



Country Profile

Foreign Agricultural Service

Horticultural & Tropical Products Division

Passage to India

Market Summary

India is a country of striking contrasts and enormous ethnic, linguistic, and cultural diversity. India is the world's second most populous country with an estimated 1 billion people. Its economy is a mixture of traditional village farming, modern agriculture, handcrafts, industry, and multitude of support services. India's trade policy has effectively prohibited imports of most agriculture goods. However, in recent years the country has made major steps towards liberalization, though its tariffs are still among the highest in the world. The opportunity for U.S. food companies in India's food service market is small but growing with major hotels showing the most promise. Food retailing is highly compartmentalized and predominantly consists of small independent, owner-managed shops. Although India is one of the world's largest agricultural producers it is estimated that only 2 to 4 percent of India's total production of fruits and vegetables are processed and packaged. Many Indians are vegetarian by tradition; moreover, many can only afford a vegetarian diet. The food distribution system is frequently inefficient and is complicated by a number of factors, including lack of adequate refrigeration, packaging, efficient transportation; and the presence of numerous independent intermediaries. As the government liberalizes trade, India emerges as a potentially large market for U.S. horticultural products. The United States is India's third-largest food supplier, accounting for approximately \$45 million of its imports in 1999 valued at \$500 million. Tree nuts, apples, pears, table grapes, frozen potato fries, dried fruits, and wine have the highest potential for increased imports.

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India is a country of striking contrasts and enormous ethnic, linguistic and cultural diversity. The diversity of India's people is exceeded only by that of its geography. From the towering Himalayas to the north, to the densely populated alluvial plains in the middle, to the plateaus of the south, it has an area of 1.3 million square miles, roughly one-third the size of the United States. India is comprised of 29 states which differ vastly in resources, religion, languages, culture, food habits, living standards, and climate. Although Hindi and English are used commonly, it officially recognizes 18 languages, and is home to six major religions. The population is overwhelmingly Hindu, but there are significant numbers of Muslims (about 12 percent of the population), Christians,

Buddhists, Sikhs, Jains, and Parsis. India has three major seasons: summer, winter, and monsoon. The winter months are from November to March, the summer months from March to May, and the monsoon season from June to September in the southwest and October to early December in the northwest.

India is the world's second most populous country with an estimated 1 billion people. Although the country is primarily rural, it is becoming increasingly urban, with more than 60 million Indians living in the eight largest cities. The population is growing at 2 percent (or 20 million per annum, which is equivalent to the entire population of Australia).

Largest Indian Cities

City	Population
Mumbai (Bombay)	14,800,000
Calcutta	12,800,000
Delhi	9,800,000
Madras	6,300,000
Hyderabad	5,000,000
Bangalore	4,800,000
Ahmedabad	2,900,000

Economy

India's economy is a mixture of traditional village farming, modern agriculture, handicrafts, industry, and a multitude of support services. More than 70 percent of the population (about 80 percent) is largely supported by agriculture. However, agriculture as a percentage of the economy is shrinking (from 38 percent of gross domestic product (GNP) in 1981 to 26.6 percent in 1999) as more industrialized and modern service sectors expand.

India's unit of currency is the Indian rupee (R), valued at Rs45.6/US\$1 (October 2000) and is now fully convertible on both the trade and current accounts. The banking system is dominated by public-sector banks, but numerous private and foreign banks also exist. These banks have restricted areas of operations, usually limited to two or three districts.

Reducing poverty and improving the living standards of the poor have long been among India's most important priorities and most pressing challenges. With a per capita gross national product (GNP) of \$400, India continues to have a greater concentration of poor people than any other country in the world. Roughly 320 million people (one-third of the population) lives below the national poverty line, unable to muster an income equivalent to the \$1 a day needed to buy basic foods.

While a stereotype of malnourished masses dominates the perception of many Western visitors, India has a large and growing middle class. Although this

class is much too heterogenous to be defined by simple numbers, it is estimated at 25 million and could be as high as 200 million depending on types of product, pricing, and availability of competitive locally produced items used in measuring living standards. This newly emerging middle class can afford many of the staples of a middle-class existence, including televisions, refrigerators, motorcycles or mopeds and, more recently, automobiles.

Indian Agriculture

Agriculture remains the backbone of the Indian economy, contributing 26.6 percent of GNP. Two thirds of the country's workforce derives its livelihood from agriculture and agriculture-based activities. Most agricultural production is carried out on small family-owned plots and, to a limited extent, on larger organized farms. India is the largest producer of fruits in the world and second-largest producer of vegetables (see chart below).

