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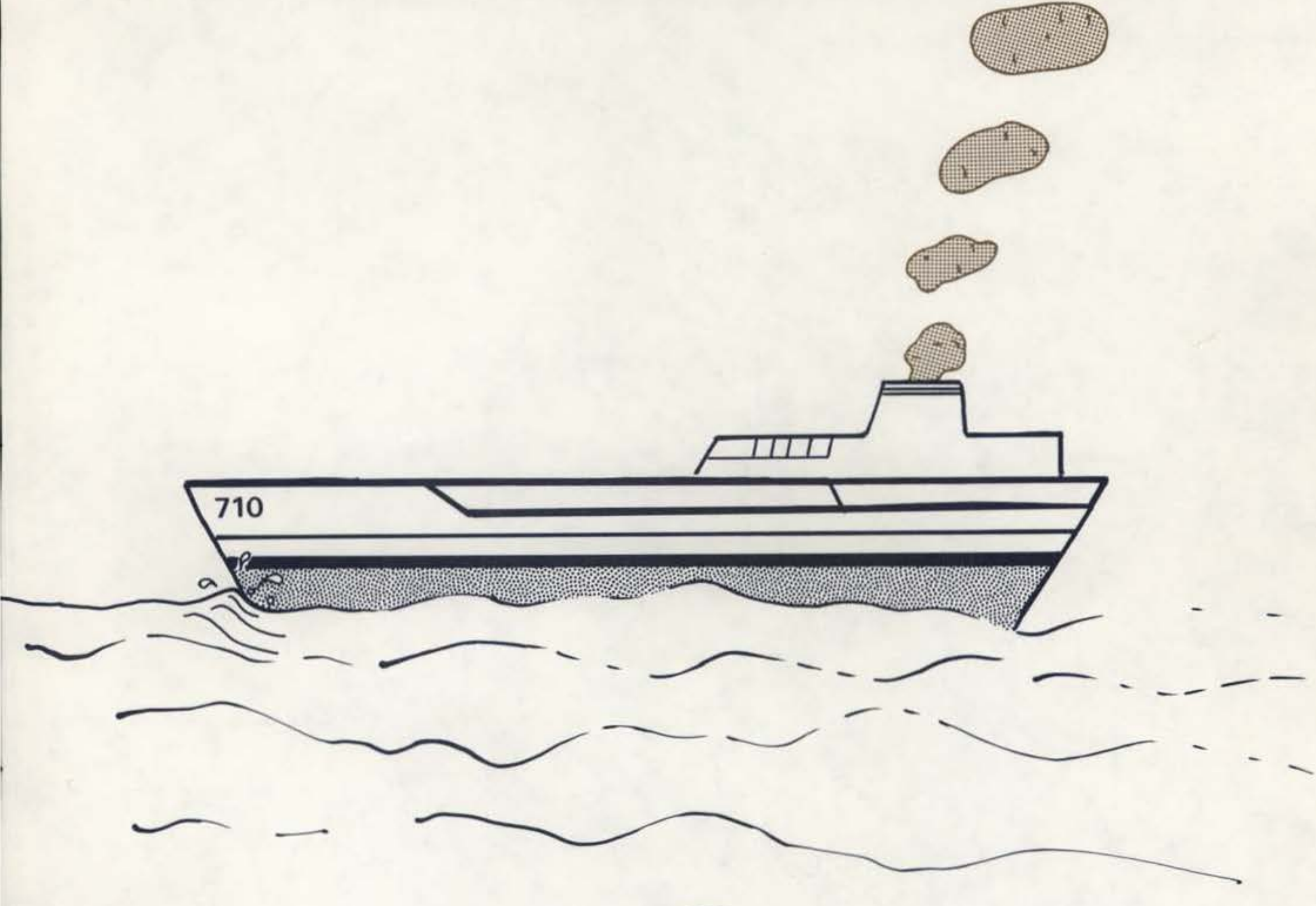

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Exports of U.S. processed potatoes have grown dramatically during the mid and late 1980's. For example, frozen potato exports to Japan increased 73 percent between 1986 and 1988. Exports in the 1980's are still relatively small compared to the domestic market, but the National Potato Board has projected that by 1999, 10 percent of the U.S. potato crop will be exported to Pacific Rim countries. This compares to about 2 percent of the crop exported to all countries in the 1980's.

People in the potato industry are curious about how this growth happened and about the outlook for exports in the future. This publication discusses the main factors in the historical and future development of export markets for U.S. potatoes.

