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# China Increases Exports of Fresh and Frozen Vegetables To Japan

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## Abstract

In the 1990s, China sharply increased its presence in Japan's import markets for fresh and frozen vegetables. The fast growth of Chinese frozen vegetable exports to Japan, however, does not yet pose a serious challenge to the position of U.S. frozen vegetables in Japan. Japan's frozen vegetable imports from the United States, mainly prepared potatoes and sweet corn, meet with only a minimum challenge from China. In comparison, Chinese fresh vegetables pose more challenges to the United States because Japan's imports from China have grown strongly in recent years across the board, including broccoli, onions, and asparagus—the three major categories of U.S. fresh vegetable exports to Japan.

**Keywords:** United States, China, Japan, fresh vegetables, frozen vegetables.

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## Introduction

For years, Japan has been China's main market for vegetable and fruit exports, which are dominated by processed products (canned, frozen, and dehydrated) and, to a much lesser degree, fresh vegetables. Since the 1990s, China has increasingly targeted Japan as its top market for processed products and fresh vegetables. These two important horticultural export categories accounted for 90 percent of Japan's overall imports of Chinese fruits and vegetables during 1998-2000.

During this period, Japan, as the leading market, received more than 50 percent of China's global fresh vegetable exports by value, rising from 39 percent during 1992-94. Similarly, Japan's market accounted for 55 percent of China's global export value of processed

fruits and vegetables during 1998-2000, increasing from 44 percent during 1992-94.

The growing presence of Chinese fresh and processed products in Japan poses a new challenge for Japan's major suppliers, particularly the United States, in this lucrative market. In addition, the large influx of Chinese products upset Japanese farmers and caused tension between China and Japan, which eventually led to a serious trade dispute in 2001 between the two countries. Although Japan's vegetable imports have increased considerably, large subsidies and strong phytosanitary rules afford heavy protection to Japanese producers. Japan's imports of processed and fresh vegetables supply 15-20 percent of vegetable consumption.

## China Becomes the Top Supplier for Japan's Fresh Vegetable Imports

While Japan substantially increased its fresh vegetable imports during the 1990s, China contributed most to the growth. As a relative latecomer in Japan's fresh vegetable import market, China drastically increased its share in the Japanese market during this period. Starting with a 6-percent market share by value as the seventh largest supplier of Japan's fresh vegetable imports in 1990, China's market share grew rapidly. Since 1996, China has been Japan's leading supplier for fresh vegetable imports, with a market share of 35 percent in 2000.

In comparison, the U.S. share in Japan's market for fresh vegetable imports increased substantially in the early 1990s, from 14 percent in 1990 to a peak of 29 percent in 1994, but since then decreased, reaching only 21 percent in 2000. Other major suppliers had a share of less than 4 percent each in 2000, except for South Korea and New Zealand, which both claimed a market share of 10 percent each.

Even with a substantial decline in unit prices for overall fresh vegetable imports after the mid-1990s, Japan's fresh vegetable imports from China surged more than sixfold by value, from about \$50 million in 1990-92 to \$311 million during 1998-2000. Fresh-market vegetable imports from the United States increased nearly threefold, from \$72 million to \$205 million between these two periods. In comparison, the growth of Japan's fresh vegetable imports from the rest of the world was modest—increasing only 40 percent.

Although the growth rate for fresh vegetable exports for some areas such as the European Union (EU) and the Association of Southeast Asian Nations (ASEAN) was relatively high, their share was too minor to affect significantly the overall growth rate for the rest of the world as a whole in Japan's market. The relatively

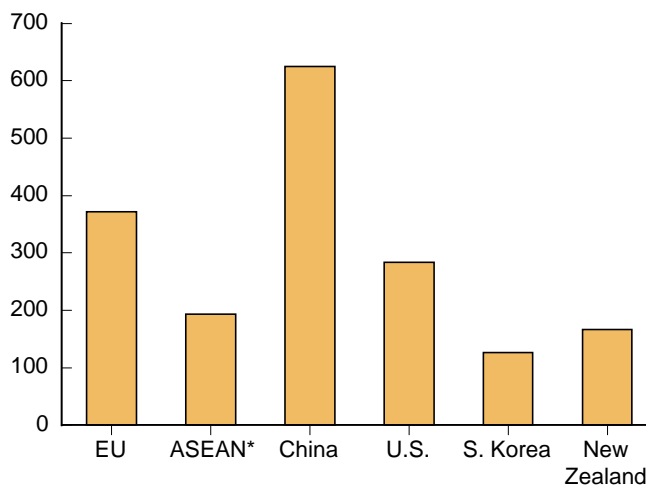
strong growth of Japan's imports of Chinese fresh vegetables is depicted in figure 1, which shows the percentage change in Japan's fresh vegetable import value among major suppliers averaged for 1998-2000, compared with a 1990-92 base.

