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## Changes of the rice distribution and the functions of the food control system in Japan

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### ABSTRACT

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Japan's Food Control System was established in 1942 during World War II in order to cope with the shortage of food. The system has been maintained in order to secure a stable supply of rice, a staple food and key crop in the country. The functions and roles of this system change gradually according to fluctuations in the rice market. Since the establishment of the 'voluntary rice-marketing system' in 1969, Japan's marketed rice has been classified into the following three types: (1) Government-marketed rice (GM rice): the government purchases from rice growers and sells to wholesalers. (2) Voluntarily marketed rice (VM rice): rice assemblers' organizations sell directly to wholesalers. (3) Freely marketed rice (FM rice) which is an illegal practice. Recent trends have witnessed decreased sales of GM rice and increases in the sales of VM and FM rice, thus resulting in the weakening of government control of the rice supply.

The goods markets for VM rice instituted in 1990 introduced to a greater degree the market mechanism of price controls for rice. At the same time, the government's control of rice distribution was relaxed to allow new access to rice dealers and to promote free trade between sellers and buyers. Although the Food Control System in Japan has changed significantly, it will be retained since it protects the rice supply and paddy field agricultural system.

### INTRODUCTION

The demand for the liberalization of rice imports to Japan increased from the late 1980s (cf. Agricultural Marketing Society of Japan, 1990). Rice and paddy farming has been protected in Japan by the 1942 Food

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Control System. The control of Japan's rice trade, its supply/demand, prices, and distribution, constitutes the integral parts of the Food Control System. It is, therefore, thought that the liberalization of rice imports may cause various problems, since the Food Control System plays an extremely important role in the stable supply of rice for the nation.

This paper has two themes. One is to present a statistical and chronological overview of the changes in supply/demand, and the distribution of rice in Japan. The other is to explain the functions of the Food Control System in the rice distribution system, including recent changes. The significance of the Food Control System will be stated in the conclusion.

#### TRENDS OF SUPPLY AND DEMAND OF RICE IN JAPAN

Figure 1 shows the change in supply/demand of rice in Japan from 1955 to the present. In 1955, when the high growth of Japan's national economy began, the situation of staple food shortages created after World War II was greatly improved. However, the consecutive increase in total rice consumption after 1955 coupled with the instability of annual rice produc-

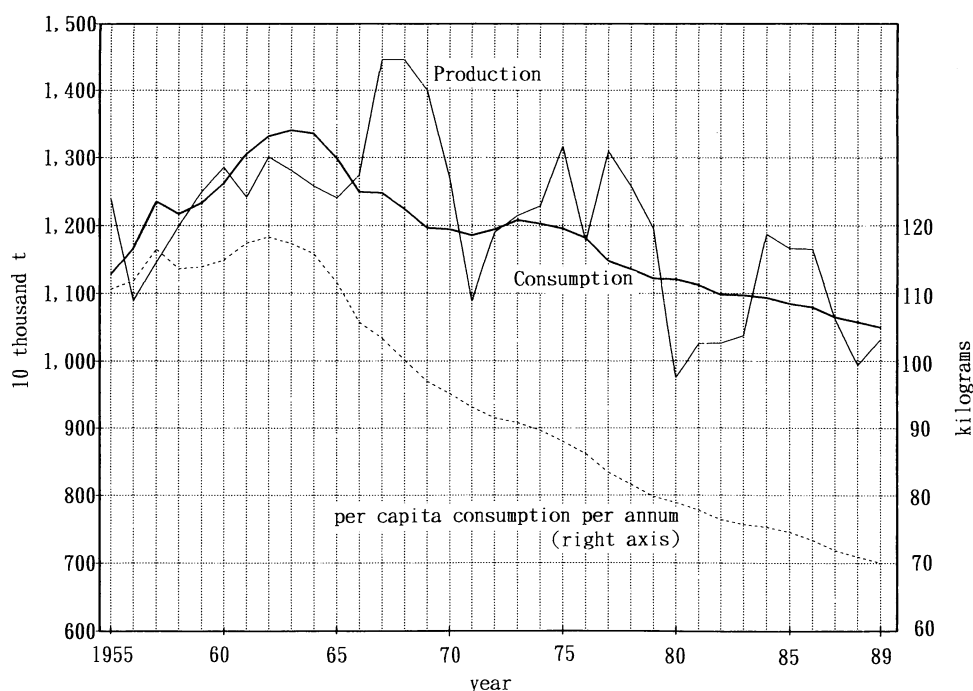


Fig. 1. Trends of total production and consumption of rice. Source: MAFF, Food balance sheet (1990).

tion forced Japan to maintain rice imports from foreign countries such as the U.S.A., Taiwan, Thailand, and China. The largest amount of rice imported from these countries was more than 1 million t and accounted for nearly 10% of the total rice consumption.