The U.S. Potato Market

Only in recent years has a significant export market been developed for U.S. potatoes. The export market appears to be strongest in countries that have strong economies and are adopting U.S. eating habits into their lifestyles. Therefore, recent changes that have taken place in the U.S. potato market might give an indication of similar changes to expect in foreign markets.

Although U.S. consumers have continued to eat about the same amount of potatoes from 1970 through 1987 (115 to 127 pounds per person), their preferences for types of potato products have changed (Fig. 1). Consumers substituted frozen potato products for fresh potatoes. During the early and mid 1970's, a rapid decline in fresh consumption was offset by a rapid increase in frozen consumption. Since then, fresh consumption seems to be stable or slightly increasing, and the growth in domestic consumption of frozen potatoes has slowed.

The growth trend in frozen potato consumption in the U.S. is partly the result of a change in eating habits. Several decades ago most of the meals for a typical American family were consumed in the home. Beginning in the early 1960's, Americans began to eat more meals in fast food restaurants. Since french fries were featured in many of these restaurants, the demand for frozen french fries increased.

As U.S. consumers chose the convenience of fast food restaurants, they cut back on their purchases of foods that required more preparation time. Consumption of fresh potatoes subsequently declined. Two things halted that decline. First, the microwave oven made it much less time-consuming to prepare baked potatoes. Second, some fast food restaurants added baked potato entrees to their menus.

Growth in the fast food industry has benefited the U.S. potato industry, but there is some concern about how long the growth trend will continue. An aging U.S. population is one reason for concern. The baby boom generation that helped increase the demand for fast food while in their teens and early adult years is now approaching middle age. This group might reduce purchases of french fries as its members move into their later years. Another concern is the slow rate of population growth in the U.S.

Consumer income is also a factor in the demand for frozen potatoes. Since higher incomes lead consumers to purchase more convenience foods and restaurant meals, the demand for frozen potato products

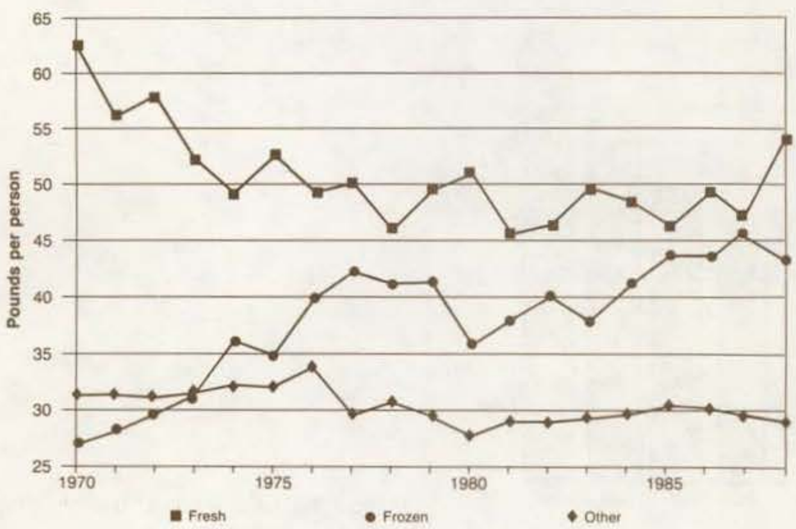

Fig. 1. U.S. per capita potato utilization.

increases when per capita consumer income increases.

The Potato Board, the Idaho Potato Commission and other entities that were formed to stimulate domestic potato demand have in recent years put effort into expanding export demand. Export markets are attractive for several reasons. First, many foreigners are acquiring a taste for American foods. Second, in countries where consumer income is increasing, people are choosing convenience foods and fast food restaurant meals. Third, population growth in many foreign countries is higher than the rate of U.S. population growth.

Potato Trade Trends

The U.S. is involved in two-way trade of potatoes. The U.S. imports more fresh potatoes than it exports, but exports more processed potatoes than it imports. Fig. 2 shows growth in the volume of fresh potatoes imported by the U.S during the 1980's. U.S. imports of fresh potatoes come mostly from eastern Canada. In the West, the potato trade flow goes the other way, because U.S. shippers in the Pacific Northwest sell to potato-deficit western Canadian provinces.

Fig. 3 shows dramatic growth in frozen french fry exports, especially in the last 3 years. From 1985 to 1988, export sales of frozen french fries have more than doubled. Much of this growth was from increased sales to Japan. Export sales of frozen potato products other than french fries have shown similar growth. Meanwhile, export sales of fresh and dehydrated potatoes have been static in recent years.