The shares of Japan's major fresh-market vegetable import value from China included mushrooms (47 percent), radishes (12 percent), peas (10 percent), leeks (8 percent), garlic (7 percent), and edible brassicas, mainly broccoli and cabbages (5 percent). In comparison, Japan's leading fresh-market vegetable imports from the United States were concentrated in edible brassicas, almost totally broccoli (58 percent), onions, including shallots (18 percent), and asparagus (9 percent).

Figure 1

### Growth of major suppliers in Japan's fresh vegetable import market, average 1998-2000

Percent (1990-92=100)



\* ASEAN here includes Indonesia, Malaysia, the Philippines, Singapore, Thailand, and Vietnam.

Source: Economic Research Service, USDA.

## Increasing Competition in Japan's Fresh Vegetable Import Market

Although it appears that the United States and China each tend to export different types of fresh vegetables to Japan, the increasing presence of Chinese products in Japan undoubtedly brings competition between these two major suppliers either through direct competition on a specific product or through a substitution effect among vegetables.

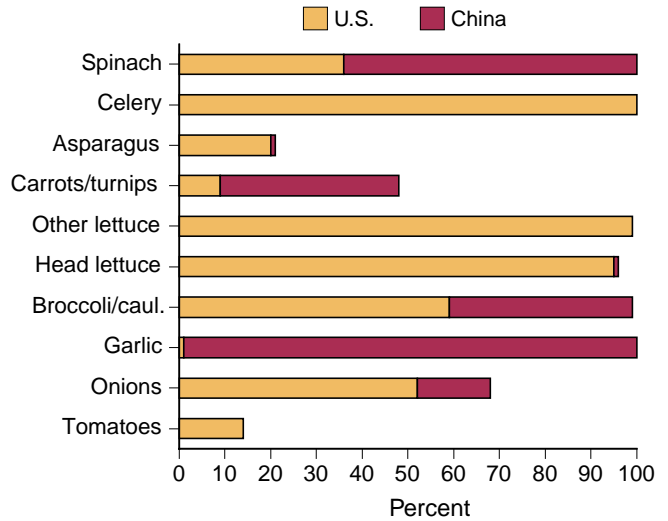
China substantially increased its share (in value terms) of the Japanese market for major fresh vegetables between 1990-92 and 1998-2000. Notable examples of market share changes were: mushrooms (from 20 to 65 percent), radishes (from 3 to 76 percent), peas (from 46 to 99 percent), leeks (from 82 to 91 percent), garlic (from 92 to 99 percent), and edible brassicas (from 2 to 11 percent). In addition, firms operating in China increased their market share in Japan for many less important or new fresh vegetable exports such as onions (from almost 0 to 16 percent), carrots and turnips (from 3 to 76 percent), and spinach (from 17 to 64 percent).

In comparison, the change in U.S. market share among various categories of fresh-market vegetables was not uniform, and the magnitude of the changes was much less than that of China. Of the three major categories of U.S. fresh vegetables exported to Japan, edible brassicas went from an 80-percent share to 84 percent; onions from 28 to 52 percent; and asparagus from 28 to 20 percent. China enlarged its market share during the period for each of these three major categories of U.S. fresh-market vegetables, especially for onions and edible brassicas as mentioned above, even though the U.S. share also increased for these two categories of vegetables. For asparagus, China increased its small share from 0.3 percent to 1.1 percent.

Figures 2 and 3 show the value share of China and the United States in Japan's market for selected categories of fresh vegetable imports during 1998-2000 and 1990-92, respectively. These figures are prepared from the Global Agricultural Trade System, a database provided by the U.S. Department of Agriculture's Foreign Agricultural Service using data from the United Nations' Statistical Office.