In 1962, rice consumption per capita peaked and then began to decrease. The decrease was mainly due to the adoption of western-style dishes, such as bread and noodles, which in turn increased the consumption of wheat products. Today, wheat and live-stock products are replacing rice as traditional staple foods. In addition to this new trend in consumption, a drastic change in rice production from 12–13 to 14 million t, for three consecutive years beginning in 1967, led to a significant increase in the stocking of surplus rice. Before the autumn harvest in 1970, surplus rice reached 7.2 million t.

In 1971, the government launched the Production Diversion Program for rice to deal with its overproduction. As a result, rice production declined for a couple of years, but the late 1970s saw the overstocking of surplus rice again. In 1978, the government implemented the Paddy Field Reorganization Program, which converted about one-fourth of Japan's paddy fields for the cultivation of other crops. Beginning in 1980, two years after implementing this program, Japan's rice crops suffered cold weather damage for four consecutive years and subsequently rice production fell below the annual necessary consumption volume. As a result, Japan suffered a rice shortage in the off-crop season of 1987 and was forced to import rice from Korea.

During the last 3 years of the Paddy Field Reorganization Program, the targeted diversion acreage was reduced. Japan continued to produce bumper crops from 1984, despite a continual drop in rice consumption. In 1987, the government started the Paddy Field Farming Establishment Program to convert nearly 30% of the total paddy fields to the cultivation of other crops.

Today, Japan does not have an overabundance of rice. Indeed, 0.83 million ha (with a yield of about 3.9 million t of rice) were not used in rice cultivation in 1990. This area represents roughly 27% of all paddy fields in Japan.

## ROLES AND FUNCTIONS OF THE FOOD CONTROL SYSTEM

Japan's Food Control System plays a key role in maintaining a self-sufficient, stable supply of rice in the country. The Food Control Law support-

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t, metric tonne = 1000 kg.

ing this system was introduced during World War II to stabilize the food supply, which until that time had been subject to shortages (Muto, 1987). Though a food shortage situation no longer exists, the majority of the public agrees that the law, still in effect, plays a great role in the self-sufficient, stable supply of rice, and thus should remain unchanged. The key roles and functions of the Food Control System are given below:

(1) All supplies of rice were controlled by the government. Until 1968, rice growers were obliged to sell all their rice, except that used for their own consumption, to the government. In this way, the government could control all the rice supplies and guarantee the people a stable supply of rice [labeled government-marketed rice (GM rice)] by using a specific distribution route that will be mentioned later. In addition to GM rice, a new rice called voluntarily marketed rice (VM rice) came into being in 1969. Consequently the government's control system of the total amount of rice was changed. Under the VM rice system, rice assemblers' organizations sell their rice directly to wholesalers. However, VM rice differs from common freely marketed rice (FM rice) in three ways: first, only government-authorized national organizations and dealers can participate in VM rice trading; second, the amount of VM rice involved in trading requires the government's recognition; and third, the price of VM rice is influenced by the price of GM rice. VM rice in a broad sense is a part of the rice controlled by the government, and therefore has comprised a stable supply of rice along with GM rice.

(2) The government decides the purchase price of GM rice from rice growers and its sale price to wholesalers. The formula for price setting depends on conditions stipulated by the Food Control Law. The purchase price is determined by advice from the government-established Rice Price Council at a level which compensates rice production costs and generates reasonable income to rice growers. The sale price is also determined by advice from the same council at a level which ensures a stable household economy. Although the total distributed amount of VM rice has increased recently, the price levels of GM rice indirectly control the price of VM rice and this contributes to the stabilization of rice prices.

(3) Distribution routes of both GM rice and VM rice are limited by the government to ensure a stable rice supply. For this aim rice assemblers are designated by the government, and other dealers are prohibited from assembling rice. Wholesalers and retailers require their prefectural governor's permission to do business and any dealers without permission are prohibited from selling rice. Only government-designated corporations (national organizations of assemblers) are permitted to sell VM rice.