With self-sufficiency as its goal, for over four decades the Indian government controlled the country's agriculture by subsidizing and regulating the domestic market. Although well-intentioned, this policy of insulating India's agriculture from outside competition has resulted in an industry fraught with inefficiencies. Some economic reforms over the past few years have fostered progress by improving production technologies and by expanding and diversifying the agricultural sector. For example, the Indian government is slowly upgrading handling and storage facilities for agricultural products. However, more work needs to be done in this area, since fruits and vegetables suffer heavy damage or deterioration during post-harvest handling, with losses estimated as high as 35 percent.

India remains a net agricultural exporter and is usually self-sufficient or has a surplus in food grains, though inadequate incomes leave millions malnourished. India's exports of agricultural products were valued at US\$6.77 billion in 1998/99. Leading exports were rice, oilmeal, coffee, tea, and spices. Nevertheless, India's share in world agricultural trade is less than 1 percent.

Indian Fruit and Vegetable Production

Fruits	Metric Tons
Banana	10,324,374
Mango	10,156,963
Citrus	4,258,514
Guava	1,613,410
Papaya	1,582,130
Apple	1,320,586
Others	10,794,942
Total	40,050,919
Vegetables	
Egg Plant	7,772,364
Tomato	6,218,470
Cauliflower	4,462,686
Cabbage	4,264,727
Okra	3,238,060
Others	43,575,588
Total	72,831,565
Nuts	
Cashews	300,000
Grand Total	113,182,484

Source: Indian National Horticultural Board - 1998/99

India enjoys the unique distinction of being the single-largest producer, consumer, and exporter of spices in the world, and also the leading producer and exporter of cashews. India's agricultural exports to the United States are 10 times greater than U.S. commercial agricultural exports to India, which typically amount to \$100 million.

India's imports were valued at US\$3.25 billion in 1998/99, leading imports were vegetable oils, pulses, raw cashew nuts, and wood and wood products. India is the world's largest importer of vegetable oil and pulses. Because of India's restrictive trade policies, agricultural imports have remained minuscule compared with the size of its domestic market. But for food security purposes, the government occasionally imports significant quantities of wheat, particularly in years of adverse domestic supplies.

Trade Policy

With a population of 1 billion, India would appear to be a natural market for U.S. horticultural products. India's trade policy, however, has effectively prohibited imports of most agricultural goods through the use of quantitative import restrictions. Tariffs, quotas, import licensing, and state monopolies became the mainstays of trade policies that virtually banned importing of agricultural products. Until 1991 the Indian market was closed to imports of most agricultural and consumer food products because of licensing and quota restrictions. Between 1991 and 1997, quotas were lifted for some products, although essentially all major agricultural products were on the negative import list which required licenses and quotas. The first major step towards liberalization occurred that year when the government announced its 5-year (1997-2002) Export-Import Policy. Import licensing restrictions (which had effectively banned imports) were fully or partially lifted on several food items by moving them from the negative import list to the Open General License (OGL), making them freely importable. In 1998 and 1999, the government moved roughly 470 agricultural products onto the OGL, thus opening the market for more consumer food products, with the exception of meat and poultry products, some fruits and vegetables, food grains, and some processed foods.

In late 1999, India agreed to eliminate all quantitative restrictions for an additional 1,400 agricultural products. Half of the restrictions were lifted within 3 months of agreement date, and the remaining half will be lifted by April 1, 2001. When the remaining tariff line items come off the negative import list by 2001, India's agricultural and consumer product imports will be free of quotas. This agreement follows a ruling by the World Trade Organization, in response to the United States challenge to India's claim that its balance-of-payments situation justified import restrictions.

Despite reforms, Indian tariffs are still among the highest in the world (15-35 percent on most food products), especially for goods that can be produced domestically. Imports are also subject to additional duties, including: a surcharge on the basic duty; an additional (popularly known as countervailing) duty

which corresponds to excise taxes on similar domestically produced goods; and a special additional duty (SAD, also known as the “swadeshi tax”). The Indian tariff structure contains a range of exemptions for imports of products that are to be further processed for export.

