International Agricultural Trade and Policy Center

A DESCRIPTIVE ANALYSIS OF GUATEMALA, HONDURAS, AND PANAMA WHO IMPORT UNITED STATES DAIRY PRODUCTS

By

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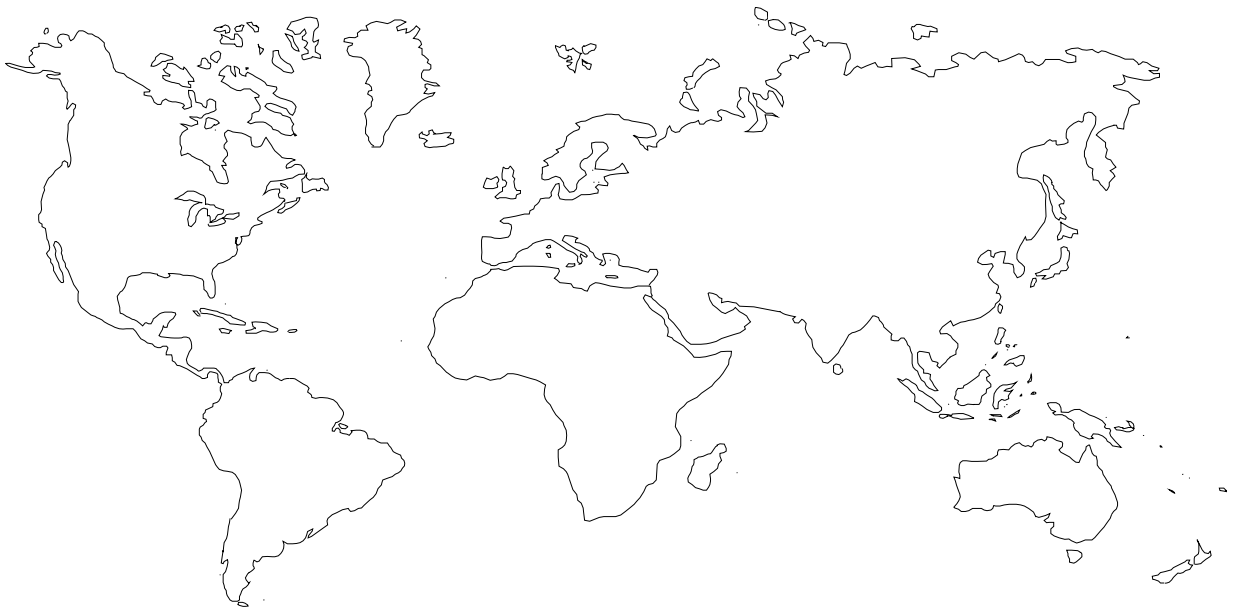
MGTC 03-6 **October 2003**

MONOGRAPH SERIES



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INTERNATIONAL AGRICULTURAL TRADE AND POLICY CENTER

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Xumin Zhang, Richard L. Kilmer and Andrew Muhammad[1]

INTRODUCTION

World dairy production and trade have experienced increases during the last decade. World trade liberalization, elimination of non-tariff trade barriers, and reduction in dairy export subsidies have increased the United States (US) interest in world dairy markets. The US is in a good position to gain greater access to international dairy markets.

Information by country, which is considered to be a potential importer of U.S. dairy products, and by individual dairy products in the international markets is needed. The information is useful to individuals interested in developing export dairy markets and direct foreign investment in dairy industries in those countries. In the study, 25 dairy import countries were selected from around the world (Table 1). Three countries in the Central America, Guatemala, Honduras, and Panama, are covered in this paper.

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Table 1. Major importers of U.S. dairy products.