(4) The foreign trade of rice is controlled by the government. This control stipulated by the Food Control Law is implemented in the follow-

ing ways: (a) The government itself can carry out imports and exports of rice when they are deemed necessary. (b) Private traders' imports and exports of rice are under the government permission system and traders are obliged to sell the government all of their imported rice.

As for the import and export of rice, the government is regarded as "the state trading enterprise" prescribed by Article 17 of GATT. Rice, along with wheat, barley and some dairy products, are classified as state trading goods, and the importation of these items is restricted. This is because these products are considered essential food stuffs and the consignment of these products to private free trade may impede a stable supply to the people.

It should be mentioned that the government annually takes financial measures to implement the above four key roles of the Food Control System. These financial measures and the expenditure of subsidies for the Production Diversion Program mentioned earlier are included in the food control costs of the general account budget, and the sum comes to about ¥ 370 billion in the 1991 fiscal budget. The food control costs have been drastically reduced over the last 10 years, but still account for 11% of the agriculture, forestry and fisheries budget for the same year.

#### GM RICE AND VM RICE

The VM rice system established in 1969 had two original objectives: (1) to cut down the financial support entailing food control by excluding a fixed amount of rice from the government's purchase and (2) to let sellers and buyers set a price on each brand of producing districts and varieties and distribute them in response to consumers' demand for high quality rice.

However, the first objective did not contribute to the curtailment of financial support. The 'reverse' relationship in which GM rice purchase prices were higher than their sale prices continued to the middle of 1980s. When GM rice of this nature was prevalent in the rice distribution system, government subsidies equivalent to the differences of GM rice purchase and sale prices and the administration costs were necessary in order to sell GM rice. The government was also required to give premiums to rice growers in order to increase the production of high quality rice. As a result, the government's expenditure for VM rice has increased as much as for GM rice.

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billion (US) = 10<sup>9</sup>.

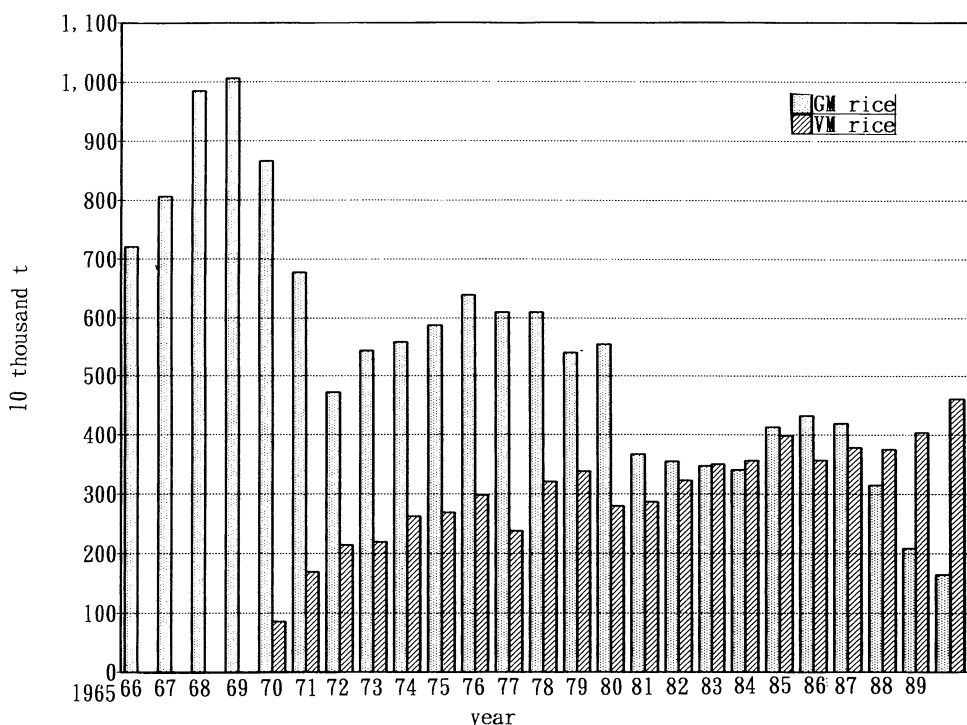


Fig. 2. Changes of assembled amounts of government-marketed rice (GM rice) and voluntarily marketed rice (VM rice). Source: MAFF, Food Agency (1990).