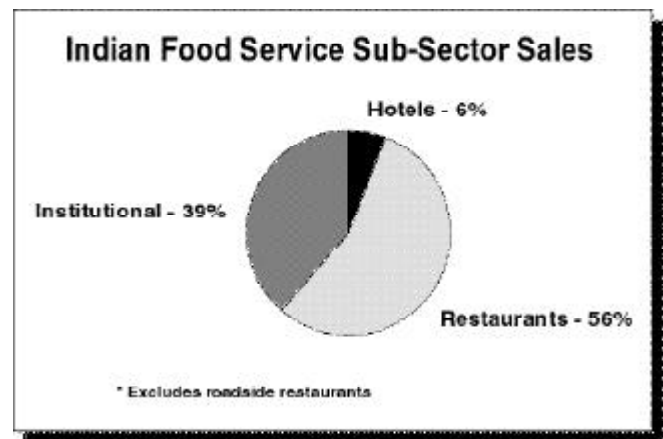
The basic duty, usually ad valorem, normally has 4 graduations: 5, 15, 25, and 35 percent. However, imports of some commodities attracts higher duties (50-100 percent) to provide protection to domestic producers of politically sensitive commodities, such as sugar and poultry. Import duties on liquor vary from 100 to 210 percent. A zero duty is applicable to only a very few basic commodities. The surcharge on the basic duty is a uniform 10 percent, applicable to all commodities except certain products bound under the General Agreement on Tariffs and Trade and items attracting a 35-percent basic duty. In effect, the surcharge raises the basic duty by 10 percent: 5-percent basic duty becomes 5.5 percent; 15 percent becomes 16.5 percent, etc. The countervailing duty is equal to the excise duty on similar products. The SAD is purported to be the equivalent of local sales taxes and similar levies applicable on similar domestic goods and is computed on the aggregate of assessed value, basic duty (including surcharge), and countervailing duty. Consequently, the total effective duty on imports of food products may vary from 16 to 67 percent.

In the near term, high tariffs and duties will no doubt continue to be employed to limit imports. However, the removal of quantitative restrictions marks an important step toward a more transparent and equitable trade policy regime.

Food Service Sector

The food service sector in India consists of approximately 22,000 registered restaurants with sales of over \$15,000 per month. In addition, there are more than 100,000 roadside restaurants (dhabas) in small stalls in cities and on highways, and 1,700 registered restaurants in hotels. The institutional sector consists of hospitals, prisons, defense establishments, schools, company canteens, railways, and airlines.

The opportunity for U.S. food companies in India’s food service market is small but growing. Sales by Indian food service companies totaled approximately \$6 billion in fiscal year 1999 (latest available data). Restaurants account for approximately 56 percent of Indian food service sales and institutional sales, about 39 percent. Indian consumers spent only 2.4 percent of their food expenditures in hotels and restaurants in fiscal year 1996. American consumers, by comparison, spent 46 percent of their food expenditures on away-from-home meals.



Hotel Restaurants

The hotel industry is growing, and major hotel companies are currently expanding in the premium segment. An increase in Indian budget travelers is expected to drive the long-term growth in the mid-range hotel sector. India has some excellent hotel chains, including: Indian Hotels Ltd. (Taj Group); East India Hotels Company Ltd. (Oberoi Group); ITC Ltd. (Welcome Group); Asian Hotels; and Leela Venture. Several international chains such as Radisson, Best Western, and Quality Inn have also established a presence through franchising.

These chains import around \$30 million of food products, mainly wine and alcoholic beverages, fruits and vegetables, meat, sauces, and cheese. Growing demand from Indian hotels and consumers is driving growth in liquor imports. Sales of imported alcoholic beverages are growing at more than 50 percent per year despite very high duties. India’s current imports of processed vegetables are low, but have grown at more than 250 percent per year from fiscal year 1994 to 1998.

The Indian government has recently allowed the import of many semi-processed vegetable preparations (previously restricted) under a special import license. While leading hotels note the excellent reputation of U.S. food products, cost is often identified as the constraint. Nevertheless, the hotel and tourism sectors (which have great potential in India) provide opportunities for U.S. exporters to position themselves.



Hotels procure imported products through several channels. Most hotel food buyers use consolidators to source their products. Consolidators are companies (generally based overseas) that procure products from several manufacturers and supply an assortment of items to hotels in India. Buyers find this arrangement suits their need for small quantities of assorted food items. Due to the short shelf life and high cost of storage of food products, hotels do not maintain large inventories, preferring to import frequently in small lots. Perishables are typically transported by air, while other items are shipped by sea in containers. Most of the hotel chains have regular working relations with a few overseas consolidator exporters, based on their past performance in terms of quality, quantity, delivery date, prices, and range of products. Consolidators used by Indian hotels operate primarily from Singapore, the Netherlands, Germany, the United Kingdom, the United Arab Emirates, Australia, and New Zealand.

Some hotels buy imported foods from locally based bulk importers, and also from the local retail market.

These importers usually import bulk volumes of foreign food products and sell to hotels, restaurants, and retailers. Indian importers and local retailers generally stock imported foods that are in steady demand. Large hotels also regularly import foreign food products directly from manufacturers, particularly products with longer shelf life like wine, and liquors.