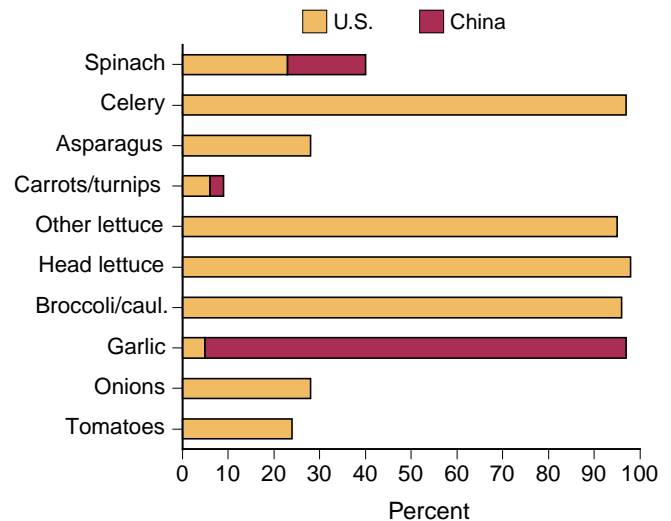
China's rising fresh-market vegetable exports to Japan were bolstered by many factors. In particular, the

Figure 2  
Market share in Japan's fresh vegetable import value, average 1998-2000



Source: Economic Research Service, USDA.

Figure 3  
Market share in Japan's fresh vegetable import value, average 1990-92



Source: Economic Research Service, USDA.

1990s was a decade when foreigners rushed to invest in China. With its low production costs and geographic proximity to Japan, China substantially attracted foreign investment especially from Japanese trading companies, which provided the seeds, spores, and tech-

niques of production and packing, and imported the harvest for Japanese retailers. In addition, the improved ocean freight service from major Chinese ports to Japan was another important factor boosting imports from China.

Faced with an influx of Chinese agricultural imports, the Japanese Government in April 2001 imposed import restrictions, called temporary safeguard measures (article 6 of Agreement on Safeguards), on two

fresh vegetables that come mostly from China—Welsh onions and fresh shiitake mushrooms. It was the first time Japan invoked safeguards in article 6 against imports since becoming a signatory of the World Trade Organization in 1995. China quickly fought back with 100 percent tariffs on Japanese cars, mobile phones, and air-conditioners. Although the dispute was resolved in December after lengthy discussions and a decision to create a special panel to oversee bilateral farm trade, tension has remained.

## China—The Leading Supplier for Japan’s Processed Fruit and Vegetable Imports

Traditionally, processed products dominated China’s overall exports of vegetables and fruits, accounting for nearly two-thirds of export value during 1998-2000. Japan is the leading market for Chinese exports of processed products, and in turn, China is Japan’s leading supplier for its imports of processed products for most of the years.

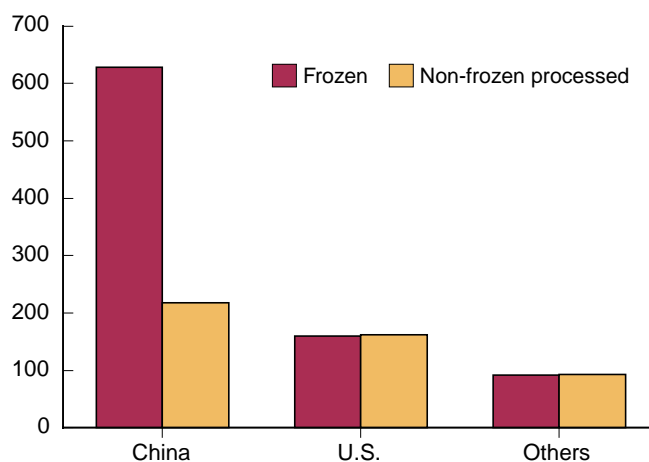
In the 1990s, China’s share of Japan’s import market for processed fruits and vegetables trended steadily higher. China’s share jumped from 24 percent in 1990 to 50 percent in 2000, with a value of \$1.45 billion. In comparison, the U.S. share was stable during the same period, ranging from 23 to 26 percent. The market share for other major suppliers remained stable or declined and each dropped to less than 5-percent by the end of the twentieth century.

Dried, provisionally preserved, and prepared vegetables are traditionally China’s main processed product exports. In the 1990s, however, frozen vegetables as a group became the fastest growth category in Japan’s imports of Chinese processed products. While Japan’s imports of nonfrozen processed vegetables from China doubled in value from 1990-92 to 1998-2000, Japan’s imports of Chinese frozen vegetables surged sixfold during the same period. As a result, frozen products accounted for nearly 20 percent of Japan’s imports of Chinese processed products during 1998-2000, increasing from only 8 percent during 1990-92. In comparison, there was not much difference between the growth rate of Japan’s imports of frozen and non-frozen vegetables from either the United States or the rest of the world (fig. 4).