Under this financial measure, the amount of VM rice sold steadily increased with the support of consumers' preference for high-quality rice (see Fig. 2), and, as a result, the government's subsidies also increased. Because of the higher sale price, rice growers preferred to plant such high quality rice as *koshihikari* and *sasanishiki*. On the other hand, the production of GM rice gradually decreased partly due to the lack of increase in the government's purchase prices.

As the Production Diversion Program resulted in a decrease in the volume of rice distribution, the ratio of VM rice to GM rice increased as shown in Fig. 3. The ratio of VM rice significantly increased after 1986, when it exceeded 50%, and rose to about 75% in 1988.

The rapid increase of VM rice after 1986 is attributed to the conversion of GM rice price from the reversed price relation to a regular spread one in 1987 because GM rice sale prices were barely lowered while the purchase prices were lowered gradually after 1987. The emergence of this regular spread price means an increase of price premium of VM rice over GM rice for rice growers even if sale prices of VM rice remain the same. In

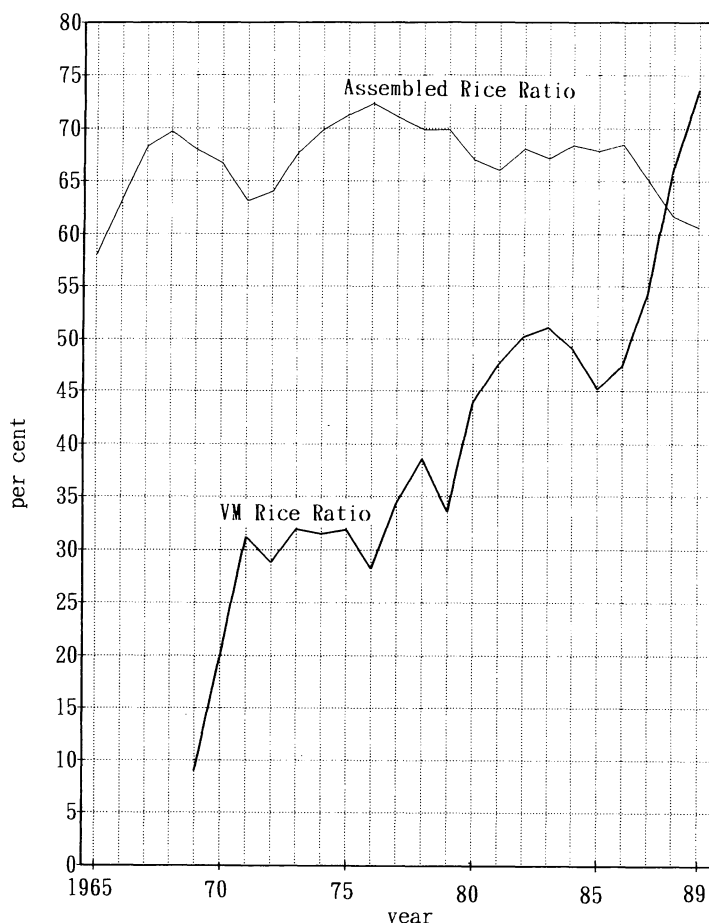


Fig. 3. Trends of assembled rice ratio and VM rice ratio. Source: MAFF, Food Agency (1990).

fact, because the sale prices of VM rice were not reduced as much as those of GM rice, the price premium for VM rice growers increased.

However, it should be noticed that the decrease of VM rice sale prices reduced the absolute income of VM rice growers. The emergence of this regular spread price and the decrease of VM rice sale prices encouraged rice growers to engage in free sales of rice.

The increase of FM rice production statistically appears as a fall in the assembly ratio of GM rice plus VM rice compared to the total rice production. The narrow line shown in Fig. 3 indicates a significant drop in the assembled rice ratio since 1986. From this statistical fact, FM rice is supposed to be increasing faster than expected since 1986.

## RICE DISTRIBUTION SYSTEM AND GOVERNMENT CONTROL

As mentioned above, FM rice has gradually increased in Japan; nevertheless, GM rice plus VM rice still account for the largest part of rice distribution. The distribution system for GM rice and VM rice, according to the government's control system, is shown in Fig. 4 and explained below.

First, the government draws up a basic program specifying the amount of rice to be controlled by the government and publishes this formation. The basic program deals with GM rice, VM rice and the uses of these types of rice, respectively. Supply programs are subsequently prepared in line with the basic program; the amount of GM rice and VM rice supplied in terms of prefectures, periods, and quality are predetermined by the programs.

