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Imports' Share of U.S. Diet Rises in Late 1990s

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Although food imports account for a relatively small share of the total U.S. diet, their importance grew considerably during the late 1990s. USDA's Economic Research Service (ERS) estimates that imports' share of the total quantity of food consumed domestically (including alcoholic beverages) rose from an average of 7.5 percent for 1979-94 and 7.4 percent for 1995 to 9.1 percent for 1998 and 1999. In comparison, imports supply about 60 percent of the calories in the Japanese diet. Among the fastest-growing U.S. imports are high-value products, such as seafood, red meats, cheese, fruits and juices, vegetables, beer, and wine, each increasing significantly since 1995.

U.S. consumers benefit from imports because imports expand food variety, stabilize year-round supplies of fresh fruits and vegetables, and temper increases in food prices. Trade mitigates domestic production shortfalls caused by adverse weather or other disruptions, thereby securing more stable supplies and reducing commodity price volatility. For example, following the almost total destruction of U.S. lime trees by Hurricane Andrew in 1992, a surge in lime

imports from Mexico helped maintain domestic supplies and kept retail lime prices from otherwise sharply increasing.

Strong U.S. Economy Makes Imports More Affordable

The better-than-20 percent rise in imports' share of total domestic food consumption between 1995 and 1999 resulted in part from exceptional U.S. economic expansion during those years. U.S. real (adjusted for inflation) Gross Domestic Product—the output of goods and services produced in the United States—grew an average of 4 percent per year between 1995 and 1999. Inflation-adjusted per capita disposable income in the United States grew 10 percent from 1995 to 1999, compared with 3 percent from 1990 to 1994. Low commodity prices, a strong U.S. dollar, recessions in Asia and Latin America, sluggish growth in Europe, and the effects of trade agreements, particularly in North America, also contributed to the surge in U.S. imports in the last half of the decade.

Low prices from abundant supplies, weak foreign demand, and foreign economic downturns made foreign goods more affordable to U.S. consumers. Prices of U.S. food imports were about 12 percent lower in 1999 than in 1995. Coffee,

cocoa, sugar products, and other prepared foods were among imports with the steepest price declines. On average, prices of meat, fruits, and vegetables fell 5-10 percent between 1995 and 1999.

A strong U.S. dollar relative to other currencies also made foreign goods more affordable in the United States. For total U.S. imports from 1995 to early 2000, the dollar increased by 15 percent in real value against currencies of source countries. For noncompetitive imports like cocoa and coffee—products the United States does not produce or produces only in very small quantities—the dollar rose by 24 percent against the currencies of the countries exporting these foods to the United States.

Trade Agreements and Technological Advances Increase Imports

U.S. participation in trade agreements, such as the North American Free Trade Agreement (NAFTA), has increased the availability and affordability of imported foods through reduced trade barriers. NAFTA is a comprehensive trade-liberalization agreement among Canada, Mexico, and the United States. NAFTA progressively eliminates most tariff and nontariff barriers to trade between these countries over a transition period that began on January 1,

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1994, and concludes on January 1, 2008. According to ERS, NAFTA has expanded U.S. agricultural trade with Canada and Mexico and has boosted trade of some agricultural commodities substantially above levels that would have occurred without the agreement. Imports from Canada and Mexico rose by more than one-third between 1995 and 1999, from \$9.5 billion to \$12.9 billion.

Adoption of new production technologies, marketing infrastructures, and other technological improvements by exporting countries has enabled foreign products to meet the quality and safety standards demanded by American consumers and also boosted the comparative advantage of imported foods in the U.S. marketplace. With improvements in shipping, handling, and plant breeding, fruits and vegetables can now be shipped long distances and over greater lengths of time and still maintain appearance and quality. Plant breeding has also produced new varieties of traditional fruit, such as seedless grape and tangerine varieties favored by consumers, increasing demand for these products.

Availability of Out-of-Season Crops and New Crop Varieties Boosts Import Demand

Imports have played a major role in changing consumer demand for fruits and vegetables. Fresh fruit consumption, on a per capita basis, grew 20 percent between 1985 and 1999, partly as a result of the greater availability of out-of-season imports. Traditionally, during the winter months, only citrus, bananas, and apples were available in U.S. supermarkets. Since the mid-1980s, however, improved transportation and increased production in Southern Hemisphere countries has made such fruit as grapes, peaches, and plums, mostly from Chile, available

in U.S. grocery stores in the winter. As a result, consumers have substituted imports, especially grapes and pears, for traditional winter fruit, such as oranges and grapefruit. Fresh fruit and vegetable imports are concentrated in the U.S. off-season, thereby providing consumers with year-round availability and affordability (fig. 1).

