis, however, the policy measures for the food security have been expanded toward reducing various instability and uncertainty of food supplies that are not so serious, but possibly occur more frequently (Note 18). In other words, it can be stated that levels of both the food security and its stability to be pursued have been raised in Japan. This movement is also related with expansions of above-mentioned precautionary or early-warning policy measures. The background of this relationship can be found in higher expectations for food supplies that have been upgraded by both citizens and corporations in the country. In the developed economy like today's Japan, it is required not only to ensure supplies of minimum food, but also to meet the demands for adequate calorie, balanced nutrition and sophisticated tastes that have been growing in people's advanced food diet as well as developed business sectors. Furthermore, it is also required to secure stable supplies of food ensuring both quality and safety.

The third and final course of the policy measure expansion is to put importance on the relevant information as well as its analysis and efficient utilization, which is commonly necessary for both of above-mentioned two courses. Namely, sophistication of the whole policy measures has been increased along with expansion of those measures.

**(Note 18)** In this second course of the policy measure expansion, it seems that measures for challenging the emergency with higher degree of seriousness are lacking. In the existing Emergency Food Security Guideline, disruption of food importation is regarded as the worst scenario, in which a minimum food requirement of the people is assumed to be met by converting crop production in the domestic agriculture. If a domestic poor crop, however, coincidentally takes place along with disruption of the food importation as happened in 1945, it will be extremely difficult for Japan to overcome the catastrophe, even though there is a small chance that such case occurs in the country. Supposing that Japan tries to prepare even for such a critical event, it will become one of effective measures for Japan to build a large-scale stockpile as Switzerland did in past years.

### 5.3 Future challenges

#### **(a) Maintenance of domestic production capacity along with securing stable imports**

In Japan's food security policy, the domestic production of agriculture is regarded, in a sense, as the last stronghold of food supplies for the people. When the biggest risk of import disruption takes place (Note 19), it will become most necessary for Japan to produce all of minimum food requirement in the country. In recent years, however, the production base of Japan's agriculture has been gradually undermined. Since Japan is not endowed with abundant resources of farmlands, it is a vital challenge for the country to prevent its farmlands from being further abandoned as well as effectively utilize existing ones.

If Japan can preserve as many existing farmlands as possible, on the contrary, it will be able to reduce the risk of food insecurity by raising its food self-sufficiency ratio as its

---

population is expected to continue remarkably declining over a long period. Considering a long history of farmland shortage in Japan, this will be a rare opportunity to be given to the country. According to the main scenario of a national population projection revealed by the National Institute of Population and Social Security Research, Japan's population is forecast to decrease by 60 percent by the end of this century. Unless a large number of immigrants are invited, a reduction in Japan's population by as much as dozens percent will be inevitable (Note 20). Farmers will also be required to adjust their crop conversions in response to the falling population. In order to promote an effective utilization of farmlands when domestic demands for every farm commodity are likely to shrink, it will be most necessary for Japanese farmers to boost domestic production especially of such farm commodities as feed crops cultivated in the land-extensive farming, while domestic supplies of those commodities have been heavily depending upon importation. Every possibility should also be explored for the effective uses of land resources, including operation of extensive agriculture like grazing of livestock animals which leads to reduction in both labor forces and production costs.

The former selective expansion policy, that has formed the existing commodity and sector-wise composition of Japanese agriculture, was established so as to make the domestic farming accommodate itself to then conditions characterized by the farmland shortage of Japan as well as surplus of agricultural commodities in the U.S. However, Japan's population now began to decrease. The situation surrounding American agriculture has considerably changed. A new demand for biofuel has been created in the U.S. agricultural sector and U.S. exports of farm commodities for China and other emerging countries are tremendously being boosted. Japanese agriculture will be required to address a long-term challenge of how to make a transition to a different commodity composition by adjusting itself to changes in food demands of domestic consumers in a new era. This transition to new crop cultivations in the Japanese agriculture is expected to make contribution to the food security of the country as well.

