

**J**apan's economy in 2001 is still struggling to get on a course of recovery from long-term stagnation. Most observers predict a zero-percent GDP growth rate in real terms for 2001. Whether the Japanese economy gets on a steady course of growth in 2002 will depend on the effects of the structural reforms announced by the government and on the world economic situation. Some observers warn of the possibility of recession.

The Japanese socioeconomic system is changing dramatically, from a mass-production-type industrial society whose emphasis is efficiency to a recycling-oriented society based on diversification, software utilization, and resource conservation. The efficiency and the material wealth that were traditionally pursued are under review.

The food system is changing under the strong pressure of market forces brought in by trade liberalization and cost reductions promoted by both producers and distributors. The environmental and health concerns of consumers are another driving force changing the system. The amended Japanese Agricultural Standards (JAS) Law was enacted in June 2000; the law includes a new food labeling system covering genetically modified organisms (GMOs). Provisional safeguard measures for Welsh onions, shiitake mushrooms, and tatami-omote were introduced for the first time in April 2001; this resulted in some friction with China over trade.

The ever-expanding urban demand for water resources will be adequately met with a supply of water diverted from agricultural use; agriculture in Japan is currently under a paddy field diversion program because of the over-production of rice for more than 30 years.

### Macroeconomic Situation and Outlook

Although the Japanese economy showed signs of economic recovery in 1999 and the government had positioned fiscal year 2000 as "the year of self-sustaining economic recovery," the economy did not reach a position of self-sustained recovery led by increased consumption and investment in the private sector.

The government's Economic Outlook, released last December, forecast a real GDP growth of 1.7 percent for fiscal year 2001, but at present many private research institutes and international organizations doubt the likelihood of reaching that level of growth. The Emergency Economic Package announced by the new cabinet was designed to achieve both structural reform and economic recovery at the same time. Some policies for structural change, such as limiting national debt, would conflict with economic growth but others, such as deregulation, would stimulate growth. Most observers predict a zero-percent GDP growth rate in real terms for 2001, though the formal government estimate is 1.7 percent growth in FY 2001. Whether the Japanese economy gets on a steady course of growth in 2002 will depend on the effects of the structural reforms announced by the government and on the world economic situation. Japanese

economic recovery seems to have stalled and remains uncertain over the coming years.

### Food Prices and Consumption

The wholesale price index showed no change in FY 2000, reflecting the weak domestic and international markets, and is expected to decrease by 0.4 percent in 2001 and remain unchanged in 2002. The consumer price index fell by 0.2 percent in 2000 because of the stagnant economy. The consumer price index is expected to fall another 0.2 percent in 2001, but is forecast to recover a bit in 2002, reflecting a weak recovery in consumer demand.

In 1999, the prices of fresh vegetables and other fresh food products that had that previously made sharp increases dropped; however, food prices as a whole were steady (down by 1.2 percent from the previous year). In 2000, food consumption expenditure per person in non-farming households declined by 1.3 percent from the previous year, while overall expenditures remained stagnant. During the period from April to December 2000, food prices were slightly weak (down by 1.9 percent from the previous year), while food expenditures remained almost unchanged (up by 0.1 percent from the previous year).

Dietary patterns in Japan have changed in the last decades as reflected in the replacement of homemade dishes with prepared foods and eating-out, reflecting an increase in single-member households and diversified lifestyles. In 2000, prepared foods and eating-out comprised 27 percent of total food expenditures.

As a result of the decreasing popularity of cooking fresh foods at home, the knowledge and interest of consumers in fresh foods has decreased, further widening the gap between "diet" and "agriculture."

Japanese dietary patterns are in such a state of overabundance that there are increasingly growing concerns over excessive intake of fat and unbalanced diets. These concerns need to be addressed to ensure the prevention of lifestyle diseases. Another problem is "food loss," observed at every stage from farm gate to final consumption and the waste of expired food and leftovers at eateries and homes. The loss rate in the food service industry is 5.1 percent, which is comparatively high because of the leftovers at wedding receptions and banquets. Reduction of this food waste is important in a country like Japan, which has a low food self-sufficiency ratio because of relatively ineffective use of resources, high recycling costs, and a significant environmental burden associated with the processing of waste disposal.