Trade has also enabled new varieties of tropical produce not grown in the United States to become popular with U.S. consumers. Through immigration, the U.S. population has grown increasingly diverse, and many people desire the fruits and vegetables they ate in their native countries. As a result, imports of tropical fruits, such as mangoes and papayas, have increased, especially in the 1990s. As the general population becomes familiar with these products, demand continues to grow and the products become regularly stocked items in the marketplace. Although tropical fruits and vegetables, such as pineapples, avocados, yams, and Japanese egg-

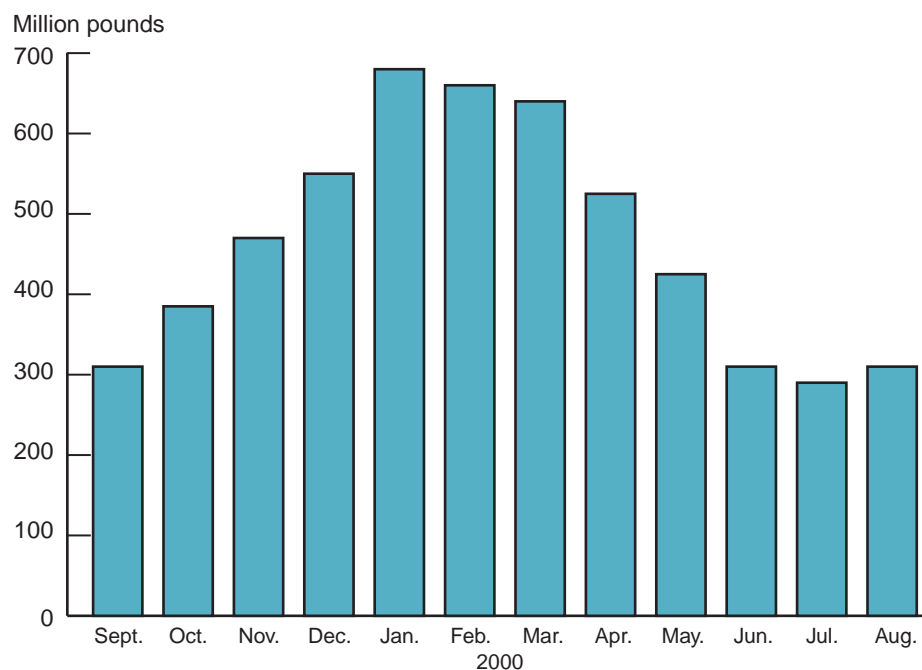
plants, are grown in Hawaii and Florida, imports will continue to be necessary to meet the growing demand. Similarly, clementine imports, mostly from Spain, increase at the same time the U.S. citrus market is at its peak. Even though clementines, a tangerine variety, are often higher priced than domestic tangerines and oranges, the popularity of the easy-to-peel, seedless clementine continues to rise.

Imports have also increased for commodities already produced in the United States, creating a more stable supply for consumers. For example, Mexican tomato imports have become an important source of winter tomatoes in the domestic market.

Demand for Novel, Nutritious, Convenient Foods Spurs Imports

Other factors underlying the growth in consumption of imported foods include increasing ethnic

Figure 1
Fresh Vegetable Imports Peak in the Off-Season



Source: U.S. Department of Commerce, Bureau of the Census.

diversity within the United States, mounting scientific evidence concerning diet and health, and growth in away-from-home eating, fruit and salad bars, and cut-up, packaged produce, which introduce consumers to new foods and cuisines. For example, chili peppers have been one of the fastest growing specialty produce items in the last decade, illustrating the growing influence of the U.S. Hispanic and Latino populations, a taste for alternative flavoring agents (spurred by