Restaurants

Generally, restaurants cater to the numerous ethnic groups in India, each of which has distinct food habits. However, foreign mass media have had an impact on the food habits of the Indian consumers. They are shifting away from traditional Indian food served in restaurants, and are increasingly turning to hotels and restaurants that serve foreign foods. Restaurant chains are creating awareness about their service and brands. As a result, specialty and theme restaurants are opening more frequently than typical traditional Indian food restaurants. Specialty restaurants in India serve a focused menu of Chinese, Italian, Thai, or Mexican food. The fast food industry, after a slow start, has registered prolific growth in recent years. Most U.S. fast food chains — McDonald's, KFC, Domino's Pizza, Pizza Hut — along with local chains such as Nirulas and Pizza Inn are doing a good business in major urban areas and are now spreading into smaller cities.

Pubs and independent bars are also becoming popular among higher income Indian consumers in India's major metropolitan cities. Increasing demand from middle class consumers is expected to spur robust growth in value-for-money restaurants.

Although most restaurants source their raw materials locally, products such as frozen potato fries, speciality cheeses, some meats and fishery products, condiments, and flavorings and other ingredients are often imported.

Food Service Summary

Although India's food expenditure in hotels and restaurants is low compared to most developed countries, a number of factors are driving increased food service sales. An increase in buying power of Indian

consumers is driving growth; however, in absolute terms, India's per capita income is low, and income distribution is highly skewed. The size of Indian households has declined over the past few years, but the number of households in middle-, upper-, and high-income categories has grown significantly. These households have higher disposable income per member and have a greater propensity to spend more on food. Since most high-income Indian consumers live in urban India, this will only increase food service sales and demand for various international cuisines (e.g., Continental, Chinese, Mexican, Italian, Thai, and Japanese). Affluent and middle-class Indian consumers, demand for snack foods is driving growth in the number of fast food chains. The number of dual-income households is also increasing, and will likely to lead to more meals eaten away from home.

Retail Sector

Food retailing in India is highly compartmentalized and predominantly consists of small independent, owner-managed shops — consumers visit different shops or open markets for different products. No one outlet supplies all the shopper's needs. Larger supermarkets are visited once or twice a month to stock up on staples, while smaller outlets such as the local provisions shop are visited on average every other day for odds and ends. Generally, the food outlets fall in the following categories: fair-priced shops, grocery stores, general merchants and vendors and, more recently convenience stores and supermarkets. There are no hypermarkets or club warehouses.

Almost all retail stores sell products at the maximum allowed retail price (MRP) printed by the manufacturers on every item and enforced by the government. Very little price competition exists between the various types of stores. The MRP often dictates the margin for not only the retailer but also the distributor, wholesaler, and other middlemen. One important exception to this rule is fair-price shops, government-sponsored outlets which sell medium-quality staple products (mostly rice, wheat, cooking oil, and sugar) at prices generally lower than the market. These stores offer no fresh produce and no refrigerated or frozen foods. They are generally located

in rural areas, constituting an essential and one of the very few elements of the government's safety net for the poor. The number of stores outside the fair-price shops is significant, and comprises most of the food retailers in India.

Small neighbourhood, family-owned grocery stores with an average size of 250 square feet mainly sell food commodities. Consumer loyalty is strong, based on convenience and added services such as credit and free home delivery. These stores usually sell unbranded products, which are individually weighed and packed. Such stores are often simply counters on the sidewalk behind which owner/managers take orders.

General merchandise stores are similar to grocery stores but are somewhat larger, with an average size of 500 square feet. They stock a wider range of products as well as branded items, snack foods, and confections. Products are generally prepackaged, and services such as home delivery and credit are also available.



General merchandise store

Convenience stores are also on virtually every street corner and range in size from kiosks of 50 to 60 square feet to larger shops of 100 to 150 square feet. They carry an impressive range of products, including imported jams, confectionery products, snack foods, magazines, toiletries, and even frozen seafood. However, these convenience stores cater to an extremely small percentage of the population.

Vendors (hawkers) sell fresh fruits and vegetables on

open stalls or handcarts along every sidewalk in the city. Often the selection of fruits and vegetables is limited and the quality poor.

Self-serve supermarkets are a more recent phenomenon in India, although there are still no supermarkets in the Western sense of the word. Most are large grocery “chains” operating in major cities in the south, resembling U.S. supermarkets 40 years ago. These 3,000- to 5,000-square-foot, self-service stores stock a wide range (by Indian standards) of groceries, snacks, processed foods, confectionery items, and cleaning and



Fresh fruit purchases are generally from street vendors

personal care products. Some have small bakery sections, and some sell fresh produce and dairy products. The produce is either displayed in-store or immediately outside the door, often this space is leased to another company. Frozen foods are often available as well, although selection is very limited. Frozen foods are relatively new to retailers, featured in small, top-loading freezers owned and placed by the supplier. Products include small packs of frozen fish sticks and patties, prawns, processed chicken patties, frozen chicken parts, chicken and lamb samosas, pre-cut vegetables, and french fries. It's estimated supermarkets typically account for 1 to 2 percent of the sales of consumer goods in a particular city.