The total amount of rice to be controlled by the government in the above basic program is allocated through the municipalities to each rice grower as a maximum amount of sales offers. Rice growers then make sale offers to the government within the allocated maximum range. Each rice grower is notified of the amount to be purchased by the government through the municipality leader. The amount to be sold by rice growers as VM rice is excluded from the above government purchase amount. This complicated procedure is necessary because the Food Control Law imposes an "obliga-

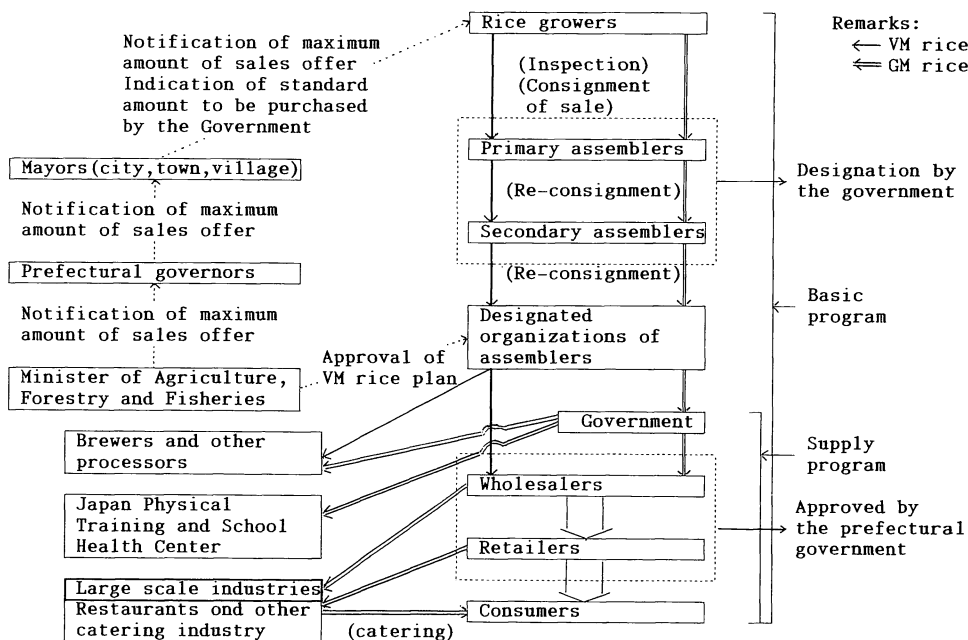


Fig. 4. Flow chart of rice distribution and its control system. Source: MAFF, Food Agency (1990).

tion of rice sales to the government," on rice growers and at the same time the government limits the amount of the purchases.

The amount of VM rice is excluded from the government's purchase amount at the option of rice growers. These amounts are summed up at the national organizations of assemblers. The government coordinates between assemblers' organizations and demand organizations such as rice wholesalers before approving the total amount as a VM rice plan. With the aforementioned practice, VM rice is not freely marketed rice, but regulated marketed rice.

All rice that rice growers plan to sell must be inspected in accordance with the Agricultural Products Inspection Law. These inspections are performed at the Food Office, a prefectural agency of the Food Agency, which is a section of the Ministry of Agriculture, Forestry, and Fisheries. Rice is inspected in terms of weight, packaging, varieties, and so on. Grading is especially important and rice is classified in 1-3 grades or off-grades according to quality. The government's rice inspection system plays a major role in the standardization and improvement of rice quality.

At present, the inspected rice is sold through the assembler through whom each rice grower has registered. Only rice assemblers designated by the government are permitted to carry out rice assembling. The designated assemblers system and the government's inspection system are essential for the government to control the amount of all rice produced.

Designated assemblers are classified into primary assemblers and secondary assemblers. Primary assemblers (agricultural cooperatives in municipalities and rice assembly merchants) assemble rice directly from growers. Secondary assemblers (generally prefectural federations of agricultural cooperatives and merchant) assemble rice from primary assemblers. A rice grower is permitted to sell his rice to only one primary assembler registered in his own name, and is not permitted to change to another assembler for a period of 3 years. The rice grower's registration consequently raises competition between agricultural cooperatives and merchants. After World War II, agricultural cooperatives developed a strong nationwide network and hence occupied 95% of registered rice producers and the rice assembly share (Table 1). Agricultural cooperatives have about 8 times as many registered producers per assembler as merchants. The merger and enlargement of agricultural cooperatives are apt to widen the difference. Agricultural cooperatives are influential in Japan because they were united and were the only ones engaged in rice-assembling during World War II. Today agricultural cooperatives possess political powers and enjoy various rights and interests granted by the government.