Canada Mexico	Central America	South America	Caribbean	European Union	East Asia	Southeast Asia	North Africa & Middle East
Canada	Guatemala	Chile	Bahamas	Netherlands	Hong Kong	Indonesia	Egypt
Mexico	Honduras	Colombia	Bermuda	United Kingdom	Japan	Malaysia	Saudi Arabia
	Panama	Venezuela	Dominican Republic		South Korea	Philippines	
			Jamaica			Thailand	
			Trinidad & Tobago			Vietnam	

The following paper covers a descriptive analysis for each individual country about the macroeconomic conditions, milk and dairy production, consumption, imports, the US share of the dairy imports, dairy trade policies, and how these factors have changed overtime. The information in this report can provide a starting point for individuals interested in exploring exports to and direct investment opportunities in Guatemala, Honduras, and Panama**.**

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OVERVIEW

World Dairy Production

World production of cow milk increased in the period 1991 to 2001 at an average annual rate of 0.5 percent. In the period 1991 to 1993, world production of milk trended downward from 469,969,290 metric tons in 1991 to 460,185,174 metric tons in 1993 (Table 1). Since then, world production of fresh milk has experienced continuous increases through 2001. In 2001, the world production of cow milk totaled 494,074,772 metric tons, a 1.4 percent increase, compared to 2000 (487,216,313 metric tons) (Table 1). Milk production in Guatemala, Honduras, and Panama totaled 1,034,412 metric tons in 2001 (Table 2), or 0.2 percent of the total world production.

Overall, in the period 1991 to 2001, world butter production increased at an average annual rate of 0.6 percent. Significant decreases occurred in the period 1991 to 1994 when world butter production decreased from 7,230,211 metric tons in 1991 to 6,626,853 metric tons in 1994, for an average annual decrease of –2.9 percent. Since then, world butter production trended upward through 2001, increasing at an average annual rate of 2.1 percent. World butter production in 2001 was about 7,639,830 metric tons, which was up 3.8 percent from butter production in 2000 (7,361,928 metric tons) (Table 1). Butter production in Guatemala, Honduras, and Panama totaled 5,033 metric tons in 2001 (Table 2), and accounted for less than 0.1 percent of the world butter production.

Table 1. World milk and selected dairy products production, 1991 through 2001.

Year	Cow Milk, Whole, Fresh	Butter and Ghee	Cheese (All Kinds)	Whole Milk, Dry	Skim Milk, Dry	Dry Whey
			Metric Tons			
1991	469,969,290	7,230,211	14,273,176	2,278,421	3,790,059	1,591,469
1992	460,815,550	7,069,007	13,924,948	2,223,634	3,383,613	1,719,527
1993	460,185,174	6,949,108	14,092,319	2,190,812	3,435,523	1,704,052
1994	461,308,188	6,626,853	14,413,909	2,299,879	3,469,588	1,721,392
1995	463,742,780	6,654,099	14,534,298	2,297,568	3,471,565	1,808,545
1996	465,750,719	6,728,324	14,895,164	2,256,240	3,359,823	1,825,342
1997	468,198,514	6,824,872	15,182,338	2,347,216	3,390,716	1,797,683
1998	475,397,193	6,931,101	15,531,190	2,424,612	3,260,097	1,875,487
1999	480,762,511	7,140,653	15,874,743	2,425,512	3,400,623	1,876,269
2000	487,216,313	7,361,928	16,451,548	2,509,210	3,401,153	1,927,189
2001	494,074,772	7,639,830	16,821,541	2,633,776	3,374,176	1,960,928
Average Annual Growth (%)						
1991-2001	0.5	0.6	1.7	1.5	-1.1	2.2

Source: FAO Statistical Databases, 2002

In the period 1991 to 2001, world cheese production increased at an average annual rate of 1.7 percent (Table 1). Particularly in the period 1992 to 2001, world cheese production experienced a continuous increase through 2001, from 13,924,948 metric tons in 1992 to 16,821,541 metric tons in 2001, for an average annual increase rate of 2.1 percent (Table 1). Cheese production in Guatemala, Honduras, and Panama, totaling

28,141 metric tons in 2001 (Table 2), accounted for 0.2 percent of the world total cheese production in 2001.

Table 2. Guatemala, Honduras, and Panama milk and dairy products production in 2001.

	Cow Milk, Whole, Fresh	Butter and Ghee	Cheese (All Kinds)	Whole Milk, Dry	Skim Milk, Dry	Dry Whey[a]
			Metric Tons			
CENTRAL AMERICA						
Guatemala	270,000	575	11,300	62	1,705	---
Honduras	593,766	4,400	8,975	125	200	---
Panama	170,646	58	7,866	4,752	---	---
TOTAL	1,034,412	5,033	28,141	4,940	1,905	---

[a] Whey production in milk equivalent metric tons was not available.
Source: FAO Statistical Databases, 2002.

