

Will the Agricultural Industry Survive?

By Dr. Fumio Egaitu

Three main differences exist between Japan and the U.S., Europe and other developed nations regarding agriculture.

30% self-sufficient in grain

There are various ways to measure the scale of a nation's agriculture and for our purposes we will use the amount of land area devoted to this industry. In proportion to its large population, the amount of agriculture in Japan is small. Gross agricultural acreage totals 5 million hectares in Japan. This is a minuscule amount when compared to the 430 million hectares in the U.S., of course, but it's still small when measured against the U.K.'s 18 million. Comparing the amount of land used for agriculture on a per capita basis, Japan's 0.04 hectare per person is 1/50 of the U.S. and approximately 1/10 of the European Community (EC) average.

Because there is little agricultural land most required foods must be imported from other countries. Japan currently imports about 5 million tons of wheat and 20 million tons of coarse grains annually, making it the largest importer of grain in the world. The grain self-sufficiency ratio is 30%, giving it the lowest ratio of any developed nation.

The most suitable crop

The second main difference is that rice is Japan's most important crop, being most suited to Japan's climatic conditions and terrain. Rice is produced throughout the country and comprised more than 60% of total crop production in 1960. Today it occupies about 40% of the total. Due to the climate and geographical conditions it is extremely difficult to grow other grains. Wheat is produced but accounts for no more than about 10% of domestic consumption. No coarse grains are grown in Japan as all of these are imported.

But the reason why rice is the most appropriate crop for Japan is not based purely on natural conditions. Historically Japan has invested continual effort and resources over 1,000 years to improve the

efficiency of farmland and irrigation systems for rice production. Today about half of the farmland consists of paddy fields devoted to growing rice.

The significant problem that has arisen in the relationship between rice and agriculture over the past 20 years is the over production of rice. Rice has traditionally been central to the Japanese diet. In 1960 approximately 50% of caloric intake was derived from rice, but eating habits have changed greatly since then. Today the Japanese diet is a mixture of traditional and Western-style foods, rice consumption has fallen, and the consumption of products made from flour, such as bread or pasta, as well as the intake of meat and dairy products has increased. Per capita consumption of rice was almost 120 kilograms annually in 1960 but had declined to a mere 70 kilograms by 1990.

Demand has shifted from rice to wheat and dairy and livestock products, but production has not adjusted to reflect these changes. An excessive amount of rice has been produced consistently since 1970. In 1971 the government introduced a rice diversion program, whereby a monetary incentive is offered to divert a portion of land used for rice production to other types of crops, in an effort to solve this problem. This program is still in existence today and about 30% of land that might potentially be used for rice production has been diverted. The government spends a large amount of public monies on this scheme each year.

Rice growing protects the environment

Over production is a problem, but there is also a great advantage to rice production. Different from the cultivation of crops such as wheat or corn, rice growing does not pollute the environment. Environmental pollution from agriculture has become a great problem in Europe and the United States in recent years. Pollution of drinking water sources from chemical-based fertilizers used on fields has become a particularly serious issue.

This is not a very serious problem in the

case of rice production because the crop is grown on land that has been flooded and chemical fertilizers are rendered harmless. In particular, the nitrate nitrogen in the fertilizer almost entirely dissipates in the paddy water and does not run off.

Rice growing is also excellent when considered from the point of sustainability. Sustainable agriculture (SA) is a concept that has rapidly taken hold in recent years. This idea played an important role in the United States' 1990 Farm Bill and in recent revisions of the EC's Common Agricultural Policy (CAP). SA is an agricultural method that is also well-suited to rice production in Japan. The country is blessed with abundant rainfall so large volumes of water may be used for irrigation. The soil is continually purified because of this and rice can be grown on the same plot of land for hundreds of years. There is also very little danger of soil erosion because the paddies are continually flooded.

Rice is the most important crop in Japanese agriculture, but this does not mean that other crops are not grown. Vegetables and fruit have steadily increased in importance in recent years making up 41% of total crop production in 1990. On the northern island of Hokkaido soybeans and hay are major regional crops, while sugar cane is important on the southern island of Okinawa.

Small-scale and inefficient

The small size of Japanese farms is the third characteristic of Japanese agriculture. The average farm in Japan is about one hectare in size. The average farm size in the U.S. is 180 hectares, 65 hectares in the U.K., and in Germany, where farms are comparatively smaller than those in the rest of Europe, 17 hectares.