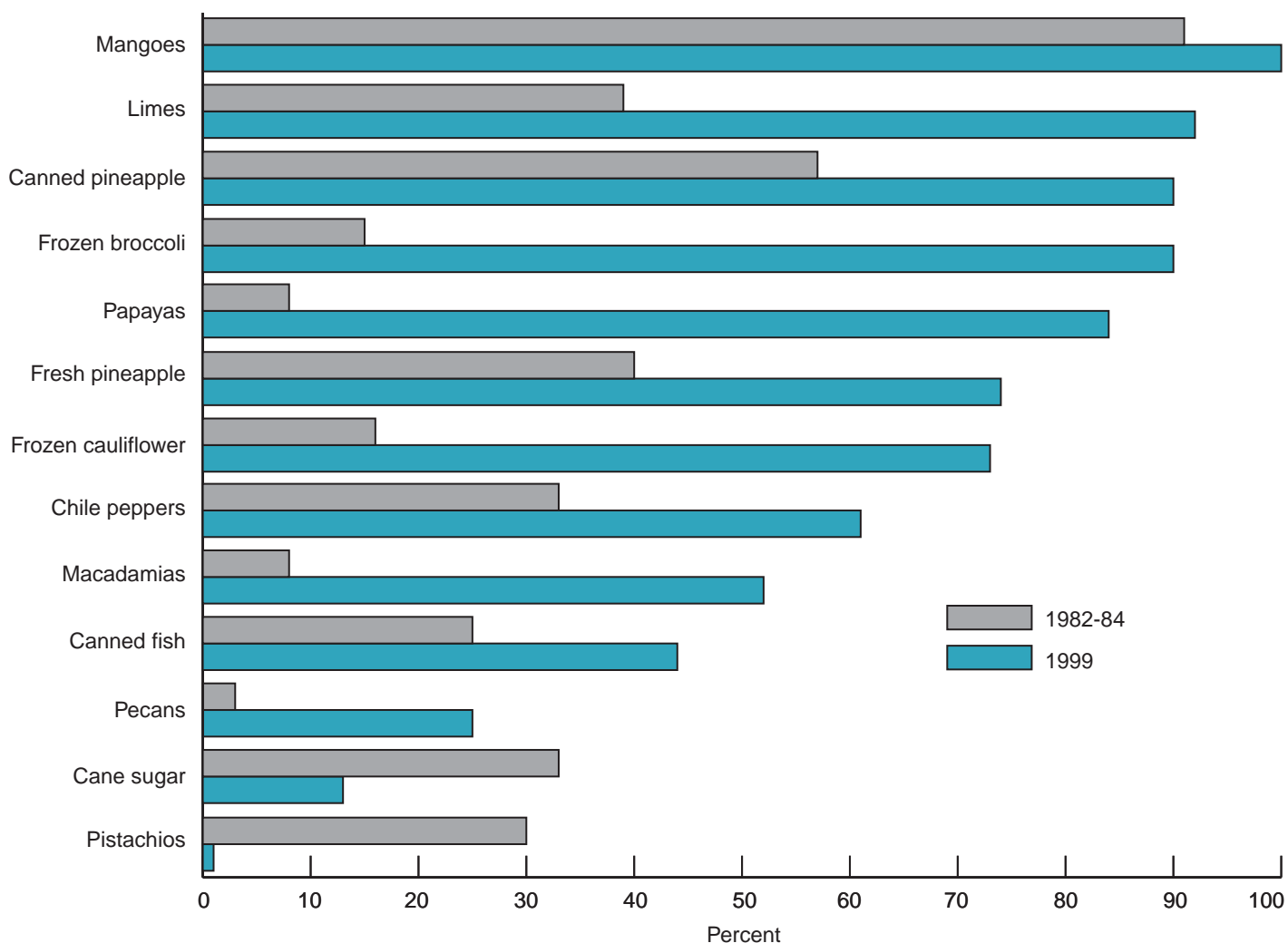
consumers' desire to cut dietary fat), and the changing American diet. Americans have been eating more chilies via southwestern-style fast foods, innovative new cuisines, and myriad new salsa, hot sauce, and other chili-based products. Imports of chilies grew 171 percent between 1982-84 and 1999 to 742 million pounds in 1999 and accounted for 61 percent of domestic chili consumption in 1999, compared with 33 percent in 1982-84 (fig. 2).

Seafood, Beef, and Cheese Dominate Animal Product Imports

ERS estimates that imports accounted for about 4.5 percent of the animal products in the U.S. diet in 1999, up from 4.0 percent in 1998 and an average of 3.4 percent in 1979-97. In 2000, imports accounted for 10 percent of the total red meat, poultry, and seafood (edible retail weight equivalent) consumed domestically (table 1). Of imports'

Figure 2

U.S. Lime Imports More Than Doubled as a Share of Consumption Between 1982-84 and 1999



Note: Excludes noncompetitive imports—bananas, coffee, tea, cocoa, tropical oils (coconut oil), and coconut—for which imports exceed 99 percent of consumption.