World production of dry whole milk increased in the period 1991 to 2001 at an average annual rate of 1.5 percent (Table 1). World dry whole milk production fluctuated in the period 1991 to 1996, ranging from a high of 2,299,879 metric tons in 1994 to a low of 2,190,812 metric tons in 1993 (Table 1). Since then, world dry whole milk production has trended upward through 2001. In the period 1996 to 2001, world dry whole milk production increased at an average annual rate of 3.2 percent. In 2001, world dry whole milk production totaled 2,633,776 metric tons, which was up 5.0 percent from 2000 (Table 1). Dry whole milk production in Guatemala, Honduras, and Panama totaled 4,940 metric tons in 2001 (Table 2). This was 0.2 percent of the world total dry whole milk production (2,633,776 metric tons, Table 1).

World dry skim milk production (nonfat dry milk or skim milk powder) has exceeded dry whole milk production during the period 1991 through 2001 (Table 1). However, in the period 1991 to 2001, world dry skim milk production trended downward, for an average annual decrease rate of –1.1 percent (Table 1). World dry skim milk production experienced fluctuations in the period 1991 to 2001, ranging from a high of 3,790,059 metric tons in 1991 to a low of 3,260,097 metric tons in 1998 (Table 1). Overall, between 1991 and 2001, world dry skim milk production decreased 415,883 metric tons. In 2001, world dry skim milk production totaled 3,374,176 metric tons, which was down 0.8 percent from 2000 (Table 1). Guatemala, Honduras, and Panama totally produced 1,905 metric tons of dry skim milk in 2001 (Table 2), accounting for less than 0.1 percent of the world total dry skim milk production.

The most growth in the production of milk and its products has occurred in the dry whey market. From 1991 to 2001, the average annual growth in world dry whey production has been 2.2 percent, with periods of increases and decreases (Table 1). World dry whey production trended upward through 2001, from 1,591,469 metric tons in 1991 to 1,960,928 metric tons in 2001, for an overall increase of 369,459 metric tons (Table 1). However, there was no whey production in Guatemala, Honduras, and Panama.

World Imports of Dairy Products

World imports of dairy products in milk equivalent metric tons increased at an average annual growth rate about 2.6 percent in the period 1991 to 2001. In the period 1991 to 1995, world imports of dairy products increased continuously from 52,405,310 metric tons in 1991 to 62,616,493 metric tons in 1995 (Table 3). Although decreases occurred in 1996, 1998, and 2001, world imports of dairy products trended upward through 2001, peaking at 68,138,509 metric tons in 2000 (Table 3). Between 1991 and 2001, world imports of dairy products increased 14,715,220 metric tons, from 52,405,310 metric tons in 1991 to 67,120,530 metric tons in 2001, for an overall increase of 28.1 percent. Total dairy imports (in milk equivalent metric tons) into Guatemala, Honduras, and Panama were 383,008 metric tons (Table 4), which accounted for 0.6 percent of the world total dairy imports (67,120,530 metric tons, Table 3) in 2001.

In the period 1991 to 2001, world butter imports decreased at an average annual rate of -0.1 percent. Between 1991 and 2001, world butter imports decreased 52,311 metric tons, reaching a low in 1996 of 1,203,892 metric tons (Table 3). A significant decrease occurred in 1994 when world butter imports decreased from 1,454,129 metric tons in 1993 to 1,288,247 metric tons in 1994, for an annual decrease of –11.4 percent. Since then, world butter imports fluctuated through 2001, ranging from a high of 1,368,933 metric tons in 1995 to a low of 1,203,892 metric tons in 1996 (Table 3). World butter imports in 2001 were 1,280,750 metric tons, which was up 1.5 percent from total world butter imports in 2000 (1,261,586 metric tons) (Table 3). Butter imports into

Guatemala, Honduras, and Panama totaled 2,762 metric tons in 2001 (Table 4), which was about 0.2 percent of the world butter imports (1,280,750 metric tons, Table 3) in 2001.

Table 3. World dairy imports, 1991 through 2000.