In practice, rice that a rice grower consigns to a primary assembler is reconsigned to a secondary assembler. The latter then reconsigns it to

TABLE 1  
Status of the agricultural cooperatives in rice assemblers

	Designated primary assemblers (numbers)			Registered producers (1000 persons)			Ratio of agricultural cooperatives	
	Total (A)	Agricultural cooperatives (B)	Merchant	Total (C)	Agricultural cooperatives (D)	Merchant	(B)/(A) %	(D)/(C) %
1975 January	7579	5315	2264	4018	3810	209	70.1	94.8
1980 January	6836	4746	2090	3740	3553	187	69.4	95.0
1983 November	6553	4580	1973	3578	3401	177	69.9	95.1
1986 November	6156	4440	1716	3397	3232	165	72.1	95.1
1989 January	5162	3648	1514	3342	3181	161	70.6	95.2

Source: ZENNOH (1990).

national organization of assemblers. GM rice and VM rice are sold respectively to the government and to the wholesalers by the assemblers organization.

Today the National Federation of Agricultural Cooperative Associations (ZENNOH) and the National Federation of Staple Food Assemblers Association (ZENSHUREN) are national organizations of assemblers, the former being an organization of agricultural cooperatives, the latter being a national organization of rice assembly merchants. These are the only designated organizations permitted to sell VM rice.

Sellers, either wholesalers or retailers, require the prefectural government's approval for rice trading. Retailers are obliged to make purchase contracts with one or two wholesalers and cannot purchase rice from other wholesalers. The number of sellers had been limited for a long time since World War II; however, unapproved sellers increased in number and rice distribution became disorderly in nature. This prompted the authorities to approve new rice sellers. Nonetheless, the number of these is still small.

Wholesalers purchase GM rice from the government (Food Office) and VM rice from the national organizations of assemblers, as brown rice in each case. In Japan, all rice growers process unhulled rice into brown rice before selling. Many wholesalers own large rice mills, where purchased rice is cleaned and blended, and then sold to retailers usually in small 5–10 kg sacks. Brown rice is sometimes sold to retailers who have their own rice mills, but the percentage is now in decline.

Consumers buy cleaned rice in small sacks from retailers. Selling rice in bulk, which is generally seen in Asian countries, hardly exists any more. Some retailers sell nearly ten kinds of retail rice: high-priced refined rice and low-priced rice is comprised of VM rice and GM rice, respectively. Middle-class rice is made of lower-quality VM rice and GM rice.

An inspection system for cleaning rice is inefficient due to a lack of inspectors. This creates concern about the quality of rice among consumers.

Figure 4 shows some other rice flows which are not mentioned in this paper. For the details of these flows, refer to Mishima (1988).

#### ESTABLISHMENT OF THE MARKET FOR VM RICE AND A CHANGE OF THE RICE DISTRIBUTION STRUCTURE

In June 1989 the Agricultural Policy Council, an advisory body to the Minister of Agriculture, Forestry, and Fisheries, submitted to the government a report called "the Future Policy on Rice and the Direction of Rice Control." The report outlines the importance of rice and paddy farming in the Japanese daily food supply and agriculture. Japan should therefore try

to maintain the self-sufficiency of rice and the fundamental roles of the Food Control System. The report recommends that the control of rice distribution be deregulated and taken charge by private organizations. It suggests further that the government reduce the GM rice amount to 40% of the total distribution figure and conduct a review once that the level has been achieved. In other words, the report stresses the necessity for the reduction of GM rice, which currently comprises the major part of rice controlled by the government.

The report advises that the Production Diversion Program for rice, implemented by the government, should be practiced by rice growers and organizations of rice growers themselves in the future. An introduction of more competitive factors into the rice distribution system and encouragement of low-priced rice production for processed food are also suggested.

In summary, the report suggests that the government shift from an overall control system to a partial control system. This means the government will control less GM rice and let rice distribution be as free as possible. The government will leave the Production Diversion Program to agricultural cooperatives and stop directing the programs. Once these changes are put into operation, the Food Control System, which has been in effect for 46 years since the end of the World War II, will be transformed into a system of partial control.