Potato Trade Issues

Access to foreign markets is one of the most important issues affecting the export of U.S. potatoes. Free trade proponents appear to be gaining influence

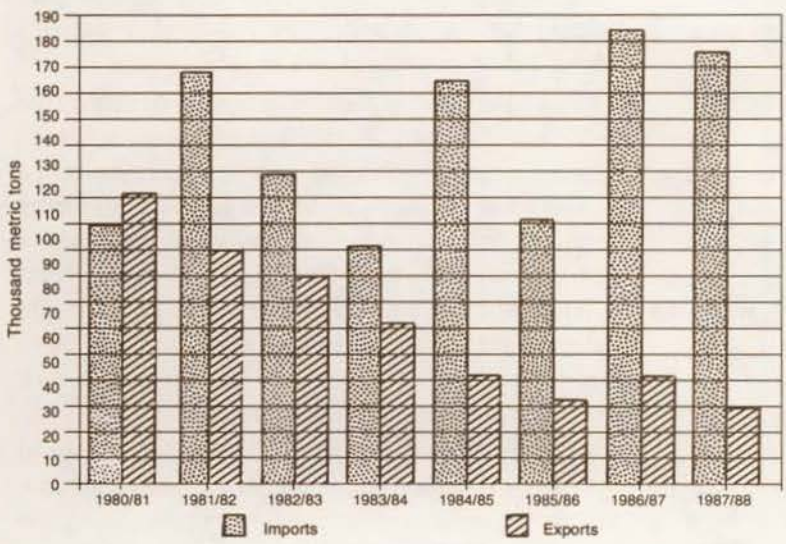

Fig. 2. U.S. fresh potato trade.

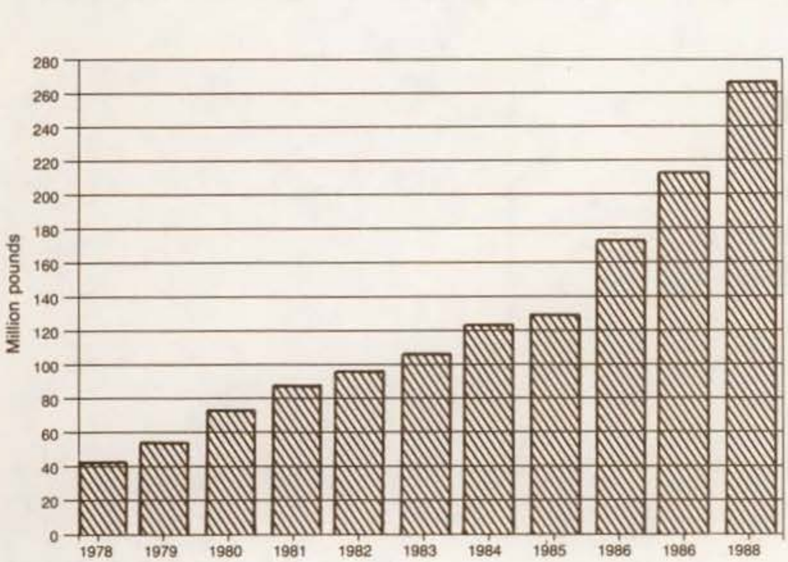

Fig. 3. U.S. frozen french fry exports.

in the U.S. and also with some of our trading partners. Although access of the U.S. potato industry into many markets continues to be restricted, some positive signs can be seen. Japan is allowing greater quantities of U.S. potato products to enter its market. South Korea lifted its ban on frozen french fries shortly before the 1988 Olympic Games in Seoul.

The Canadian Free Trade Agreement might be another positive sign. Western U.S. growers could benefit at the expense of eastern U.S. growers, but the net effect is not known. The agreement does have a "snapback" provision that offers the potato industry some protection. This provision allows the U.S. to reimpose temporary tariffs if Canadian imports significantly affect U.S. potato prices.

Another important issue is the value of the U.S. dollar in relation to other currencies. Although exchange rates for some currencies did not follow the trend, the real trade-weighted exchange rate of the dollar declined sharply through 1988, after peaking in mid-1985. This was also the period during which exports of frozen french fries more than doubled.

Marketing efforts of the U.S. potato industry are another important issue. Recent growth in export sales resulted partly from efforts to promote frozen potato products overseas and to provide buyers with the quality products they want.

Advertising and Promotion

The potato industry has had help from the federal government in its export marketing efforts. USDA's Targeted Export Assistance (TEA) program has been an important component in the expansion of potato exports. TEA provides money to agricultural commodity groups for their export promotion efforts.