Consumer response to supermarkets has been moderate because most do not have access to transportation to a supermarket and are still in the habit

of buying fresh produce daily from local stores. This is mostly due to the convenience (proximity to homes) personal service of local stores. Many shoppers also have the perception that prices are higher at supermarkets because they are large, brightly lit, and air-conditioned. Large retail formats are also faced with high overhead costs (e.g., high rental prices for new entrants) and the existing supply chain economies. Real estate prices are high (compared to older, rent - controlled shops) and restrict new entrants from opening large retail outlets in established markets. In addition, expansion in this sector is hampered by the lack of reliable nation wide transportation, complex taxation between states, and limited cold storage facilities. Nevertheless, the number of supermarkets is expected to grow in coming years, as higher-income consumers focus more on convenience and quality and more foreign investors are attracted to this sector.

Market Summary

The availability of consumer food products in India has grown significantly since the economic reforms beginning in 1991. Indian consumers can now purchase domestically produced cheese, wine, potato chips, ketchup, soft drinks, candy bars, breakfast cereals, ice cream, donuts, biscuits, frozen meats and vegetables, instant noodles, jams and jellies, packaged grains and pulses, soups and some ready to eat packaged and frozen meals. Availability of fresh produce is seasonal.

Retail food sales in India were approximately \$132 billion in fiscal year 1998 and are growing at 13 percent per year, according to the Ministry of Finance. The retail market for fruits and vegetables has grown at over 20 percent per year in the past few years. Retail sales of subsistence foods such as cereals, breads, pulses and edible oils have started declining. As incomes have risen, there has been a shift in consumption, from subsistence to higher value foods.

There are three significant trends in Indian retailing. First, the number of small outlets has grown over the past few years, bucking the worldwide trend toward retail consolidation. Second, Indian retailers have started promoting brands and using basic merchandising

techniques. Some of these stores are even charging slotting fees for shelf space. This is in stark contrast to the small shopkeepers who paid personal attention to regular customers and strongly influenced their buying decisions. The shopkeeper's recommendation was important because he often did not display all the items he stocked. Indian consumers who choose branded foods are less likely to seek the shopkeeper's recommendation. Lastly, retailers have also started offering home delivery services in urban areas.

Food Processing

India is one of the world's largest agricultural producers; yet it is estimated that only 2 to 4 percent of India's total production of fruits and vegetables are processed and packaged. These value-added food products, however, amount to \$22.2 billion and account for one-third of the value of the food sector. Other developing countries such as Malaysia process more than 70 percent of their fruits and vegetables. In India, however, most of the raw food products are sold as primary products. The decentralized nature of production equates to small-scale



Food processing sector remains underdeveloped

operations with limited quantities from any one farmer. With investment reforms, including deregulation of the food processing industry, the processed food sector has attracted increasing foreign direct investment. Several multi-national companies, such as Pepsi, Cargill, Coca-Cola, Kellogg's, Conagra, and Pillsbury have established a presence in India, in addition to fast food chains such as KFC, McDonald's, Domino's, and Pizza Hut, and

ice cream companies such as Wells Blue Bunny, and Baskin Robins. Existing companies such as Hindustan Lever, Nestlé, Cadbury's, Britannia, Dabur, and Godrej have expanded their operations. Entry of the multinationals into the food processing sector, changing consumer tastes, and the government's enthusiasm to develop the food processing industry will contribute to continued growth in this sector.

Consumer Purchasing Behavior

Many Indians are vegetarian by tradition; moreover, many can only afford a vegetarian diet. Meat may be regularly consumed by less than 30 percent of the Indian population, due to its higher cost and a predominance of vegetarianism and Hinduism. However, only 20 percent of the population is strictly vegetarian. Non-vegetarians typically consume meat only once or twice per week.

Higher income consumers rely almost entirely on domestic help for their shopping. The domestic help buys staples, vegetables, and fresh foods from local small grocers and vendors, and other products from a variety of general merchants. The middle class has diverse purchasing habits. Many families on the upper end use part-time domestic help to do their shopping, often necessitated by a growing pattern of households with two working parents. Many families at the lower end of the middle class continue to do their own shopping. The poorer segments of the Indian population tend to buy basic staples with the first part of their paychecks, which typically are distributed on the first few days of each month. During the month, the poorer customers will buy whatever fresh foods and consumer goods they can afford, often filling in at the end of the month with some additional staples purchased on credit. In all classes, women do most of the shopping and make most of the food purchase decisions.