Source: USDA's Economic Research Service and U.S. Department of Commerce, Bureau of the Census.

10 percent-share, fish and shellfish accounted for 50 percent; beef and veal 36 percent; pork 12 percent; and lamb, nearly 2 percent. Chicken and turkey imports were minuscule.

More than two-thirds of the fish and shellfish consumed in the United States in 2000 was imported, up from just under one-half in 1977-79. Imports accounted for 79 percent of the fresh and frozen seafood consumed domestically in 2000, 44 percent of the canned seafood, including canned tuna, and 85 percent of the cured seafood, such as smoked salmon.

The United States is a major exporter of grain-fed beef but a large importer of grass-fed beef for the processing industry, primarily for hamburger. In general, imported beef competes with U.S. cull dairy

and beef cows in the production of hamburger. Imports have averaged a 10-percent share of U.S. consumption since the mid-1980s, but the actual level depends on the phase of the U.S. cattle cycle. During the liquidation phase of the cycle, U.S. slaughter of cows from breeding herds increases and imports of beef decline. When the United States enters a cattle-rebuilding phase and retains female stock (heifers and cows) for breeding, imports of beef increase. Most U.S. beef imports come from Canada, Australia, and New Zealand.

Imported dairy products are mainly manufactured foods—cheese, butter, and dry milk products. Imports accounted for nearly 3 percent of total dairy products (milk-equivalent, milkfat basis) con-

sumed in the United States in 2000, 5 percent of the cheese consumed, and 3 percent of the butter consumed. Imports' share of U.S. consumption of "other cheese," which includes Italian cheeses, such as mozzarella, declined from 14 percent of total domestic consumption in 1977-79 to 8 percent in 2000. The growing popularity of pizza over the last two decades has spurred domestic production of mozzarella.

Fruit, Vegetables, Sugar, and Vegetable Oils Top Crop Product Imports

The 12-percent import share of U.S. consumption of crop products in 1999 is relatively unchanged since 1996. This finding reflects offsetting

Table 1

Two-Thirds of the Seafood Americans Ate in 2000 Was Imported, Compared With Less Than Half in 1977-79

Selected commodities	Import quantity				Imports' share of total consumption ¹			
	1977-79	1992-94	1997-99	2000	1977-79	1992-94	1997-99	2000
	<i>Million pounds</i>				<i>Percent</i>			
Total meats ^{2,3}	3,308	4,272	4,967	5,654	8.3	8.7	9.4	10.3
Red meats ²	1,905	2,144	2,347	2,818	6.7	7.3	7.6	8.8
Beef and veal	1,545	1,593	1,753	2,028	8.4	9.7	9.9	11.0
Pork	336	518	526	705	3.4	4.1	4.0	5.2
Lamb and mutton	23	33	67	85	10.1	13.7	29.3	36.4
Poultry	0	1	8	10	0.0	—	—	.1
Fish and shellfish ²	1,404	2,127	2,613	2,826	48.5	55.3	65.1	68.1
Fresh and frozen	1,152	1,635	2,089	2,211	65.8	62.7	76.5	78.5
Canned	189	423	454	546	17.8	36.4	37.8	43.8
Cured	63	69	70	69	75.0	89.2	86.8	85.2
Eggs	12	4	7	8	.2	.1	.1	.1
Total dairy products ⁴	2,194	2,736	4,087	4,445	1.8	1.8	2.6	2.7
Cheese ⁵	233	312	361	409	6.3	4.6	4.7	4.9
American cheese	17	18	40	45	.8	.6	1.2	1.3
Other cheese	216	294	321	364	13.5	7.6	7.3	7.5
Butter ⁶	2	4	38	32	.2	.3	3.1	2.5
Condensed and evaporated milk ⁶	1	5	10	15	.1	.6	1.6	2.9
Nonfat dry milk ⁶	2	1	10	7	.3	.2	1.2	.9

Note: — = less than 0.05 percent.

¹Calculated from commodity supply and use balance sheets. Import share is the total quantity imported divided by the quantity available for domestic human food consumption. A portion of the imports of some commodities is exported and a portion of the imports of some products is diverted to nonfood uses; therefore, the ratios presented here may overstate the importance of imports in domestic consumption for some commodity groups.