Year	Milk Equivalent	Butter	Cheese	Dry Whole Milk	Dry Skim Milk	Dry Whey
			Metric Tons			
1991	52,405,310	1,333,061	2,127,089	1,115,052	1,664,905	627,884
1992	55,385,703	1,376,590	2,230,616	1,073,993	1,821,565	657,822
1993	55,463,235	1,454,129	2,222,401	1,059,341	1,843,592	645,911
1994	57,759,324	1,288,247	2,461,275	1,161,280	1,773,160	713,385
1995	62,616,493	1,368,933	2,468,786	1,525,707	1,890,674	783,249
1996	59,844,367	1,203,892	2,688,552	1,281,604	1,716,935	838,526
1997	62,626,024	1,321,235	2,843,580	1,357,158	1,727,457	862,943
1998	62,478,356	1,213,138	2,786,286	1,401,542	1,607,154	915,807
1999	66,593,229	1,217,796	2,887,650	1,439,868	1,879,505	998,073
2000	68,138,509	1,261,586	3,093,644	1,418,968	1,805,896	1,067,210
2001	67,120,530	1,280,750	3,354,503	1,351,083	1,577,319	1,165,912
Average Annual Growth (%)						
1991-2001	2.6	-0.1	4.7	2.6	-0.2	6.5

Source: FAO Statistical Databases, 2002.

In the period 1991 to 2001, world cheese imports increased at an average annual rate of 4.7 percent (Table 3). Except for 1993 and 1998, world cheese imports experienced

continuous increases, from 2,127,089 metric tons in 1991 to 3,354,503 metric tons in 2001 (Table 3), for an overall increase of 57.9 percent from 1991. In 2001, world cheese imports were up 8.4 percent from 2000 (Table 3). Guatemala, Honduras, and Panama imported 16,353 metric tons of cheese in 2001 (Table 4), which was about 0.5 percent of the world total cheese imports in 2001 (3,354,503 metric tons, Table 3).

Table 4. Guatemala, Honduras, and Panama dairy imports in 2001.

	Milk Equivalent	Butter	Cheese	Dry Whole Milk	Dry Skim Milk	Dry Whey
			Metric Tons			
CENTRAL AMERICA						
Guatemala	232,986	1,071	3,157	20,401	1,687	3,014
Honduras	91,036	770	8,656	4,200	1,750	302
Panama	58,986	921	4,540	2,728	885	361
TOTAL	383,008	2,762	16,353	27,329	4,322	3,677

Source: FAO Statistical Databases, 2002.

World imports of dry whole milk increased in the period 1991 to 2001 at an average annual rate of 2.6 percent. World dry whole milk imports fluctuated in the period 1991 to 2001, ranging from a high of 1,525,707 metric tons in 1995 to a low of 1,059,341 metric tons in 1993 (Table 3). World dry whole milk imports trended downward in the period 1995 to 2001, for an average annual rate of –1.7 percent. In 2001, world dry whole milk imports totaled 1,351,083 metric tons, down from 1,418,968 metric tons in 2000 (Table 3). Dry whole milk imports into Guatemala, Honduras, and Panama totaled 27,329 metric

tons (Table 4), accounting for about 2.0 percent of the world total dry whole milk imports in 2001 (1,351,083 metric tons, Table 3).

World dry skim milk imports (nonfat dry milk or skim milk powder) have exceeded dry whole milk imports in the last decade (Table 3). However, in the period 1991 to 2001, world dry skim milk imports trended downward, for an average annual decrease rate of –0.2 percent (Table 3). World dry skim milk imports fluctuated, ranging from a high of 1,890,674 metric tons in 1995 to a low of 1,577,319 metric tons in 2001 (Table 3). Overall, between 1991 and 2001, world dry skim milk imports decreased 87,586 metric tons. In 2001, world dry skim milk imports totaled 1,577,319 metric tons, which was down 12.7 percent from 2000 (Table 3). Total dry skim milk imports into Guatemala, Honduras, and Panama were only 4,322 metric tons (Table 4), accounting for 0.3 percent of the world total dry skim milk imports (1,577,319 metric tons, Table 3) in 2001.