Most consumers prefer local shops to larger supermarkets because of proximity, personal attention, and lower prices. Nearly 95 percent of consumers purchase fresh fruits and vegetables from a local market or street vendor. Additionally, traditional markets are considered the freshest source for foods.

Indians have a strong preference for freshly prepared foods, and most have a definite prejudice against packaged, branded, or processed foods, believing them to be lower in flavor and nutrients. Many households will not even reheat foods, and make only enough for one meal. This is mainly to avoid waste, but also to ensure freshness since refrigeration is available only in wealthier households. However, with urbanization, rising incomes, more working women, the arrival of large food multinationals, and a proliferation of fast food outlets, acceptance of packaged food products is increasing. Packaging of imported goods is typically better than that of domestic goods.

Also, India has many regional differences in food tastes and preferences. For example, residents of Mumbai (formerly known as Bombay) are more willing to try new foods than those in other Indian cities. As Mumbai is home to a more progressive and skilled labor force than other parts of India, many multinational corporations test market new products in that city.

Food Distribution

India has both organized and unorganized channels for distributing goods. The food distribution system is frequently inefficient and is complicated by a number of factors, including lack of adequate refrigeration, packaging, efficient transportation; and the presence of numerous independent intermediaries.

A lack of modern refrigeration in both warehouse facilities and delivery trucks is perhaps the most constraining factor in developing the market for fresh fruits and vegetables. The costs of building cold storage facilities are very high because many of the facilities are small by global standards and thus do not take advantage of economies of scale. A typical frozen cold store in India, for frozen food application, is 40,000 cubic feet, compared to the 200,000 cubic-foot units typical of Westernized countries. In addition, Indian cold storage firms tend to rely exclusively on storage revenue. In Western countries, cold storage firms derive a good share of their revenue by offering a range of services: handling, freezing, inventory management, delivery, palletizing, labeling, load mixing, and so on. The lack of



Typical truck used for transporting domestic produce

adequate cold storage facilities is also due in part to the low demand for cold chain facilities. Many consumers simply do not place an added value on refrigerated foods and often are not willing to pay more for them. Also, the lack of refrigeration is in part due to the high cost and limited availability of electricity.

Post-harvest produce losses (which can run as high as 35 percent) reportedly are quite significant for imports as well. To overcome this problem, some of the bigger retail operations are beginning to have their own cold storage facilities and refrigerated trucks. However, once produce arrives at the retail level, it is unlikely it will be kept under refrigeration.

While some produce, such as grapes and strawberries, is packed in modern facilities in cardboard boxes or plastic clamshells, most produce is not packaged. Often the produce is not packaged at all. Instead, it may be packed in wood boxes with straw and old newsprint around the edges or between the layers of produce.

Lack of adequate transportation infrastructure makes it extremely difficult to move perishable agricultural items to cold storage in a timely manner. Currently, it is illegal to use large refrigerated trucks (over 9 tons) in India. Interstate movement is often unreliable due to the failure of shipping companies devote attention and resources to product handling.

There are numerous intermediaries who have little appreciation of consumer demands. The intermediaries lead to unnecessary handling waste, and an inevitable drop in the quality of the product. For example, it is not uncommon for there to be six or seven intermediaries in the fruit and vegetable sectors. However, in spite of the number of intermediaries involved they are important because they partially make up for the lack of infrastructure providing functions normally performed by transport companies, commodity processors, and cooperatives in other countries.



Newsprints are still used for packaging

Wholesale Markets

Fruits and vegetables are typically supplied to markets through wholesale centers, better known as Agricultural Produce Market Committees (APMC's). APMC's are quasi-governmental organizations established to regulate marketing of agricultural products at the wholesale level to create price transparency. APMC's are set up for growers to market their products and usually represent an area that grows similar crops. In addition, they are responsible for dissemination of market-related information, such as production, storage, transportation, and movement of commodities.

Growers have the option of selling their produce not only through a local APMC, but also through other APMC markets or directly to retailers. Regardless of who buys the produce, the buyer has to pay the 1 percent CESS tax, which goes back to the APMC. While wholesale markets are important links in the distribution

chain for domestic produce, they are less likely to figure prominently in the distribution of imported produce. Some importers have their own distribution networks delivering the produce from their own cold storage facilities directly to the hotels, restaurants, and retail outlets. Most of the produce imports are funneled through APMC's for distribution.

Retail Markets

Despite the large number of intermediaries in the Indian retail market, typically the retailer has the option of either buying food products from a wholesaler or distributor, another retailer, an importer, or directly from overseas suppliers. While wholesalers and distributors sell to stores of all sizes, licensed importers are more likely to sell only to large retailers. The Indian importer may also act as a wholesaler or distributor, and quite often the larger retailers sell food products to the smaller retailers. However, established distribution patterns are slowly giving way to more streamlined operations, with the larger retailers increasingly buying directly from exporters and farmers.