²Totals may not add exactly due to rounding.

³Boneless, trimmed weight (retail weight minus the weight of bone or shell, if any, in retail items).

⁴Milk equivalent of all dairy products calculated on a milkfat basis.

⁵Natural equivalent of cheese and cheese products; excludes full-skim American and cottage-type cheeses.

⁶Product weight.

Source: USDA's Economic Research Service.

trends between rising import shares of horticultural products—fruits, vegetables, wine, and beer—and lower import shares of sugar and candy, vegetable oils, grain products, and tree nuts in 1999. The 12-percent import share of crop product consumption in 1996-99 compares with an annual average of 10.4 percent for 1979-95.

U.S. sugar imports have declined significantly over the past 20 years as corn sweeteners displaced cane and beet sugar in the American diet. Sugar imports dropped by nearly three-quarters between 1977-79 and 1999, from 9.9 billion pounds to 2.6 billion pounds, on a refined-weight

basis (table 2). Imports accounted for 14 percent of total refined sugar consumption in 1999, down from 49 percent in 1977-79. The United States imports sugar mainly from the Dominican Republic, Brazil, and the Philippines.

Imports' share of U.S. canola oil consumption dropped from 84 percent in 1992-94 to 80 percent in 1999, as a result of increasing domestic production. Olive oil imports increased by 52 percent between 1992-94 and 1999, as many Americans tried to follow nutrition recommendations that emphasize use of monounsaturated fats. During the same period, imports of coconut

oil—a highly saturated fat used mainly in crackers, cookies, and confectionery products—dropped by more than a quarter. The United States imports canola oil from Canada, olive oil from Western Europe, and coconut and other tropical oils from Indonesia, the Philippines, and Malaysia.

U.S. imports of wheat flour products consist mainly of pasta and noodles from the European Union, Canada, and Asia, and accounted for only 2 percent of total consumption in 1999. Imports accounted for 14 percent of U.S. rice consumption in 1999, up from less than 0.05 percent in 1977-79. Nearly all U.S. rice

Table 2

One-Seventh of the Refined Sugar in the American Diet Was Imported in 1999, Down From a Half in 1977-79

Selected commodities	Import quantity				Imports' share of total consumption ¹			
	1977-79	1992-94	1997-99	1999	1977-79	1992-94	1997-99	1999
	<i>Million pounds</i>				<i>Percent</i>			
Sugar (cane and beet) ²	9,902	2,557	3,356	2,581	49	15	19	14
Corn sweeteners ³	1	383	260	292	—	2	1	1
Canola oil ⁴	**	900	1,096	1,140	NA	84	85	80
Olive oil	57	275	382	417	95	95	95	95
Coconut oil	364	207	140	153	100	100	100	100
Wheat flour and products	73	650	927	931	—	2	2	2
Rice	7	439	701	730	—	10	14	14
Tree nuts ^{5,6}	118	221	253	283	29	35	36	34
Almonds	—	—	—	—	—	—	—	—
Brazil nuts	NA	19	19	20	100	100	100	100
Cashews	70	137	165	191	100	100	100	100
Hazelnuts	8	10	11	13	56	44	56	47
Macadamias	—	4	9	11	—	32	45	52
Pecans	1	29	27	26	1	25	23	25
Pistachios	9	1	—	—	97	2	1	1
Walnuts	1	3	2	—	1	3	2	—
Peanuts ⁷	1	26	155	169	—	1	7	7
Coffee ⁸	2,381	2,479	2,809	2,987	100	100	100	100
Tea ⁹	176	262	259	274	100	100	100	100
Cocoa ¹⁰	766	1,561	1,740	1,880	100	100	100	100

Notes: ** = not applicable. — = Less than 0.5 percent. NA = not available.

¹Calculated from commodity supply and use balance sheets. Import share is the total quantity imported divided by quantity available for domestic human consumption. A portion of the imports of some commodities is exported and a portion of some commodities is diverted to nonfood uses; therefore, the ratios presented here may overstate the importance of imports in domestic consumption for some commodity groups.

²Refined weight.

³Dry weight.

⁴Canola oil was not approved for human use by the U.S. Food and Drug Administration until 1985.

⁵Totals may not add exactly due to rounding.

⁶Shelled basis. Includes miscellaneous nuts, not shown separately.

⁷Farmers' stock basis.