Figure 4

### Fast growth of Japan's imports of Chinese frozen vegetables, average 1998-2000

Percent (1990-92=100)



Source: Economic Research Service, USDA.

In contrast, Japan’s imports of processed products from firms operating in the United States have been quite concentrated and steady. For example, potatoes (both frozen and other processed), sweet corn (both frozen and canned), and raisins were the top five U.S. processed products imported by Japan during 1998-2000, accounting for 62 percent of Japan’s imports of U.S. processed products—only slightly higher than the 56-percent share for these products during 1990-92. In addition, the frozen vegetable category is always the major item in Japan’s import market for U.S. processed products—accounting for 44.4 percent in 1998-2000, only marginally different from 44.7 percent in 1990-92.

## China Drastically Increased Its Share in Japan's Market for Frozen Vegetable Imports

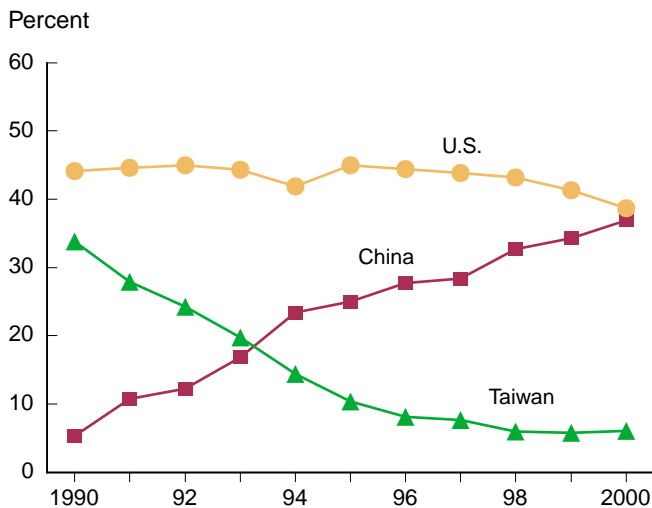
Similar to the rise in fresh-market vegetables, the rise of China in Japan's frozen vegetable import market is dramatic. Starting with a 5-percent share by value in Japan's frozen vegetable import market in 1990, China quickly replaced Taiwan to become the second largest supplier in 1994, and narrowed the gap with the United States, the leading supplier. In 2000, China's market share was 37 percent, while the U.S. share was 39 percent (fig. 5). Taiwan became number three, but its market share declined drastically in the 1990s, from 34 percent in 1990 to only 6 percent in 2000. The market share for other major suppliers, including Canada, Thailand, New Zealand, and, to a lesser degree Mexico, was small—less than 5 percent each.

The 1990s also witnessed substantial structural changes in Japan's frozen vegetable imports from China. For example, during 1990-92, beans and peas were Japan's top frozen vegetable imports from China, accounting for 40 percent of all frozen vegetable imports. During 1998-2000, however, the top two products were legumes (except beans and peas) and

spinach, accounting for 42 percent of Japan's imports of Chinese frozen vegetables. Meanwhile, the share for frozen beans and peas was reduced to only 12 percent. In contrast, Japan's frozen vegetable imports from the United States throughout the 1990s were dominated by prepared potatoes (including french fries) and sweet corn. They accounted for 73 percent and 15 percent, respectively, of Japan's imports of U.S. frozen vegetables during 1998-2000. The United States was the leading supplier of Japan's imports of frozen prepared potatoes and frozen sweet corn, with a market share of 87 percent and 80 percent, respectively, during the same period. In contrast, China's share of Japan's import market for these two frozen vegetables was negligible (figs. 6 and 7).