Imports

Most American products are transshipped through regional hubs, such as Dubai and Singapore, due to their more liberal trade policies, efficient handling, and reduced transport times. Transport time from California to India is at least 30 days, and in some cases as long as 45 days. The primary points of entry are Mumbai and (to some extent) Chennai and Calcutta. Container handling facilities are available at most major ports and in several cities; however, only a few ports can berth the large Panamax vessels, and bulk handling facilities are very limited.

Market Potential for Agricultural Products

As the government liberalizes trade, India emerges as a potentially large market for U.S. horticultural products. India imported approximately \$500 million worth of vegetables, fruits, and nuts in 1999. The United States is India's third-largest food exporter, accounting for



Wholesale market in New Delhi

approximately \$45 million or 9 percent of its imports in 1999. Although U.S. food exports to India grew an average of 9 percent per year from fiscal 1994 to 1998, they remain well below the 23-percent U.S. share of 1994.

Competition

The United States faces substantial competition in supplying food to India, with the biggest competitor being India itself. Domestically grown fruits and vegetables, although generally of lower quality, pose a significant threat, since domestic prices are generally lower than the prices of imported fruits and vegetables. Almonds account for almost 90 percent of U.S. horticultural sales in this market, followed by fruit and vegetable juices, apples, frozen potato fries, and wine. Unshelled almonds alone account for 3.2 percent of India's total food imports. Reducing government-imposed tariffs and duties may make U.S. horticultural products more competitive.

Brazil, Australia, Canada, and Argentina are the primary competitors of the United States in India's imported food market, and have taken market share away from U.S. suppliers over the past several years. The proximity of New Zealand, Australia, and some European countries gives these countries a freight advantage over the United States. Europeans in general,

and more specifically the English, have a long history of trade and cultural ties with India. The Australians are also stepping up efforts to enter the Indian market.

U.S. fruit juice exports to India face competition from Brazil and the United Kingdom. U.S. apples primarily compete with those of New Zealand, Australia, and South Africa. India imports preserved vegetables such as tomatoes from the United States and Switzerland. U.S. olive exports compete with Spain. The United Kingdom and France are the main competitors

for U.S. wine. India also imports fruits and nuts from Iran, Guinea, and Tanzania.

Best Products Perspective

Although access for imported agricultural products remains limited, the market potential for fruit and vegetable exports to India over the next decade is very promising. The recent lifting of import licensing restrictions on several food products and the reduction in the bound tariff rate for most of these food products, albeit at high applied duties, will provide opportunities for U.S. horticultural imports.

Rising living standards and the expanding number of middle-class consumers are expected to increase imports as consumers demand more variety and greater quality of food products. However, because most of India's 1 billion people have low incomes, domestic demand is mainly for basic, low-priced staples, e.g., rice, bread, peas, and lentils. Horticultural imports have risen since the lifting of restrictions, and the increase is expected to continue. Tree nuts, apples, pears, table grapes, frozen potato fries, dried fruits, and wine have the highest import potential.

Tree Nuts — Ongoing trade negotiations with India since 1988 have succeeded in opening this market for U.S. almonds. By the end of 1999, these efforts had

helped U.S. almond sales reach sales \$45 million, making India our ninth-largest market. India imports most of its almonds from the United States (approximately 95 percent), and small amounts from Afghanistan and Iran, a fact which has to do more with tradition than quality. Indian importers primarily buy in-shell whole natural almonds because of the lower tariff than for shelled almonds. The elimination of India's duty on in-shell almonds would result in an increase of U.S. almond exports to India of approximately \$100 million per year, according to industry sources.

The almonds can be shelled by hand because of low labor cost and resold within India. Hand-shelled almonds provide importers with a product virtually free of blemishes, far superior to mechanical shelling. Almonds are very much a part of the cultural eating patterns of Indians. The main consumption of almonds is as a food ingredient, rather than a snack.. About 75 percent of the total sales takes place in the winter months.



Indian women hand-shelling almonds

Until recently the market potential for U.S. pistachios was limited, given licensing requirements and availability of lower priced pistachios from Iran, India's major supplier. However, the elimination of import licensing has significantly improved the market potential U.S. pistachios. Iranian pistachios are primarily used for processing and are considered to be greener and chewier than U.S. pistachios. U.S. pistachios are considered much better for snacking, but will have to overcome consumers' unfamiliarity with the U.S. product.