The most growth in world dairy imports has occurred in the dry whey market. From 1991 to 2001, average annual growth in world dry whey imports was 6.5 percent (Table 3). Except for 1993, world dry whey imports increased continuously from 627,884 metric tons in 1991 to 1,165,912 metric tons in 2001 (Table 3). Dry whey imported to Guatemala, Honduras, and Panama totaled 3,677 metric tons in 2001, accounting for about 0.3 percent of the world total dry whey imports in 2001.

The rest of this paper covers the following information for Guatemala, Honduras, and Panama: macroeconomic conditions, milk and dairy production, consumption, imports,

the US share of the dairy imports, dairy trade policies, and how these factors have changed overtime.

GUATEMALA

Overview of Guatemala

Guatemala is located in the Central America, bordering the Caribbean Sea between Honduras and Belize and bordering the North Pacific Ocean between El Salvador and Mexico. The total area of Guatemala is 108,890 square kilometers, slightly smaller than the state of Tennessee. The population of Guatemala in 2001 was about 13.3 million, with a 2.57 percent population growth rate (CIA World Factbook, 2002).

In 1996, Guatemala signed the Peace Accords, thus ending its 36 years of civil war. Its government has worked to implement a program of economic liberalization and political modernization. As one of the largest economies in Central America, Guatemala has experienced economic growth in the last several years. Real gross domestic product (GDP) growth has averaged above three percent annually since 1998 (US Department of State, 2002). Its economy grew 2.3 percent in 2001. That year, Guatemala's DGP was $48.3 billion (purchasing power parity), with a per-capita purchasing power parity of $3,700 (CIA World Factbook, 2002). Its agricultural sector accounts for about one-fourth of the GDP and two-thirds of the exports. Coffee, sugar, and bananas are its main agricultural products (CIA World Factbook, 2002).

Guatemala's total exports in 2001 were $2.9 billion, of which the US received 57 percent, and its total imports in 2001 were $4.9 billion, of which the US shipped 35.2 percent. The main trading partners are the United States, the European Union (EU), and

other members of the Central American Common Market (CACM) (CIA World Factbook, 2002).

Dairy Industry in Guatemala

Production of Dairy Products

Livestock and dairy farming is not new to Guatemala. As in other Central American countries, Guatemala's livestock and dairy farming started during colonial times and has continued to be a common practice in recent years.

Guatemala's milk sector is subdivided into technical and dual-purpose operations, characterized by mainly small- to medium-scale dual-purpose operations. It is estimated that 75 percent of the milk produced every year is from about 30,000 small operations. Totally, there were about 74,000 head dairy cows in 2000 (USDA-FAS, 2002).

Technical operations, which produce about 25 percent of total milk production in the country, have relatively advanced technologies, with highly productive herds. For example, they confine milk cows and feed them a high ration of feed concentrate. In addition, they have cooling tanks for keeping fresh milk (USDA-FAS, 2002). In dual-purpose operations, milk cows are grass-fed with little or no supplemental feed. The lack of advanced technology and the difficulty in providing adequate nutrient feed has caused very low milk productivity in dual-purpose operations. Per-cow milk production was

approximately three to four liters per day, with mainly mixed breed cows (dairy type with Cebu breed criollo) [USDA-FAS, 1995].

Guatemalan cattle and dairy farming traditionally have been located on the south coast. However, the center of the country's operations has been moved to the northern part of the country, especially in Petén and Izabal. Land on the south coast ahs shifted to crops such as sugarcane and rubber (USDA-FAS, 2002).

Historically, most of the milk farms in Guatemala were inefficient and had low-quality standards due to lack of infrastructure and technology. This situation made the local milk operations less attractive to manufacturers and less competitive against imported milk and powdered milk. However, in recent years, the government has concluded that the dairy farming industry is important to its economy and people. As a result, with the help of international cooperators, the government has become interested in supporting the milk sector with technical assistance and infrastructure to strengthen the industry and make them more competitive (USDA-FAS, 2002).