The change in eating habits associated with the changing lifestyles is also a problem. People skip meals more often. Children's eating habits are disturbed when there are fewer opportunities for family members to eat together. This trend is likely to have a serious impact on our traditional food culture as well as on the psychological and physical growth of our children.

## Food Processing and Marketing

Total domestic production of the agricultural and food industries is about 55.8 trillion yen (1998); this accounts for 10 percent of all industries and is comprises a major sector of the Japanese economy. According to the component ratio of each industry in the total domestic production of agricultural and food industries, the added value generated beyond the farmgate comprises a large proportion in the Japanese food system.

With diversification—such as the emergence of supermarkets—in the retailing sector in response to changes in lifestyle at the national level, distribution channels are also diversifying. Innovations include direct shipping from individual producers and direct procurement—bypassing terminal markets—by large-scale users. Under these circumstances, improvements in efficiency and reductions in the cost of food distribution; clarification of distribution costs; and clarification of distribution systems through reviews of commercial practices are important factors in realizing reasonable food prices.

In situations where the food industry depends heavily on imported foods, a closer association between the food industry and agriculture is advantageous to both parties, securing a stable supply of materials for the food industry and expanding markets for domestic products. To actively promote this association, comprehensive support—including a mechanism for accurately matching the information and requirements of both parties—will be necessary.

To make the food industry more environmentally friendly, it will be necessary to create a mechanism that will conform to a recycling-based socioeconomic system dependent on role-sharing between interested parties. The Law on Recycling Containers and Packaging was enforced on a full scale in April of 2000 and has substantially expanded target businesses.

Problems related to food safety, including a large-scale food poisoning incident involving processed milk products that occurred in June 2000, have occurred repeatedly. Japanese consumers are much more concerned with food safety now.

The amended Japanese Agricultural Standards (JAS) Law includes the improvement of the food labeling system to include, for example, a mandatory listing of the country of origin for any perishable foods, as well as the establishment of an inspection and certification system. For country-of-origin labeling for perishable foods, the degree of consumer recognition is high; however, responses from specialized shops are slow, and further explanation of the system and improved guidance for these shops will be necessary.

In addition to country-of-origin labeling of processed foods, quality standards for labels on pickled plums and pickled onions were announced in December 2000 and will be applied starting in October 2001.

An inspection and certification system for organic foods was introduced; under this system, only foods that have passed the inspection specified by the Organic JAS Standard may be labeled organic, which is done by attaching a JAS mark. For effective implementation and promotion of this system, it will be necessary to provide further information on the significance and contents of the system to consumers.

The labeling of genetically modified organisms (GMOs) began in April 2001 following a review by the JAS Research Committee.

## Agricultural Production and Trade

As measured by the production index, agricultural production increased by 16 percent in 1999 over that of the previous year due to increases in rice, fruits, and vegetables; livestock production dropped that year, however. Agricultural prices dropped because of increased yields of vegetables and rice, resulting in a fall of 7.2 percent compared to those of the previous year, although there was an increase in industrial crops.

Rice supply and demand has been easing dramatically. As a result, the domestic rice stock at the end of October 2000 was 2.8 million tons; the prices of rice that was voluntarily marketed in 1999 and 2000 also remained low. “Year 2000 Urgent Comprehensive Rice Measures” were established. Primary components of the measures are: measures for early appropriation of the carried-forward stock level; expansion of production adjustment of rice in 2001; and measures for controlling rice cropping to stabilize supply and demand for rice.

To increase domestic staple food commodities, and to improve Japan's food self-sufficiency situation, it will be necessary to work out a system of rewarding cropping arrangements that properly combine rice, wheat, and, soybeans. Important issues in realizing these objectives are to enhance the marketing of locally produced wheat and soybeans to increase demand for and consumption of these products; this will lead to expanded production, resulting in improved productivity.

Recently, the volume of imported fresh vegetables has been increasing. To increase domestic vegetable production and compete with foreign vegetable producers, it will be necessary to reduce the costs of production and distribution; to improve the year-round supply system by linking growing centers; and to encourage contract transactions with the food industry.