On the other hand, a structure of importing countries in the international farm trade centering on grain transactions has undergone a remarkable change in comparison with that during past years when Japan used to be growing its reliance on food imports. In a group of food importing countries, China has become the largest importer in the world, and some nations other than Japan have also emerged as large-scale importers. As this movement lowered Japan's relative position in the global food market, competition even among food importing countries is happening in today's world market. In a group of exporting countries, meanwhile, several countries such as Brazil, Argentina, Ukraine, and Russia almost simultaneously emerged as key players to increase the total capacity and diversity of their potential food supplies in the international market, even though there seem to be some problems possibly undermining the stability of production and political conditions.

In this way, more key players have joined the world market of agricultural commodities, in which new uncertainties like possible effects by the climate change are also arising. Under this situation, it will become much more important to collect and analyze the relevant information for ensuring stable food imports. Private corporations engaged in farm trades can also be expected to play a vital role for the same purpose.

**(Note 19)** In Japan, a poor crop in the domestic agriculture makes less influence on a total supply of food than the import disruption because of its higher dependency on food importation.

**(Note 20)** Even in a scenario based on the most optimistic assumption forecasting a dramatically rising birthrate in Japan, the Japanese population is expected to decline by as much as 30 percent by the end of this century. See Hirasawa (2016).

---

## **(b) Japan's response to be made for adapting itself to changes in international arguments**

This paper is concluded by giving some considerations to arguments made for the food security in the international arena, focusing on the recent movement that a distance of those arguments between Japan and the international community has been diminishing, although the distance between them used to be increasing in past years.

According to FAO's definition, "Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food, which meets their dietary needs and food preferences for an active and healthy life". Almost of this content is covered by provisions concerning securing a stable food supply of the Food, Agriculture and Rural Areas Basic Act. Nevertheless, the Basic Act definitely differs from the FAO's definition only in one point. Namely, the provisions of the Japanese Act lack a concept of "all people" which is available in the FAO's definition. This difference highlights the distance between past arguments about the food security in the international society and those in Japan.

In Japan, any people scarcely suffer from starvation in normal times. At the same time, however, the Japanese society has understood it as a major challenge for Japan's food security not only to avoid being excessively dependent upon food imports, but also to secure a stable food supply at the national level. The Japanese people have deepened such understanding through their historical experience that they gained during the war. As a matter of fact, results of Japanese opinion polls on the food security have always been deeply reflecting public concerns about national dependence on food importation as well as people's support for domestic production-oriented farm policy.

Conventional arguments on the food security at international level, on the other hand, were mainly focusing food security not at national level, but at levels of individuals, family finance and local areas, because those arguments were pursued in contexts of relief and solution of famines with international food aids. In addition, European countries, which had formerly implemented farm policies placing emphasis on stable supplies of food at national level, changed themselves into a food exporting region and strengthened their common role as the European Community in the international society. Under such conditions, coupled with the end of the cold war, European countries' sense of crisis about the food shortage was weakened away year by year. Scandinavian countries and Germany almost discontinued their food reserve programs, and Switzerland began to gradually reduce an amount of the public stockpile. Therefore, it became increasingly difficult for these European countries to understand a position of Japan emphasizing the importance of securing a stable food supply at national level.

In recent years, however, a concept of the food security at national level has been receiving attention again since prices of agricultural commodities remarkably hiked in the global market in 2007 and China began to increase its demand for foods.

People's rallies against food price hikes were held in many countries amid the 2007 surge of agricultural commodity prices in the world market, in which some of food exporting countries imposed controls and bans on their exports of farm products to avoid food inflation in their domestic markets. These movements provided citizens of developed countries in the European region with an opportunity to heighten their interests in the food security. EU decided to impose export levies for the purpose of preventing grains produced in the region from outflowing to non-member countries. In 2013, furthermore, when EU carried out a reform in its Common Agricultural Policy (CAP), member countries reawakened their interests in the food security and brought about a decision to maintain the agricultural budget. The Swiss government also introduced "Supply Security Payment" as a main program of the direct payment system for producers in its mid-term agricultural policy implemented since 2014 in order to ensure its domestic production for the food

---

security. In Switzerland, moreover, people's proposal has been submitted for adding to its constitution a new provision in which the food security is to be enshrined together with a regulation on preservation of farmlands. A federal referendum on the proposal is scheduled to be held in the autumn of 2017.