The Potato Board, whose TEA funds increased from $2 million in 1986 to $4.7 million in 1989, built a successful potato promotion campaign in Southeast Asia. The Board used foreign television and newspaper advertising focused on the high quality of U.S. potatoes. Promotional efforts in grocery stores and restaurants were also important to the campaign. The Potato Board also did something in advertising that had never been done before in Japan. The Board bought the entire advertising space of Japan's major newspaper for one day. Since Japanese consumers are very quality conscious, the space was used to promote the quality of U.S. potato products.

Individual processors have also promoted their products overseas. The advertising and promotion campaigns conducted with both private money and public money have apparently helped expand the demand for U.S. potato products in Southeast Asia.

Japanese Market

The U.S. potato export industry has developed a strong Japanese focus in recent years. Japan bought 83 percent of the frozen french fries exported by the U.S. in 1987. Hong Kong, the next largest customer, bought 6 percent and Canada bought 4 percent.

Japanese consumers also depend heavily on the U.S. to meet their potato needs. According to the Potato Board, the U.S. share of the Japanese frozen potato market increased from 28.5 percent in 1978 to 72 percent in 1988. During this same period, total consumption of frozen potato products increased from 52 million metric tons to 121 million metric tons.

As Japan has become an economic superpower, food preferences of the Japanese consumer have changed. The traditional Japanese diet of rice, fish and vegetable proteins has now expanded to include a wider variety of foods. The use of convenience foods is replacing the Japanese tradition of preparing most meals with fresh raw ingredients. Increasing independence of the Japanese housewife also encourages increased consumption of processed foods and meals at fast food restaurants.

The food service industry is rapidly growing in Japan. Annual growth in the number of fast food and family restaurants in Japan has ranged from 10 percent to 21 percent during the 1980's. It is not just the American franchises, such as McDonald's, Kentucky Fried Chicken and Denny's, that serve U.S. french fries. The Japanese fast food chain Lotteria also serves the U.S. product rather than Japanese french fries.

In 1987, 25 percent of the money the Japanese people spent on food was spent on meals away from home. Some analysts expect this figure to climb to 40 percent by 1997 (Potato Board). Continued growth of the Japanese restaurant industry should have a strong positive influence on the demand for U.S. frozen potato products.

U.S. frozen potato products have also been successful in the retail market. Most large supermarket chains in Japan carry American frozen potatoes. According to a 1990 study by the Potato Board, frozen potatoes are stocked in 32 percent of Japanese homes.

Although the Japanese frozen potato market has been growing rapidly, Japanese consumption of the product lags far behind U.S. consumption. During the mid 1980's U.S. per capita consumption was 40 to 45 pounds. Japanese per capita consumption was 2 pounds.

Japanese At-home Market Research

At-home per capita consumption of frozen potatoes in Japan has increased but consumption of the product in restaurants has increased more rapidly. In 1990 the Potato Board estimated that 14 percent of the U.S. frozen potato exports go into the retail market, and the remaining 86 percent into the food service market.

Market research has been conducted to evaluate the Japanese demand for U.S. potato products. Surveys sponsored by the Potato Board show that Japanese in-home consumption of frozen potatoes increased from 83 percent of households in 1986 to 92 percent in 1988. This is in contrast to a 1983 survey which showed that 57 percent of Japanese households consumed french fries at home.

The 1983 survey, conducted by Ketchum Osawa International, Ltd., investigated at-home consumption of frozen french fries. The researchers found that women and children ate more french fries than men, that french fries were frequently consumed for between-meal snacks, and that younger adults ate more french fries than older adults. At that time, frozen french fries were new in Japanese retail markets and sales data were limited.

Another study, conducted at the University of Idaho in 1985 (Gentillon), surveyed a random sample of urban and rural Japanese consumers regarding their frozen french fry purchases at the retail level. This survey showed that Japanese households that had children and middle or higher incomes were most likely to buy frozen french fries for home consumption. Buyers were also most likely to have been aware of frozen potato product advertising and to have a favorable perception of fries as a food nutrition source. Japanese consumers reported that french fries were relatively easy to prepare in their kitchens, as it is common to deep fry foods in Japan.

The Gentillon survey also found that frozen potato products were served with meals in 47 percent of the households. Other uses were snacks for children, 25 percent; served when entertaining, 14 percent, and packed in lunch boxes, 6 percent.

This survey indicated how Japanese people substitute frozen french fries for other food products. French fries were found to be a substitute for other vegetables in 47 percent of the homes and a substitute for rice in 22 percent of the homes. Also, french fries were considered to match or exceed rice in nutritional value per dollar of expenditure in 75 percent of the households.

The survey showed that home consumption of french fries varied between households. Consumption in rural Japan was only 60 percent as high as it was in urban Japan. A possible explanation is that rural residents had less exposure to Western culture and to advertising and promotion efforts.