Since the production of Unshou mandarins and apples fluctuates particularly widely, starting in 2001, production stabilization measures will be implemented to help adjust supply and demand.

Supply and demand in livestock products has been stable in recent years. Unfortunately, foot and mouth disease, which was assumed to have originated in imported feed, was detected in Japan in 2000. While the importation of rice straws is increasing, it is important to use domestically produced rice straws (about 10 percent of the entire amount consumed in 1999) to enhance food self-sufficiency. To make livestock farming more rewarding by reducing the labor burden of feed production, the subcontracting of feed production to other organizations (contractors) is increasingly being employed, thus developing labor-conserving, efficient feed production. In response to the Bovine Spongiform Encephalopathy (BSE or Mad Cow disease) outbreak that is causing problems in the EU countries, quarantine measures such as prohibition of imported beef from the infected regions, have been implemented.

Imports of agricultural products declined slightly in 2000 for the

first time after a steady increase spanning decades. Most of the major agricultural imports in Japan—such as grains—are from a small number of countries, such as the US; in addition, overall demand for imported agricultural products is growing in tandem with the increase and diversification of consumer requirements.

In 1999, retail prices of food products in Japan (Tokyo) were 20 percent to 30 percent higher than those in other major foreign cities. The price gap is increasing because of changes in the exchange rate of the Yen. Causes of the price gap can be observed at every stage, from production to distribution to processing. It is important that Japan make some effort to reduce overall costs in agriculture and related industries.

As the price gap has widened and consumers' needs have diversified, a growth in imports of some vegetables and other agricultural products has increased dramatically in the last few years. In April 2001, the Japanese government implemented provisional safeguard measures for the first time on welsh onions, shiitake mushrooms and tatami-omote in order to protect producers. This measure caused serious friction with China over trade.

### Food and Agricultural Policy

In the Basic Plan developed in March 2000 (following enactment of the Basic Law in 1999), new food self-sufficiency ratio targets were established, with 2010 as the target year. The food self-sufficiency ratio in Japan declined sharply from 1965 to 1998, falling from 73 percent to 40 percent in terms of calorie supply and 62 percent to 27 percent in grains. It will be very difficult to achieve the new targets of 45 percent in calorie supply and 30 percent in grains.

The Japanese Ministry of Agriculture, Forestry, and Fishery (MAFF) is strongly urging recognition of the principles of the Basic Law on Food, Agriculture, and Rural Areas and accompanying measures in the coming WTO negotiations. The government submitted the "Japanese Proposal of WTO Agricultural Negotiations" to the WTO in December 2000.

The basic objective of Japan's negotiating proposal is "coexistence of various types of agricultures." Based on this objective, the proposal clearly states the policies concerning implementation of the Uruguay Round Agreement (UR), multi-functionality of agriculture, ensuring food security, and redressing the imbalances in rules and disciplines as applied to agricultural exporting countries and importing countries.

### Water Resource Issues

While the average annual precipitation in Japan is about 1800 mm, or nearly twice as much as the world average, the precipitation shows large seasonal and regional differences. Because of the geographical features of steep mountains and short rivers, rainwater is liable to flow rapidly to the sea before it can be captured for practical use. One of the major features of Japanese agriculture is an efficient irrigation system built to control running water for rice cultivation.

About 88 percent of water withdrawals go to agriculture, 5.7 percent to industrial use, 5.4 percent to urban household use, and 1.7 percent to other purposes in 1999.

Industrial use had increased sharply during a period of high economic growth, but this growth has been slowing down since 1985 due to an increase in recycling and stagnation in heavy and chemical industries. People's consumption of water for urban sewage use has been increasing, but the additional amount of water required has been found in water that has been diverted from agricultural use.

Cultivated land has declined 20 percent, from 6.09 million hectares in 1960 to 4.83 million hectares in 2000. About 60 percent of the cultivated land is paddy fields, of which 100 percent is irrigated. Water is mainly used for paddy rice cultivation. Japan's paddy field irrigation system has developed over the past 2000 years. Both central and local governments have made huge investments in the paddy field irrigation system. About 30 percent of paddy fields are currently under a diversification program, shifting primarily to upland crops such as forage crops, soybeans, and vegetables. In addition, the land utilization rate has declined to less than 100 percent. Demand for irrigation water has declined as the number of paddy fields under the diversification program increases.