Milk production in Guatemala increased slightly during the 1990s by an average 0.49 percent annually (FAO Statistics, 2002). Milk production increased from 253,729 metric tons in 1991 to 259,628 metric tons in 2000, for an overall increase of 5,899 metric tons, and peaked in 1996 at 320,950 metric tons (Table 1). In 1998, Guatemala was hit by Hurricane Mitch, which depleted some of the infrastructure and reduced cattle numbers. As a result, milk production decreased from 320,000 metric tons in 1997 to 290,000 metric tons in 1998 (Table 1). In the period 1998 to 1999, due to depressed beef prices

and rising production costs, dual-purpose operations were forced to reduce cow numbers. Dairy cow numbers continued to decrease from 78,000 head in 1997 to 74,000 head in 2000 (USDA-FAS, 2000). In addition, severe dry conditions during the summer season depleted the water resources, with caused poor pasture growth. As a result, milk production continued to decrease in the period 1998 to 1999 (Table 1).

Table 1. Guatemala milk and selected dairy products production, 1991 through 2000.

Year	Cow Milk, Whole, Fresh	Butter and Ghee	Cheese (All Kinds)	Whole Milk, Dry	Skim Milk, Dry	Whey[a]
			Metric Tons			
1991	253,729	425	11,300	62	756	38,750
1992	251,150	450	11,300	62	730	38,750
1993	258,470	400	11,500	62	947	39,800
1994	291,258	400	11,500	62	903	39,800
1995	305,790	400	11,500	62	937	39,800
1996	320,950	545	11,100	62	1,091	38,350
1997	320,000	545	11,100	62	1,307	38,350
1998	290,000	545	11,100	62	1,369	38,350
1999	258,337	550	11,100	62	1,179	38,250
2000	259,628	550	11,100	62	1,492	38,250

[a] Whey production in milk equivalent pounds.
Source: FAO Statistical Databases, 2002.

Due to the seasonal surplus, fresh milk is usually processed as other dairy products, such as butter, cheese, and milk powder. However, production of these dairy products has not been high. Butter production increased by an average annual rate of 3.5 percent in the 1990s, from 425 metric tons in 1991 to 550 metric tons in 2000 (Table 1). Cheese was an important dairy product in Guatemala, and was produced more than butter. Although cheese production decreased slightly from 11,300 metric tons in 1991 to 11,100 metric

tons in 2000 (Table 1), cheese production was steady. Guatemala's dry whole milk production maintained at 62 metric tons annually during the 1990s. Most milk powder production was in the form of skim milk powder. Although dry skim milk production increased at an average annual 8.8 percent, the quantity was not high in the 1990s. Between 1991 and 2000, dry skim milk production increased 736 metric tons (Table 1), for an overall 97 percent increase. In 2000, Guatemala produced 1,492 metric tons dry skim milk.

Whey is a by-product of cheese production. Although it decreased slightly, whey production was relatively stable in the 1990s. Between 1991 and 2000, whey production decreased 500 metric tons, from 38,750 metric tons in 1991 to 38,250 metric tons in 2000 (Table 1).

Demand for Dairy Products

Guatemala experienced 36 years of armed internal conflict until 1996. Although the economy was one of the largest economies in Central America, its growth was hindered as a result of conflict. Guatemala began economic reform and trade liberalization in 1986, and has really taken off after signing the Peace Accord in 1996. Economic growth caused household income and the living standard to increase. In addition, trade liberalization has provided consumers with greater access to imported products (US Department of State, 2002).

Neither the government nor the industry had plans to improve the Guatemalan dairy industry during the last decade. Virtually no incentives were provided to increase dairy consumption in Guatemala, which has been historically low compared to other Latin American countries. However, the increasing living standard and high population growth rate (2.57 percent in 2001), caused consumption of milk and dairy products to increase slightly during the last decade.

Table 2. Per-capita consumption of dairy products in Guatemala, 1991 through 2000.

Year	All Milk[a]	Butter	Cheese	Skim Milk[a]	Whole Milk[a]	Whey[a]
			Kilograms			
1991	38.94	0.08	1.28	3.74	35.56	5.36
1992	38.62	0.09	1.27	2.40	36.52	4.88
1993	37.80	0.10	1.26	2.25	35.82	5.26
1994	42.32	0.09	1.25	2.06	40.35	5.35
1995	41.02	0.11	1.25	2.38	38.44	5.34
1996	42.48	0.12	1.21	2.10	40.31	5.18
1997	46.01	0.12	1.22	2.64	42.91	5.87
1998	42.55	0.11	1.25	2.31	39.44	5.40
1999	39.85	0.11	1.22	2.60	36.42	5.07
2000	40.50	0.12	1.21	2.55	36.98	6.32
Average Annual Growth (%) 1991-2000	0.6	5.1	-0.6	-2.6	0.6	2.4

[a] Included food and other uses, such as cattle feed.
Source: FAO Statistical Databases, 2002.