⁸Green bean equivalent.

⁹Dry leaf equivalent.

¹⁰Chocolate liquor equivalent.

Source: USDA's Economic Research Service.



Import levels of certain food products have been augmented by improvements in shipping and transportation technology, which enable products to be shipped greater distances and over longer periods of time while maintaining appearance and quality.

Credit: USDA.

imports are aromatic varieties that cannot currently be grown in the United States. Jasmine rice from Thailand accounts for about 75 percent of U.S. rice imports. Almost 12 percent of U.S. rice imports consist of basmati rice from India and Pakistan. Italy supplies a small amount of arborio rice, typically used in making risotto.

Cashew nuts made up two-thirds (67 percent) of the volume of tree nut imports (excluding coconut meat) in 1999, followed by pecans (9 percent) and brazil nuts (7 percent). More than 65 percent of cashew nut imports were from India, the largest supplier of tree nuts to the United States. Mexico provided 96 percent of all pecan imports, while Brazil and Bolivia each supplied 35 percent of all brazil nut imports.

Fresh Fruit and Juice Imports Show Strong Growth

Of all food groups, import growth has been the strongest in fresh fruit. In 1999, 40 percent of the fresh fruit (including melons) Americans con-

sumed was imported, up from 24 percent in 1977-79 (table 3). Bananas accounted for 60 percent of the volume of fresh fruit imports. Without bananas, fresh fruit imports rose from 6 percent of domestic consumption in 1977-79 to 21 percent in 1999. Sold year round in the domestic market, bananas rank number one in U.S. per capita fresh fruit consumption, followed by apples and oranges. To meet domestic demand, the United States imports virtually all bananas, primarily from Costa Rica, Guatemala, Ecuador, Colombia, and Honduras.

Imports accounted for 29 percent of the processed fruit Americans consumed in 1999, up from 13 percent in 1977-79. Processed fruit accounted for 49 percent of total fruit imports in 1999, compared with 42 percent in 1977-79. Fruit juices—orange, apple, and pineapple—accounted for 85 percent of total processed fruit imports in 1999 and canned fruit accounted for 11 percent. Pineapples accounted for 84 percent of total canned fruit imports, followed by olives at 10 percent.

Mexico is the United States largest supplier of fresh and frozen fruit, accounting for about 35 percent of the total value of fresh and frozen fruit imports. Mexico ships limes, melons, tangerines, pineapples, mangoes, grapes, papayas, avocados, and strawberries. Low transportation costs due to geographic proximity and tariff reductions or eliminations resulting from NAFTA provide Mexico a competitive advantage over other exporting countries.

Chile is also a major supplier of fresh fruit, with a 28 percent share of the U.S. import market. Located in the Southern Hemisphere, Chile can provide fresh fruit during the off-season months when the United States produces little, particularly from November through March.

Other fruit and fruit product suppliers to the United States are Brazil, the largest supplier of orange juice, and Argentina, Chile, and China, the leading suppliers of apple juice. Western Europe is a major supplier of processed fruit products, such as wine and fruit juices. Southeast Asia provides the largest share of canned fruit products, specifically canned pineapple from the Philippines and Thailand.

Fresh Vegetables, Frozen Potatoes, and Canned Tomatoes Top Vegetable Imports

Americans consumed an average of 421 pounds of vegetables per person in 1999, on a fresh-weight basis, compared with 406 pounds per person in 1992-94 and 339 pounds per person in 1977-79. Imports contributed 10 percent of total U.S. vegetable consumption in 1999—compared with 6 percent in 1992-94 and 3 percent in 1977-79.

Imports captured 11 percent of fresh-market vegetable consumption in 1999, compared with 7 percent in 1992-94 and 5.5 percent in 1977-79. Tomatoes accounted for 29 percent

Table 3

Imports' Share of Total U.S. Fruit and Vegetable Consumption Doubled Between 1977-79 and 1999 to 20 Percent