Japanese irrigation development and water management are stipulated in the Agricultural Land Improvement Law. The Communal Land Improvement District (LID), which is rooted in the rural community, is the basis of the irrigation system.

The LID is responsible for investment, maintenance, and management of the irrigation system. Investment in agricultural irrigation is subsidized more than 80 percent (50 percent by the central government, about 30 percent by local governments); farmers bear only 20 percent of the investment, which is covered by long-term and concessionary loans from public funds.

Cultivated areas continue to shrink because of conversion to non-farming use and to the abandonment of cultivated land. The cultivated land utilization ratio has been in continuous decline; however, in 1999, the ratio increased by 0.3 points, reaching 94.4 percent because of an increase in the total cropping of paddy field areas.

To secure and make effective use of agricultural land, it is important to employ planned land utilization; promote improvement of the agricultural production infrastructure, promote integrated use of agricultural land for each individual farms, and prevent the abandonment of cultivation by improving harsh production conditions such as hilly and mountainous areas.

Integration at large-scale levels is still insufficient. It is likely that motivation for large-scale expansion will deteriorate because a decrease in demand for and prices of agricultural products, as well as an increase in imports, is probable.

Securing and making effective use of agricultural land with positive management conditions and efficient irrigation will result in improved agricultural productivity and the promotion of agricultural land to integrated use at large-scale management levels. Improvements in facility management have been implemented to

achieve these objectives. In particular, the use of paddy fields for general purposes and field division enlargement enable full-scale production of upland cropping such as wheat, beans, and feed crops and contribute to stable paddy field agricultural management.

Agricultural irrigation and water utilization facilities have multiple roles, and can serve in regional water supply functions as well as in agricultural production.

Another problem with shrinking paddy field is loss of their important functions. Paddy fields aid in land conservation, preventing flooding by preserving excess seasonal water and smoothing the running of river and underground waters, preventing soil erosion and landslides and helping in soil purification. Paddy fields are water resources themselves, like water reservoirs. Landscaping with paddy fields is also an important part of the multi-functionality of agriculture.