Apples — The export prospects for U.S. apples are good, and although the domestic market is extremely price-sensitive, consumers are prepared to pay a premium for high-quality apples, particularly during the off-season (March-July). Unlike the seasonal demand for most other fruits, Indian consumers have a year-around appetite for apples. Market sources report a strong preference for Red Delicious, though consumers are increasingly demanding other varieties. Although Red Delicious makes up most of the imports, many traders believe there is opportunity for varieties such as Fuji, Gala, Golden Delicious, Granny Smith, and Braeburn.

U.S. apples wholesale in Mumbai for about \$1.35 per kilogram, and domestic apples from \$0.30 to \$0.50 per kilogram. High-quality apples reportedly receive a premium of 30-50 percent, depending on the season and market.

Market sources expect U.S. sales to increase, but expect stiff competition from Australia and New Zealand. Australia has a strong presence in southern India, while South Africa and New Zealand are more active in the north.

Pears — While India is a large producer of fruits, there is little production of pears. One constraint to U.S. exports could be the lack of awareness with the product, but many importers who have imported pears believe this isn't an issue. The absence of a domestic pear industry will certainly make it easier to reduce the tariffs for pear imports, unlike commodities that have organized domestic industries.

Table Grapes — India could very well offer a multi-million-dollar market to California grapes, as evidenced by the rapid growth of the country's table grape industry. And though it's anticipated there may be some resistance by Indian grape growers, this should not be a major obstacle since India's grape harvest is counter-seasonal to that of California. However, the lack of adequate cold storage facilities, as well as the recent increase in the bound tariff from 30 to 40 percent, may be obstacles.

The key markets for table grapes are the Northern

cities Mumbai and New Delhi. Consumers have greater awareness levels of table grapes, because of familiarity with Afghanistan grapes, and higher per capita income. Consumers prefer table grapes that are much sweeter (19-22° Brix) than those typically consumed in the rest of the world (17-19°). In addition, consumers prefer a yellowish-green color (Thompson Seedless) and a more elongated grape (<19 millimeters).

Frozen Potato Fries — India is one market where the export opportunities are promising given the sound economy, market reforms, and ever-changing lifestyles. A faster pace of life and a demand for quality, variety, and convenience in food products, consistent with the patterns observed in other markets, coupled with the large population, base translate into enormous potential for frozen potato fries. As elsewhere, the primary vehicle for fry distribution is the international fast food restaurant, a sector which is steadily expanding via new outlets and movement into new regions.

The United States is well placed to compete in the frozen potato sector, since domestic competition is nonexistent. The U.S. has a 50-percent market share, with Australia accounting for most of the balance. Very small quantities are also imported from the Netherlands and Canada.

As mentioned, the distribution chain for frozen foods is inadequate, which will obviously be a major market constraint. Fortunately, most of the international fast food chains have their own cold storage facilities, and should be able to service future demand with these existing facilities.

Dried Fruit — The market potential for U.S. raisins shows promise, but may be limited by higher landed prices of U.S. product and the preference for light-colored green raisins. Indians prefer the golden raisins because they are drier, not too sticky, and sweeter. However, there is some preference for dark raisins in southern India because of traditional usage as a food ingredient. Despite a prohibitively high tariff, India does import limited quantities of raisins primarily from Afghanistan, Pakistan, and China. The raisins imported from Afghanistan are very popular because of their

plumpness; however, imports from these countries have been declining over the years due to increased domestic production.

India may be one of the few frontiers left in the world where the United States could realize significant export growth in prunes, since it is already a strong market for dried fruits and nuts. Currently, Iran is the only exporter of prunes to India, but the prunes are considered to be of poor quality and very perishable.

Wine — India is one of the largest alcohol beverage markets in the world, representing an estimated 10



Refrigeration is not available at the retail market

percent of global consumption, or roughly twice the size of the US. market. Conversely, it is also one of the world's most restricted markets, with an actual clause in the constitution requiring the state to endeavor to enforce prohibition. However, only four of the 29 states are dry, with many exercising a monopoly control over wholesale distribution and/or retail sales.

There are considerable restrictions regarding advertising, licensing, and manufacturing. High taxation rates are an important source of revenue to the government. Despite these challenges, wine consumption has grown recently at a rate of 12 to 15 percent annually. U.S. wine exports to India are forecast to reach \$200,000 and \$350,000, respectively, in 2000 and 2001.

Although the current market for wine is quite small, there is the possibility that changes in alcoholic beverage consumption in India could mirror other countries where wine consumption is growing at the expense of beer and spirits. Wine sales to hotels are increasing at a rate of 20 to 40 percent annually.

Initially wine was sold in hotels that primarily catered to foreign visitors, but this has been changing as more hotels that cater to Indians have begun selling wine. The hotels predominantly sell French wines, though in the last 2 to 3 years their sales of Australian and U.S. wine have increased. Lack of consumer recognition is the chief impediment to U.S. wine sales.

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