The government of China is making every effort to address a challenge of how to meet people's food demand which has been steadily increasing along with the economic growth of the country, because Chinese authorities consider it dangerous to limitlessly depend upon food importation from the viewpoint of its enormous population. For the purpose of maintaining the national food security, therefore, China has been taking a number of measures to keep the domestic production of staple foods as well as to promote farmland investments in foreign countries, while it continues to increase imports of feed grains in cautious manners.

What is seen in the actual situation is that every country has decided to take measures for its own food security at national level in the end, when it faced an emergent event in which a risk was likely to realize in food supplies for its people. Such movements suggest us that above-mentioned countries are getting close to Japan in their awareness of the food security issue. It will be more desirable for Japan to take advantage of this new dimension emerging in the international community for the purpose of creating a global public opinion supporting Japanese stance on the food security by further promoting cooperation among food importing countries.

## References

- Destler, I. M. (1978). United States Food Policy 1972–1976: Reconciling Domestic and International Objectives. *International Organization*, Vol.32-No.3, pp.617–653.
- Dower, John W. (2004). *Embracing Defeat: Japan in the Wake of World War II, expanded Japanese edition, Volume 1*: Iwanami Shoten. [available in Japanese: 「ダワー, ジョン (2004)『増補版 敗北を抱きしめて (上) —第二次大戦後の日本人—』岩波書店」]
- Food Agency. (1960). *Statistical Yearbook of Food Control 1959*. [available in Japanese: 「食糧庁 (1960)『食糧管理統計年報 昭和 34 年 1959』」]
- Food Agency. (1952). *Statistical Yearbook of Food Control 1951*. [available in Japanese: 「食糧庁 (1952)『食糧管理統計年報 昭和 26 年 1951』」]
- Food Agency. (1951). *Statistical Yearbook of Food Control 1950*. [available in Japanese: 「食糧庁 (1951)『食糧管理統計年報 昭和 25 年 1950』」]
- Food and Agriculture Organization of the United Nations (FAO). (1955). *Report of the Conference of FAO Eighth Session*, 4–25 November.
- Food and Agriculture Organization of the United Nations (FAO). (1953). *Report of the Conference of FAO Seventh Session*, 23 November–11 December.
- Fujimoto, Takashi. (2009). Realistic and Virtual Uses of Farmlands Supporting Food Consumption of Japanese People—Evaluation by Interindustry Relations Analysis. *Academic Papers of Osaka Economics University*, Vol.60-No.2, pp.79–91. [available in Japanese: 「藤本高志 (2009)「日本人の食を支える現実耕地投入量と仮想耕地投入量—産業連関分析による評価」『大阪経大論集』第 60 巻第 2 号, 79～91 頁」]