Japanese consumption of frozen french fries was also found to vary between cities. Since advertising for the product was concentrated in Tokyo and Yokohama, consumption rates were higher in those two cities. An urban area in southern Japan had a consumption rate that was only 20 percent of the Tokyo consumption rate. In addition to differences in advertising, the lack of product availability may have inhibited consumption of processed U.S. potatoes outside the Tokyo area.

The University of Idaho study estimated that Japanese consumption of frozen french fries can be expected to rise by 1 percent for each 4 percent increase in per capita income. The Japanese economy has been on a growth trend that has increased per capita income. Since this trend is expected to continue, it is likely that growth in Japanese income will continue to have a positive impact on the demand for frozen potato products.

Gentillon's study also analyzed the impact of population growth on the demand for frozen potato products. As Japanese population continues to grow, the demand for frozen potato products is also expected to increase. According to Kondansha Encyclopedia of Japan, "The count of households in Japan was 35 million in 1980 and is expected to increase to 45 million by the year 2000." Continued population growth is expected but the rate of growth is slowing. Japan's population increased 1.4 percent in 1972, 0.8 percent in 1981 and 0.6 percent in 1987.

Although the processed potato market has had tremendous growth in Japan, the fresh potato market remains closed to the U.S. If the increasing emphasis on free trade between the two countries leads to the removal of the fresh potato barrier, the potato industry in the Pacific Northwest would be in a good position to compete in that market.

Other Export Markets

Besides Japan, other Asian markets for U.S. frozen potato products have grown. The Potato Board has targeted Hong Kong, Singapore, Malaysia, Indonesia, South Korea, The Philippines and Taiwan for increased promotional attention.

South Korea may be one of the brightest spots. The South Korean government dropped its ban on U.S. frozen potato imports in summer 1988. Furthermore, the country's economy is booming. As consumer income continues to increase, South Koreans will look

Table 1. United States potato exports, 1988 (metric tons).

	Fresh	Seed	Frozen french fries	Dehydrated
Canada	27,165	3,905	106	3,712
EC-Twelve	-	-	22	99
Other Western Europe	19	-	-	155
East Asia and Pacific	701	211	30,362	948
Middle East and North Africa	-	-	464	80
Latin America, except Caribbean	1,993	172	37	79
Bermuda and Caribbean	847	165	348	30

Source: National Potato Council. 1989 Potato Statistical Year- book.

for more variety in their diet. The many young people in the country (two-thirds are age 30 or under) will likely want to purchase french fries like the Americans and Japanese do. Some analysts see a similarity between the way South Korea is developing and the way Japan built its economic might. If South Korea does expand its economic muscle and keeps its doors open to U.S. potatoes, it could indeed be a growth market for U.S. potatoes.

Some potato industry people have also wondered about the potential for potato exports to China. The Chinese people apparently have a taste for potatoes, since they are the world's second largest potato producer behind the U.S.S.R. China also has more people than any other country — about one billion. The problem is that China is a very poor country. The vast majority of Chinese people cannot afford to buy U.S. potato products. Even if they could, most do not have the freezer facilities to store frozen potato products. Political problems also reduce the potential for exporting potatoes to China.

Table 1 shows U.S. potato export destinations during 1988. The movement of fresh potatoes to Canada and frozen french fries to "East Asia and Pacific" dwarf the movement of U.S. potatoes to other regions.

The potential for potato export expansion is greatest in the countries that have healthy economies. The citizens of third world countries simply cannot afford to buy U.S. potato products. Hence, the potential to expand exports to Latin America is limited.

Western Europe has many people who can afford to buy U.S. potato products, but there are other barriers to enter that market. The European Common Market (EC) countries have historically protected their agricultural industries from foreign competition. Although the EC is increasingly knocking down trade barriers between its member countries, it is likely to resist opening the door for U.S. potato products.

Summary

U.S. consumers are choosing to increase purchases of frozen potato products. Convenience of at-home preparation and the growth in the fast food industry are reasons for this shift in preferences. When U.S. consumer income increases it also tends to increase frozen potato consumption. Similar shifts in frozen potato demand appear to be happening in countries such as Japan.

Export sales of frozen french fries more than doubled during 1986-88. Over 80 percent of the 1987 frozen french fry sales were to Japan. Research has found that increased income, children at home, an urban residence, advertising and exposure to the product are all factors that have a positive impact on the demand for frozen potato products in Japan.

Many factors can influence the export demand for U.S. potatoes and potato products in the future. Some of the most important factors are trade barriers, the value of the U.S. dollar, advertising and promotion efforts, consumer income, population growth and food tastes and preferences.

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