Small farm size is a characteristic that is shared with other countries of East Asia such as South Korea and China where agriculture is also centered on rice. In Japan's case the land reform that was implemented at the direction of the American Occupation after the Second



Photo: Iiyama City, Nagano Prefecture

As the older generation dies off, fewer numbers of young people choose farming as an occupation. Even for the "corporate dropout," returning to the land is not an option because of the initial high costs of buying land.

World War contributed to an even further reduction in the size of farms. Beginning in 1945 land reform was carried out over a number of years with almost all farmland, previously owned by semi-feudal landlords, being transferred to the former tenant farmers. In this fashion the number of landlords was reduced and 6 million owner-farmers, holding an average of one hectare of farmland each, had been created by around 1950.

In 1957 the Agricultural Land Law was enacted with the aim of preserving the farming structure that had been created by agricultural land reforms. This law severely restricted the transfer or lease of agricultural property rights and the 6 million small farms created by agricultural land reforms remains largely unchanged to this day.

As Japan's economy has grown, bringing wage increases and advances in mechanized agriculture, small farms have become financially inefficient. Today it is enough for a family to work only on weekends in order to manage a one hectare plot. The majority of agricultural workers are now part-time farmers with the majority of their income coming from

sources other than farming. Full-time farmers now make up only about 15% of the total.

International competitiveness

Over the past 30 years, the Japanese agricultural market has been gradually opened to foreign imports. Imports of beef and oranges were long a subject of negotiation between the U.S. and Japan, with beef imports being liberalized in April 1991 and orange juice a year later. Rice, barley, starch, and dairy products such as butter and powdered skimmed milk are the only significant products that have yet to be liberalized at the present time. Looking at the overall picture, Japan is the largest food product importer in the world and it can hardly be said that the market for agricultural products is heavily restricted.

In the current Uruguay Round of the General Agreement on Tariffs and Trade (GATT) tariffification proposals are under way. In Japan there is a great deal of interest in what might happen if non-tariff barriers to rice and dairy products were

replaced with tariffs, with farmers being strongly opposed.

The problem with opening the market is that in most agricultural sectors Japan is not competitive on an international basis. International competitiveness is measured by comparing domestic and international prices. If higher domestic prices are compared to world market prices, the less competitive a country is internationally.

It is a widely known fact that Japan's rice prices are fairly high compared to the international market. There are varying opinions as to exactly how high prices are, but they are at least four times higher and some believe this difference is as great as eight times. If low tariffs were applied and rice was liberalized domestic prices would drop precipitously and rice producers would suffer great financial losses.

For wheat and most other crops the situation is the same as rice. The disparity between domestic and international wheat prices is even greater than for rice. Wheat is currently protected by a minimum price guarantee program. If imports were liberalized and the program abandoned there is no doubt that domestic production would rapidly decline.

It is not the case that agricultural products have always been more expensive in Japan. During the 1950s rice was a bit cheaper in Japan than in the U.S. and during the 1960s there was little difference in price. Japanese agricultural products lost their international competitiveness in a definitive manner in the 1980s and particularly so after 1985.

There were two reasons for this. The first is higher wages. Wage increases were primarily due to improved productivity in the industrial sector and are currently among the highest in the world. As farm productivity has increased the price of agricultural products has also consistently risen.

The second factor is the strengthened yen. From the time of the Plaza Accords in 1985 until the present, domestic rice prices have not increased in Japan, but as the yen has strengthened against the U.S. dollar, the price of Japanese rice has climbed more than 70%. The increases in Japanese rice prices during the previous 10 years have solely been due to the strengthening of the yen. It is forecast that the trend toward higher wages and a stronger yen will continue in the future.

As such there is very little chance that Japanese agriculture will regain its international competitiveness in the near future.

For example, even if the domestic price of Japanese rice is cut by 50% in the next 10 years it will not reverse the existing large price discrepancies. Likewise, if the yen gains more than 30% or 40% during the same period it is conceivable that the price of Japanese rice will not drop much at all in terms of the dollar.

New policies for agriculture

Without some kind of protection agriculture that cannot compete internationally cannot remain viable. In order to pro-

serve its agriculture Japan must protect its borders with high tariffs and import quotas or institute a domestic program of deficiency payment schemes, or possibly both methods. At this point we should stop and ask why an industry that is not competitive on the international market needs to be given protection as this is accompanied by economic losses. Import restrictions force consumers to pay high prices for food and the cost of deficiency payments is passed onto the taxpayers. This is why protection of domestic agriculture must be justified by extra-market benefits that counteract economic losses.