The most noteworthy part of this report is the establishment of the 'place of price decision', which is the trading market for VM rice. This has a wide-ranging impact for the government's control of rice prices.

One of the most important functions of the current Food Control System is price control by the government. This function works well in three stages. The first stage lets the government decide the purchase and sale prices of GM rice. The second stage lets the government become indirectly involved in the price decision process of VM rice. The third stage lets the government guide retailers in offering low-priced rice (100% GM rice) and to decide the sale price of refined rice. However, when the 'place of price decision' begins to function in the actual market tradings, the fluctuation of rice prices according to the actual supply/demand situation makes it difficult for the government to carry out the role of price controller. Although the report recommends that GM rice be maintained in the future no matter how much the amount is reduced, if its prices are set according to the price decided at the 'place of price decision', the influence on prices on other types of rice will almost certainly diminish.

The 'place of price decision' was set up under the name of the 'Mechanism for VM Rice Price Decision-Making' (VM rice market), an organization independent of sellers and buyers. Its steering committee includes the representatives of the national organizations of agricultural cooperatives

and of wholesalers. Most of the business circles and organizations of rice dealers agreed with the institution of the VM rice market, but influential agricultural cooperatives did not since ZENNOH, a National Federation of Agricultural Cooperative Associations, has a 95% share in assemblers and a great influence on the price-decision of VM rice. This situation is unfavorable to wholesalers who are their buyers. At the time of the establishment of the VM rice market, the largest problem was how to divide ZENNOH's monopolistic supply power. After political negotiations, prefecture-level organizations of agricultural cooperatives and merchants were empowered to be sellers in the VM rice market, in addition to ZENNOH, and national organizations of merchants agreed to join tradings in the VM rice market. More than two hundred authorized wholesalers (including prefectural federations of agricultural cooperatives across the country) are qualified as buyers. Since only government-authorized individuals can take part in tradings, the VM rice market is far from being a perfectly competitive market.

VM rice market limits the amount of rice trading. At present, rice listed is limited to brands with a distribution of over 10 000 t out of prefectural varieties. Its total trading amount is about a million t, equivalent to some 20–30% of the distribution of VM rice. The total supply/demand to be reflected in the price decision is eliminated from the beginning. To prevent excess movement in prices, price fluctuation range is limited at present to 5% of the average price of the previous trading and 7% for the year. The other limitation is that the market operates at only two places, Tokyo and Osaka, and opens about five times a year.

With these limitations the new market cannot be considered a free market where the market mechanism is in full operation. A number of restrictions are imposed to prevent disorder by destabilization of supply and demand, making the market appear to be a 'regulated market'. However, it is significant, that the market where buyers and sellers trade directly and set prices at their will was established in a segment of the rice market that has long been a government's controlled market. Though, in quantity, the new market is part of VM rice's distribution, the price set there will be an index for the price of other VM rice traded through direct negotiation between sellers and buyers. These prices will also influence the government's sale and purchase prices eventually. Except for some marketable varieties of rice, the prices of most rice will probably be lowered due to the structural surplus of rice.

The institution of the VM rice market will lower the entire level of producer's prices of VM rice and GM rice for the time being. However, there is no assurance that it will bring about a reduction in the retail prices, since retail prices are freely set when the government's price control fails.

Changes in production, stock and shipment times also cause fluctuations in the rice price, which affect rice growers, consumers, and dealers. In the meantime, if large businesses, such as general trading firms, department stores, chain stores, as well as the currently authorized big wholesalers and retailers, enter the rice distribution field, they might buy up most marketable varieties of rice and restrict their sale to speculation. On account of large businesses' entry and the liberalization of Japan's rice market, uncompetitive rice-producing districts in the country might disappear, resulting in a destabilized rice supply. The government's ongoing partial control and the establishment of the rice market that might destabilize the rice