# JAPAN

	Units	1997	1998	1999	2000	2001 <sup>E</sup>	2002 <sup>F</sup>
<b>FOOD CONSUMPTION PATTERNS <sup>a</sup></b>							
Per capita caloric intake	Cal/day	2,651	2,602	2,619	2,620	2,620	2,620
From animal products	Cal/day	580	566	568	570	570	570
From vegetable products	Cal/day	2,071	2,036	2,051	2,050	2,050	2,050
Protein (% of calories)	%	13.2	13.2	13.1	13.1	13.1	13.1
Fat (% of calories)	%	28.3	28.4	28.5	28.6	28.6	28.6
Carbohydrates (% of calories)	%	58.5	58.5	58.4	58.3	58.3	58.3
<b>INCOME AND FOOD PRICES <sup>b</sup></b>							
Per capita income	US\$/capita	34,203	31,372	37,715	33,920	32,210	32,050
% of disposable income spent on food	%	16.0	16.2	16.1	16.1	16.1	16.1
% spent eating out	%	2.9	2.9	2.7	2.7	2.7	2.7
Food price index	1995=100	101.7	103.1	101.9	102.0	102.0	102.0
General price index (CPI)	1995=100	101.9	102.5	101.9	101.4	101.2	101.0
<b>POPULATION</b>							
Total population <sup>b</sup>	Million	126.0	126.5	126.7	127.0	127.2	127.4
Urban <sup>c</sup>	Million	82.0	na	na	na	na	na
Nonurban <sup>c</sup>	Million	44.0	na	na	na	na	na
Share of population in the following age groups <sup>c</sup>							
0–14 years	%	15.4	15.1	14.8	14.6	14.4	14.2
15–64 years	%	69.0	68.7	68.5	68.2	67.8	67.6
65–over years	%	15.7	16.2	16.7	17.3	17.8	18.2
Female labor force participation <sup>b</sup>	%	50.4	50.1	49.6	49.3	49.1	48.9
<b>LIFE EXPECTANCY <sup>d</sup></b>							
Males	Years	77.2	77.2	77.1	77.2	77.2	77.2
Females	Years	83.8	84.0	84.0	84.1	84.1	84.1
<b>FOOD INFRASTRUCTURE</b>							
Trade capacity							
Grain exports <sup>e</sup>	1,000 Tons	36	358	144	42	40	40
Grain imports <sup>e</sup>	1,000 Tons	27,871	26,995	27,812	27,011	27,000	27,000
Total food and agricultural trade <sup>e</sup>	Million US\$	67,090	55,111	59,073	61,239	60,000	60,000
Total food and agricultural exports <sup>e</sup>	Million US\$	3,134	2,797	2,994	2,921	2,900	2,900
Fishery exports	Million US\$	1,403	1,162	1,246	1,285	1,300	1,300
Total food and agricultural imports <sup>e</sup>	Million US\$	70,224	57,908	62,067	64,160	62,900	62,900
Fishery imports	Million US\$	16,107	13,337	15,332	16,086	16,000	16,000
Road access <sup>f</sup>	1,000 Kms	1,146	1,150	1,155	1,158	1,161	1,164
Rail access <sup>f</sup>	Kms	27,397	27,453	27,600	27,600	27,600	27,600
Telecommunications <sup>g</sup>	1,000 subscribers	60,451	58,559	55,547	52,528	51,000	49,000
Power generation <sup>h</sup>	Gigawatts	926	934	957	980	1,000	1,010
Percent of population with refrigerators <sup>b</sup>	%	98.7	98.1	99.2	99.4	99.6	99.7
<b>FOREIGN INVESTMENT IN THE FOOD SECTOR <sup>i</sup></b>							
Inward FDI in the food sector, total	Million US\$	18	201	13	20	20	20
Outward FDI in the food sector, total	Million US\$	572	1,268	14,905	1,500	1,500	1,500
<b>ROLE OF AGRICULTURE AND TRADE IN THE ECONOMY <sup>e</sup></b>							
Agriculture as a share of GDP	%	1.2	1.2	1.1	1.1	1.0	1.0
Self sufficiency in grains	%	28.0	27.0	27.0	27.0	27.0	27.0
<b>POLICY TRANSFERS <sup>j</sup></b>							
Consumer subsidy equivalents	%	–46.0	–45.0	–45.0	–44.0	–43.0	–42.0
Consumer support estimate	%	na	–52.0	–54.0	–54.0	–53.0	–53.0
Total transfers (subsidy/tax)	Million US\$	67,300	na	na	na	na	na
Total transfers (subsidy/tax, from 1998)	Million US\$	na	66,544	69,681	73,269	65,000	64,000
Total transfers per capita	US\$/capita	533.0	na	na	na	na	na
Total transfers per capita (subsidy/tax, from 1998)	US\$/capita	na	526.0	550.0	578.0	540.0	545.0
<b>MACROECONOMICS INDICATORS <sup>b</sup></b>							
GDP growth (real)	%	1.8	–1.1	0.8	1.2	0.5	0.5
Interest rate	%	0.5	0.5	0.5	0.5	0.5	0.5
Exchange rate	Yen/US\$	129.92	115.20	102.08	114.90	123.00	123.00

na = not available E = estimate F = forecast \* = fiscal year.

## Sources:

- MAFF, Food Balance Sheet, supplied calorie base.
- Ministry of Public Management, Home Affairs, Posts and Telecommunication, Pocket Statistical Information.
- Ministry of Public Management, Home Affairs, Posts and Telecommunication, Population Census.
- Ministry of Health, Labour and Welfare, Life table.
- MAFF estimate.

- Ministry of Land, Infrastructure and Transport.
- Ministry of Public Management, Home Affairs, Post and Telecommunications.
- Agency of Natural Resources and Energy.
- JETRO, Agrottrade Handbook.
- OECD, Monitoring Report (\*from 1998, the index "Consumer subsidy equivalents" changed its name into "Consumers Support Estimate", as well as the way of calculation).