- 
- HIRASAWA, Akihiko. (2017). “Food Security Measures in Japan since World War II.” Chap.5 in *Food Insecurity in Asia: Why Institutions Matter* (ed. Zhou, Zhang-Yue and Guanghua Wan.: Asian Development Bank Institute), pp.89-138.
  - HIRASAWA, Akihiko. (2016). Toward Agricultural Policy in Era of Population Decrease. *Japan’s Agricultural Annual Report No. 62: How the Basic Plan Will Tackle Agricultural Policy Reform and TPP?*, Norin Tokei Kyoukai, March, pp.27~46. [available in Japanese: 「平澤明彦 (2016) 「人口減少時代の農業政策に向けて」『日本農業年報 62 : 基本計画は農政改革と TPP にどう立ち向かうのか—日本農業・農政の大転換—』農林統計協会, 3 月, 27~46 頁」]
  - HIRASAWA, Akihiko. (2013). Agricultural Imports, Trade Liberalization and Farm Income Supports in Japan. *Country paper for the FFTC-NACF International Seminar on Threats and Opportunities of the Free Trade Agreements in the Asian Region*, Seoul, 29 September-3 October.
  - Honma, Masayoshi. (2003). Considerations on Food Security (including discussions). *Food Policy Study*, No.117, pp.68~133. [available in Japanese: 「本間正義 (2003) 「食料の安全保障を考える [含 討議]」『食料政策研究』№117, 68~133 頁」]
  - Institute of Statistical Research (ISR). (1970). *History of Food Control, Particulars Volume II*: Food Agency. [available in Japanese: 「統計研究会 (1970) 『食糧管理史 各論 II』食糧庁」]
  - Institute of Statistical Research (ISR). (1969). *History of Food Control, Generals Volume II*: Food Agency. [available in Japanese: 「統計研究会 (1969) 『食糧管理史 総論 II』食糧庁」]
  - Japanese Agricultural Almanac Publication Group (JAAPG). (1975). *Japanese Agricultural Almanac 1976*: Ie-No-Hikari Kyoukai. [available in Japanese: 「日本農業年鑑刊行会 (1975) 『日本農業年鑑 1976 年版』家の光協会」]
  - Japanese Agricultural Almanac Publication Group (JAAPG). (1974). *Japanese Agricultural Almanac 1975*: Ie-No-Hikari Kyoukai. [available in Japanese: 「日本農業年鑑刊行会 (1974) 『日本農業年鑑 1975 年版』家の光協会」]
  - Kabuta, Fumihiko. (2012). Quantitative Risks and Problems of Food: On the Basis of Concepts of Food Security at Home and Abroad, and Evolution of Relevant Policy Measures. *Agricultural Economics Studies*, Vol.84-No.2, pp.80~94. [available in Japanese: 「株田文博 (2012) 「食料の量的リスクと課題—国内外の食料安全保障概念と対応策の系譜を踏まえて—」『農業経済研究』第 84 巻第 2 号, 80~94 頁」]
  - Kishi, Yasuhiko. (1996). *Postwar History of Food and Agriculture*: Nihon Keizai Shimbunsha. [available in Japanese: 「岸康彦 (1996) 『食と農の戦後史』日本経済新聞社」]
  - Koyama, Osamu. (2007). About Japan’s Food Security Policy. *Agriculture and Economy (Special Issue)*, Vol.73-No.8, pp.75~83. [available in Japanese: 「小山修 (2007) 「日本の食料安全保障政策について」『農業と経済』(臨時増刊号) 第 73 巻第 8 号, 75~83 頁」]

- 
- MAFF. (2012). *Food Security Guidelines for Emergency Situations*. [available in Japanese: 「農林水産省（2012）「緊急事態食料安全保障指針」」]
  - MAFF. (2009). International Positioning of “World Food Supply and Demand Model (MAFF)”. *Reference Material of “Points of Outlook for World Supply and Demand of Food in 2018”*, January 16. [available in Japanese: 「農林水産省（2009）『世界食料需給モデル（農林水産省）』の国際的な位置づけ」, 「2018年における世界の食料需給見通しのポイント」参考資料, 1月16日」]
  - Matsuda, Nobukazu. (1951). *Study on History of Agricultural Policies in Japan Volume 3: Food Agency*. [available in Japanese: 「松田延一（1951）『日本食糧政策史の研究 第三巻』食糧庁」]
  - Minister’s Secretariat Administration Division, MAF. (1972). *Administrative History of Agriculture and Forestry*, Volume 8. [available in Japanese: 「農林省大臣官房総務課（1972）『農林行政史 第8巻』」]
  - Minister’s Secretariat Policy Division, MAFF. (2017). *Food Balance Sheets 2015: Norin Tokei Kyokai*. [available in Japanese: 「農林水産省大臣官房政策課編（2017）『平成27年度食料需給表』農林統計協会」]
  - Minister’s Secretariat Research Division, MAF. (1976). *Basic Statistics on Supply and Demand of Food: Norin Tokei Kyokai*. [available in Japanese: 「農林省大臣官房調査課編（1976）『食料需要に関する基礎統計』農林統計協会」]
  - Ministry of Agriculture and Forestry (MAF). (1975). *Annual Report of Ministry of Agriculture and Forestry Fiscal Year 1973: Norinkousaikai*. [available in Japanese: 「農林省編（1975）『昭和48年度農林省年報』農林弘済会」]
  - Ministry of Agriculture, Fisheries and Forestry (MAFF). (2007). *What is the Food Situation of our Country?*, [available in Japanese: 「農林水産省（2007）「今、我が国の食料事情はどうなっているのか」」]
  - Ministry of Health, Labour and Welfare. (2014). *National Health and Nutrition Survey in 2012*. [available in Japanese: 「厚生労働省（2014）『平成24年国民健康・栄養調査報告』」]
  - Nixon, Richard. (1973). *Address to the Nation Announcing Price Control Measures*. 13 June.
  - Oda, Yoshiyuki. (2012). *Origin of Postwar Staple Food Policy: Politics and Public Administration for Food Crises in Wartime and Postwar Periods*: Keio University Press. [available in Japanese: 「小田義幸（2012）『戦後食糧行政の起源—戦中・戦後の食糧危機をめぐる政治と行政—』慶應義塾大学出版会」]
  - Ohga, Keiji. (2014). What is Food Security?: Food Security Issues in Japan and the World. *Journal of the Japanese Agricultural Systems Society*, Vol.30-No.1, pp.19~25. [available in Japanese: 「大賀圭治（2014）「食料安全保障とは何か—日本と世界の食料安全保障問題—」『システム農学』Vol.30, No.1, 19~25頁」]
  - Oki, Kazuhisa. (2008). U.S. Food Export Controls Policy: Three Cases from 1973 to 1981. *USJP Occasional Paper 08-13*, Program on U.S.-Japan Relations, Harvard