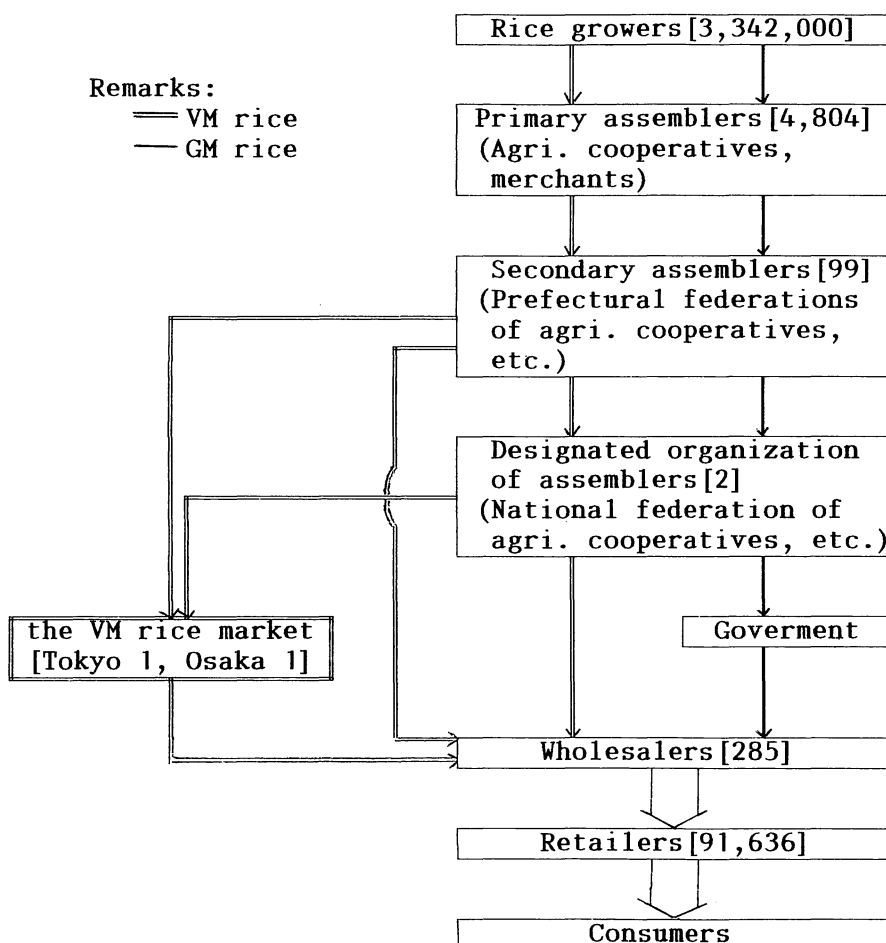


Fig. 5. Flow chart of rice distribution after the establishment of the VM rice market. Note: The figures in brackets are the numbers that related to rice distribution. Source: MAFF, Food Agency (1990).

price and rice production, are opposed by a large number of rice growers and consumers.

The institution of the VM rice market will hereafter convert the rice distribution system to the situation shown in Fig. 5. One of the most striking points is that in addition to the designated national organizations of assemblers (ZENNOH and ZENSHUREN), the secondary assemblers (prefecture-level organizations of assemblers) have come to sell VM rice for wholesalers. Now these secondary assemblers can directly trade with wholesalers and can conduct sales in the VM rice market. Although the national organization of assemblers still holds the seller's position, its share and bargaining ability will decrease from now on.

Thus, the establishment of the VM rice market will gradually convert Japan's future rice distribution system to a freer market mechanism.

## CONCLUSION

The rice market existed in Japan before World War II. However, rice prices fluctuated so greatly that both farmers and consumers suffered. In 1918 the sudden rise of the rice price triggered a revolt which developed into a major political problem. As a consequence, the government started a rice price stabilization policy by intervening in the rice market and paying a fixed expenditure. The last part of this policy was the Food Control Law, instituted in 1942. This Food Control System, which has contributed to a stable supply of rice for nearly half a century since World War II, drastically changed with the establishment of the VM rice market in the fall of 1990.

Any proposed reform of the Food Control System should take into account the above-described process of the institution and changes in the Food Control Law.

Although rice's relative position as a staple food is now lower compared with the pre-war days, Japanese people still obtain one-third of their calories from rice. Rice is also Japan's traditional staple food, and people's taste for and attachment to rice are strong. Rice-producing paddy fields are highly productive and suitable to Japan's natural conditions and are of great help in land preservation and flood prevention. They also help accumulate underground water and maintain the natural landscape (Mishima, 1991)

The Food Control System protects rice and paddy fields which play such vital roles in the country, as mentioned in the above paragraph. It is hoped that those exerting international pressures regarding the Japanese rice policy should take into consideration the historical background and current complex nature of the Japanese rice market. In order for the system to

function effectively, modifications are sometimes necessary. However, the fundamental roles and objectives of the system should be maintained in the future.

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