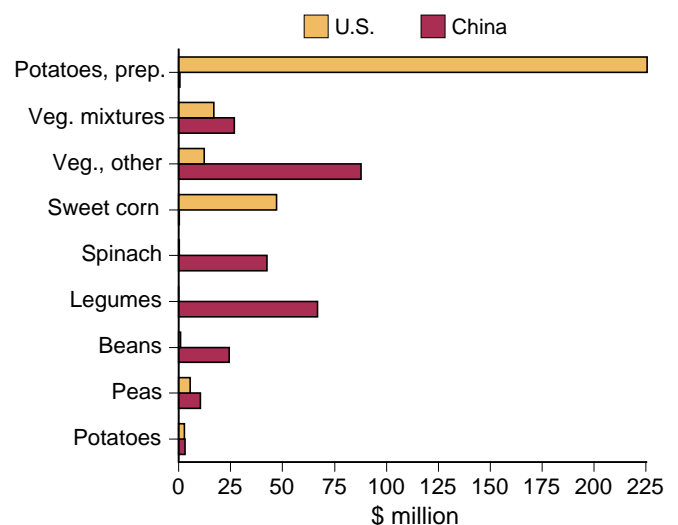
Because U.S. products in Japan's import market for frozen vegetables were dominated by these two products, with minimum challenge from China, the competition between China and the United States in Japan's frozen vegetable import market tended not to be serious. In fact, China's bursting onto the scene of

Figure 5  
Share of major suppliers in Japan's frozen vegetable import market



Source: Economic Research Service, USDA.

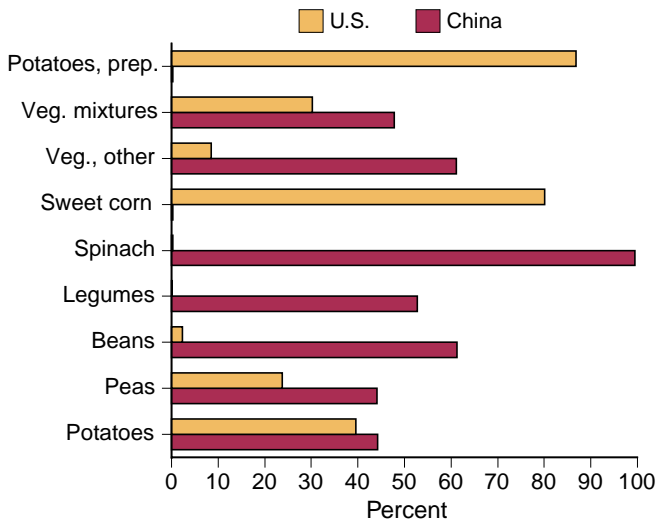
Figure 6  
Japan's import of frozen vegetables, average 1998-2000



Source: Economic Research Service, USDA.

Figure 7

**Market share in Japan's frozen vegetable import value, average 1998-2000**



Source: Economic Research Service, USDA.

Japan's import market for frozen vegetables was due in part to foreign investment, particularly from Japan and Taiwan. In particular, the exodus of Taiwan's frozen food manufacturers to China, like many of Taiwan's other manufacturing industries, was the main cause for Taiwan's drastic decline in its market share of Japan's frozen vegetable imports, while it boosted China's presence in Japan in the 1990s.



## Conclusions

In the 1990s, firms operating in China drastically increased their presence in Japan's import markets for fresh and processed vegetables—the two leading categories of China's overall exports of fruits and vegetables. The advances of China in Japan's import market eclipsed those of all other suppliers.

In Japan's import market for fresh vegetables, China increased its share from 6 percent in 1990 to 35 percent in 2000. Although there were some ups and downs over the years, the upward trend of China's presence was unmistakable. In addition, China has firmly established itself as the leading supplier for Japan's imports of fresh vegetables since the mid-1990s.

Equally impressive was China's market share of Japan's processed products imports—steadily increasing from 24 percent in 1990 to 50 percent in 2000. China has been the top supplier of processed vegetables to Japan since 1991. In particular, Japan's rapid growth in imports of Chinese processed products was fueled by a substantial rise in the imports of Chinese

frozen vegetables—from a 5-percent market share in 1990 to 37 percent in 2000.

China's rapid rise has posed a new challenge for Japan's major suppliers, particularly the United States. Basically, the United States and China each tend to export different types of fresh and processed vegetables to Japan. China's fresh vegetables, however, pose a much greater challenge than frozen vegetables to firms operating in the United States. This is largely because Japan has increased imports of Chinese fresh vegetables across the board, including the three major categories of U.S. fresh vegetables exported to Japan—broccoli, onions, and asparagus.

In comparison, the competition between China and the United States in Japan's frozen vegetable import market does not appear as serious. The concentration of Japan's frozen vegetable imports from the United States, mainly prepared potatoes (largely french fries) and sweet corn, not only dominates Japan's import markets for these two products but has also been met with minimum challenge from China.

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