Selected commodities	Import quantity ¹				Imports' share of total consumption ²			
	1977-79	1992-94	1997-99	1999	1977-79	1992-94	1997-99	1999
	Million pounds				Percent			
Total fruit and vegetables ^{3,4}	12,522	27,879	36,165	39,766	9.5	15.6	18.6	20.1
Total fruit ^{3,4}	10,022	21,775	25,690	28,277	17.6	29.1	31.3	33.6
Fresh	5,492	10,158	13,097	14,333	24.4	31.5	36.7	39.6
Citrus	131	323	623	756	2.3	5.0	9.3	13.4
Limes	20	205	334	342	37.5	80.8	94.1	92.4
Oranges	47	31	127	226	1.6	.9	3.7	9.6
Tangerines	53	41	88	101	10.6	8.1	13.9	16.3
Noncitrus	5,361	9,835	12,475	13,577	31.7	38.2	43.0	44.4
Bananas	4,479	7,052	7,883	8,546	99.9	99.8	99.8	99.7
Melons ⁵	413	836	1,661	1,787	9.5	12.8	21.1	21.2
Grapes	85	726	942	1,014	11.3	38.9	43.3	45.0
Pineapples	148	281	544	624	47.1	53.5	72.7	73.7
Mangoes	30	228	436	461	71.2	95.6	97.2	98.3
Other fresh noncitrus	337	1,036	1,650	1,901	2.7	6.5	9.9	12.0
Processing ^{3,4}	4,255	11,617	12,593	13,944	13.2	27.3	27.2	29.1
Canning	847	1,457	1,355	1,533	15.8	26.6	26.5	29.0
Freezing	106	73	118	142	15.0	7.4	11.3	13.9
Dehydrating	300	354	455	463	14.0	11.0	14.6	15.0
Juicing	3,277	9,733	10,664	11,806	12.5	29.7	28.8	30.6
Orange juice	2,277	4,758	5,265	5,775	11.9	23.2	21.6	22.9
Apple juice	593	2,984	3,419	3,630	28.3	55.9	60.4	60.8
Pineapple juice	392	1,247	1,049	1,089	46.7	78.0	79.8	80.3
Total vegetables ³	2,500	6,105	10,475	11,489	3.3	5.9	9.3	10.1
Fresh	1,780	3,266	5,622	5,719	5.5	7.1	11.0	10.9
Tomatoes	774	743	1,713	1,633	27.7	17.8	36.0	33.7
Potatoes	139	586	916	923	1.3	4.6	6.9	6.9
Cucumbers	292	495	714	750	35.3	36.8	39.3	39.7
Onions	158	492	586	584	6.3	11.3	11.6	11.5
Bell peppers	140	242	430	455	22.3	15.3	24.0	24.7
Garlic	35	94	201	263	21.5	21.3	28.4	30.9
Carrots	80	138	196	185	6.5	5.0	5.2	5.0
Asparagus	6	64	114	142	9.7	42.8	54.0	57.0
Broccoli	—	25	84	100	**	2.6	5.7	6.1
Processing ³	720	2,838	4,853	5,770	1.7	4.9	7.9	9.4
Canning	584	1,462	2,168	2,707	2.6	5.1	7.5	9.5
Tomatoes	397	621	987	1,322	27.7	17.8	36.0	33.7
Chili peppers	NA	484	742	887	NA	28.3	48.4	60.9
Other vegetables	187	357	440	498	2.2	4.7	6.1	6.9
Freezing	63	1,209	2,458	2,772	.5	6.4	11.3	12.7
Potatoes	23	531	1,701	1,965	.2	3.8	10.5	12.1
Broccoli	18	454	497	530	6.2	75.1	83.6	90.4
Other vegetables	21	224	260	276	.7	5.0	5.2	5.5
Dehydrating	13	55	56	88	.4	1.4	1.2	2.0
Pulses	62	104	152	167	4.2	5.0	6.9	7.1

Notes: — = less than 0.5 percent. ** = less than 0.05 percent. NA = not available.

¹Fresh weight equivalent.²Calculated from commodity supply and use balance sheets. Import share is the total quantity imported divided by quantity available for domestic human consumption (food disappearance). A portion of the imports of some commodities is exported and a portion of some commodities is diverted to nonfood uses; therefore, the ratios presented here may overstate the importance of imports in domestic consumption for some commodity groups.³Totals may not add exactly due to rounding.⁴Excludes wine.⁵Watermelons, cantaloups, and honeydews.

Source: USDA's Economic Research Service.

of fresh-market vegetable imports in 1999, followed by potatoes (16 percent), cucumbers (13 percent), onions (10 percent), bell peppers (8 percent), garlic (5 percent), and carrots (3 percent). Imports accounted for 34 percent of fresh tomato consumption in 1999 (up from 18 percent in 1992-94). Imports' share of fresh tomato consumption rose steadily since 1994 until low domestic prices discouraged imports in 1999. In 1995 and 1996, imports surged due to the combined effect of the Mexican peso devaluation, rising demand for improved (extended shelf life) varieties, and adverse weather in Florida, which reduced output. In the past few years, greenhouse, hydroponic products made inroads into the fresh tomato retail market and imports shifted from Mexico to Canada.