In June 1992 the Ministry of Agriculture, Forestry, and Fisheries (MAFF) published the *Basic Direction of the New Policies for Food, Agriculture*

and Rural Areas. This publication attempts to provide a clear justification as to why Japanese agriculture requires protection in order to survive and to obtain the public's understanding of the costs that will be required. The publication asserts that Japanese farming and farm villages are an indispensable element of a better quality of life for the future. Agriculture and farm villages should not be judged strictly according to financial profitability. They are also the source of many extra-market benefits.

Number one, domestic agricultural is naturally needed in order to ensure a safe, stable supply of foodstuffs, but agriculture and farm communities also contribute to the life of the nation in many other ways. Rural communities preserve traditional culture and values and as such their existence is a must. Water, earth, cattle and wild creatures, in beautiful rural settings, play an important role in the maintenance of the health of the nation's spirit.

The MAFF publication also reflects upon the changes in Japanese attitudes in recent years. Since attaining high income levels Japanese have steadily come to give more thought to personal worth besides income. They now perceive that there are many factors in addition to economic efficiency that contribute to a better quality of life.

Changing perceptions

The changes in Japanese attitudes are best illustrated in the Five-Year Plan, subtitled *Sharing a Better Quality of Life Around the Globe*, which the government released last year. Its central theme is a policy shift from an emphasis on economic efficiency to comfortable and multifaceted living conditions. This also includes the preservation of resources and the environment on a global scale.

An issue for the future will be whether or not Japanese agricultural policies and agriculture will actually move in the direction pointed out in the *New Policies*. Japanese agriculture has come to the fork in the road. Will it develop in new ways with the support of the public or will it continue to downsize?

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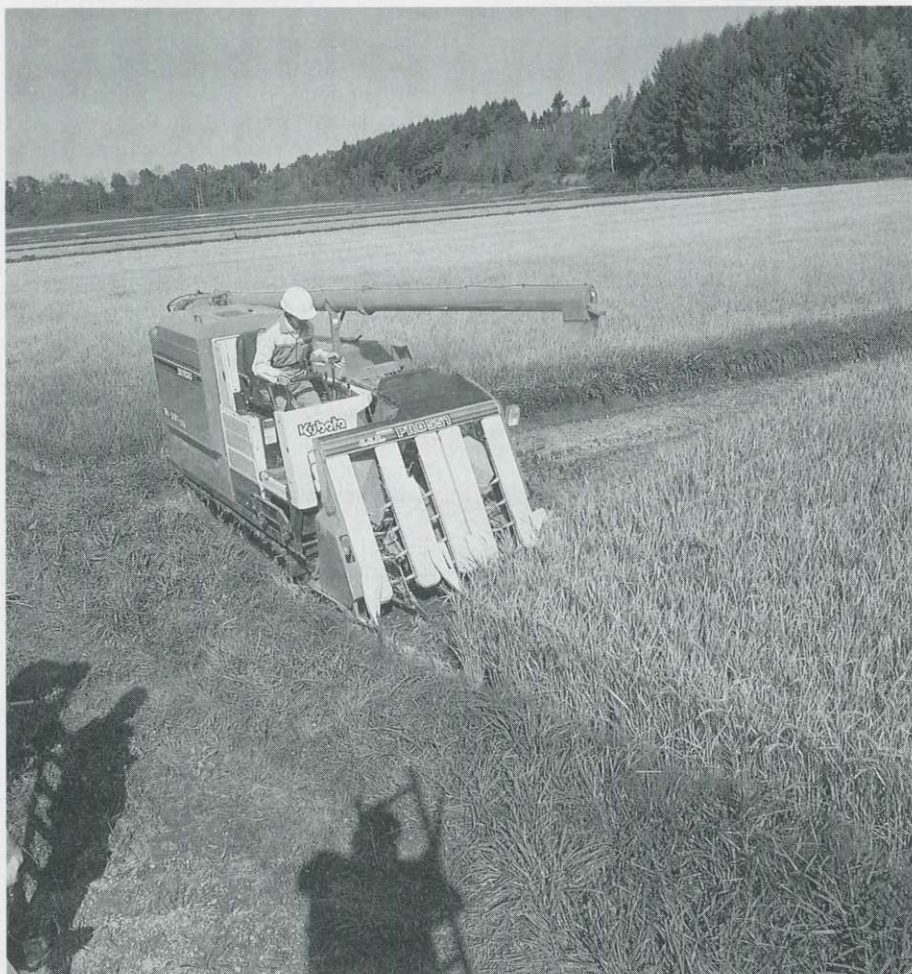


Photo: Kubota Corporation

Mechanization, which substantially reduces the labor needed to work a farm, also enhances the possibility for engaging in large-scale farming.