University.

- Publishing Association of History of the Tokyo Metropolitan Rationing Organization. (1950). *History of the Tokyo Metropolitan Rationing Organization*. [available in Japanese: In Japanese 「東京都食糧営団史刊行会（1950）『東京都食糧営団史』」]
- Round-table on Agricultural Issue Corresponding to Internationalization. ed. (1974). *Fundamental Initiative for Japanese Agriculture Preparing for Food Crisis: Recommendations Regarding Promotion and Modernization of Agriculture and Rural Area*.: National Chamber of Agriculture. [available in Japanese: 「国際化に対応した農業問題懇談会 編（1974）『日本農業の基本構想：食料危機にそなえて 農業・農村整備近代化に関する提言』全国農業会議所」]
- Sakurai, Makoto. (1989). *Rice—Its Policy and Movements, Volume 2*.: Noson Gyoson Bunka Kyokai. [available in Japanese: 「櫻井誠（1989）『米 その政策と運動 中』農山漁村文化協会」]
- Tama, Shinnosuke. (2013). *Rice Market and Staple Food Policy in Modern Japan: Historical Nature of the Food Control System*.: Tsukuba Shobo. [available in Japanese: 「玉真之介（2013）『近現代日本の米穀市場と食糧政策—食糧管理制度の歴史的な性格—』筑波書房」]
- Tanabe, Katsumasa. (1948). *Contemporary Food Policy History*.: Nihon Shuho Sha. [available in Japanese: 「田邊勝正（1948）『現代食糧政策史』日本週報社」]
- Unno, Hiroshi. (2016). *Food Supplies to be Secured as Well: Decisions on Outbreak and End of War, and Staple Foods*.: Norin Tokei Shuppan. [available in Japanese: 「海野洋（2016）『食糧も大丈夫也—開戦・終戦の決断と食糧—』農林統計出版」]
- Yamada, Masaru. (2012). June 13, 1973: Nixon's Shock of Soybean Export Ban Hammered Japan. *ARDEC*, Volume 47, December. [available in Japanese: 「山田優（2012）「1973・6・13 ニクソン大豆禁輸ショックが日本を襲った」『ARDEC』第47号，12月」]
- Zhou, Zhang-Yue, and Guanghua Wan. ed. (2017), *Food Insecurity in Asia: Why Institutions Matter*.: Asian Development Bank Institute.

Norinchukin Research Institute Co., Ltd.

9th Floor, Agri-Square Shinjuku Bldg.,

5-27-11, Sendagaya, Shibuya-ku, Tokyo 151-0051 Japan

E-mail: [manager@nochuri.co.jp](mailto:manager@nochuri.co.jp)

© Copyright 2017 HIRASAWA Akihiko all rights reserved.

\* This report is translated from Japanese Original Report: “日本における食料安全保障政策の形成—食料情勢および農政の展開との関わり—”, *The Norin Kinyu*, 70(8), pp. 2-24. 2017.