Seven percent of the fresh-market potatoes Americans consumed in 1999 were imported. Since the enactment of the United States and Canada Free Trade Agreement (USCFTA) in 1989, fresh potato and seed imports from Canada have averaged 746 million pounds, 116 percent higher than the average for the 11-year period prior to USCFTA. Traditionally, a large percentage of the imported fresh potatoes from Canada have come from Prince Edward Island and have been distributed primarily along the U.S. east coast. More recently, a significant amount of potato imports have come from Manitoba, a province in midwestern Canada. Canadian producers have benefited from the U.S./Canadian exchange rate as well as transportation cost advantages over competing firms in the Pacific Northwest in shipping to east coast and midwest markets.

Imports of fresh cucumbers are highest in January and February, when U.S. production is limited by cool weather, and lowest in summer, the height of the domestic growing

season. Imports accounted for 40 percent of U.S. fresh cucumber consumption in 1999. The volume of fresh imports in 1999 was 90 percent larger than in 1990, with the majority shipped from Mexico. Cucumber imports from Canada, which have increased fourfold since 1994 due to the strong U.S. dollar and the growing demand for European-type greenhouse/hydroponic cucumbers, accounted for 5 percent of U.S. imported fresh-market cucumbers in 1999.

Imports accounted for 9.4 percent of U.S. processed vegetable consumption in 1999, up from 4.9 percent in 1992-94 and 1.7 percent in 1977-79. Canned tomatoes, canned chili peppers, frozen potatoes, and frozen broccoli are the major processed vegetable imports.

Imports of most canned vegetables are relatively low due to a highly mechanized and relatively low-cost domestic industry. However, the United States imports significant quantities of canned items not produced domestically, such as bamboo shoots and water chestnuts. Tomato products are the leading canned vegetables, and imports of items like tomato paste and tomato sauce were generally a third less in volume in 2000 than in 1990 due to increasing efficiency (new plants, lower costs) in the domestic industry. Tomato product imports surged temporarily in 1999 due to smaller-than-expected domestic production in 1998-99. Tomato imports then declined significantly in 2000 as a record-large tomato crop brought low domestic prices in 1999-2000.

Frozen vegetable imports continue to increase. Imports of frozen vegetables now account for about 13 percent of consumption—up from 6 percent in 1992-94 and 0.5 percent in 1977-79. Broccoli accounts for 19 percent of the 2.8 billion pounds of frozen vegetable imports. Most frozen broccoli comes from Mexico

(with smaller amounts from Guatemala). Frozen broccoli has the highest degree of import penetration among all vegetables, with about 90 percent of consumption coming from imports. Cutting broccoli into florets is a labor-intensive task. To cut costs, the industry basically moved from California to Mexico in the late 1980s and early 1990s.

As U.S. exports of french fries continue to rise—particularly to Japan, China, other Asian countries, and Latin America—so, too, do U.S. imports of french fries from Canada. Since the enactment of USCFTA, imports of french fries from Canada have increased an average of 25 percent per year. Canadian-produced fries currently account for 13 percent of U.S. consumption, up from about 2 percent in 1989. With the processing capacity in Canada continuing to expand, the United States could become a net importer of french fries for the first time in 2001.

References

- Dyck, John. "Japan's Changing Agricultural Policies," *Agricultural Outlook*, AGO-270, April 2000, U.S. Department of Agriculture, Economic Research Service, pp. 14-19.
- Jerardo, Alberto. "Import Share of U.S. Food Consumption," *U.S. Agricultural Trade Update*, June 27, 2001, U.S. Department of Agriculture, Economic Research Service, pp. 8-12.
- Pollack, Susan L. "Consumer Demand for Fruit and Vegetables: The U.S. Example," in Regmi ed., *Changing Structure of Global Food Consumption and Trade*, Agriculture and Trade Report WRS-01-1, U.S. Department of Agriculture, Economic Research Service, May 2001, pp. 49-54.
- U.S. Department of Agriculture, Economic Research Service. *NAFTA Commodity Supplement*, WRS-99-1A, March 2000. ■