Per-capita milk consumption increased slightly at an average annual 0.6 percent (Table 2). Per-capita milk consumption peaked in 1997 at 46.01 kilograms. In 1998, when the Hurricane Mitch hit Guatemala, milk production decreased as result. Decreased production and other financial losses led per-capita milk consumption to decrease from

46.01 in 1997 to 42.55 kilograms in 1998 and to further decrease to 39.85 kilograms in 1999. Between 1991 and 2000, per-capita milk consumption increased 1.56 kilograms (Table 2).

Whole milk consumption followed almost the same pattern as all dairy consumption in the 1990s. In the period 1991 to 1997, per-capita whole milk consumption fluctuated, but increased overall from 35.56 kilograms in 1991 to 42.91 kilograms in 1997 (Table 2). In the period 1998 to 1999, due to the impact of Hurricane Mitch and an economic slowdown, per-capita whole milk consumption decreased to 36.42 kilograms in 1999 (Table 2). In 2000, per-capita whole milk consumption recovered slightly to 36.98 kilograms, a 0.56 kilograms increase from the previous year. Despite these effects, the overall growth of per-capita whole milk consumption was about 0.6 percent, on average, per year in the 1990s (Table 2).

Guatemalans consume very little skim milk because they prefer a high fat content in whole milk. Per-capita skim milk consumption decreased in the 1990s, for an average annual rate about –2.6 percent (Table 2). Between 1991 and 2000, per-capita skim milk consumption decreased 1.19 kilograms, from 3.74 kilograms in 1991 to 2.55 kilograms in 2000, with a low of 2.06 kilograms in 1994 (Table 2).

Guatemalans traditionally consume very little butter, which ranged from 0.08 kilograms to 0.12 kilograms during the 1990s. Per-capita consumption increased 5.1 percent, on average, every year in the 1990s (Table 2).

During the 1990s, per-capita cheese consumption decreased 0.6 percent, on average, per year (Table 2). Between 1991 and 2000, per-capita cheese consumption decreased 0.07 kilograms, from 1.28 kilograms in 1991 to 1.21 kilograms in 2000 (Table 2). The decrease in per-capita cheese consumption was associated with the decrease in domestic cheese production and the slow increase of cheese imports compared to its high population growth rate.

Whey is mainly utilized for animal feed and as an ingredient for other food production. Per-capita whey consumption increased at an average annual 2.4 percent in the 1990s (Table 2). Between 1991 and 2000, per-capita whey consumption increased 0.96 kilogram, from 5.36 kilograms in 1991 to 6.32 kilograms in 2000 with a low of 4.88 kilograms in 1992 (Table 2).

Because the government did not pay much attention to its domestic dairy industry, which is dominated by small producers who do not have the ability to compete in a market affected by globalization and subsidized production, dairy imports increased during the 1990s. As a result, Guatemala's dairy self-sufficiency declined from over 75 percent in 1995 to about 55 percent in 2000 (FAO Statistics, 2002).

Imports of Dairy Products

Guatemala is a net importer of dairy products, which have increased over the last decade. In 2000, Guatemala ranked out of the top 40 countries in total dairy imported (in milk equivalent pounds). Guatemala's total dairy imports were 206,790 metric tons

(Table 4), accounting for 0.3 percent of the total world imports of dairy products in that year (FAO Statistics, 2002). In addition, Guatemala ranked out of the top 40 countries in imports of butter, cheese, and dry skim milk during the 1990s. In 2000, Guatemala's total butter and cheese imports were 824 metric tons and 2,713 metrics tons, respectively (FAO Statistics, 2002). Dry skim milk imports were 1,353 metric tons in 2000, and were only 0.07 percent of the world imports of dry skim milk, or 1,805,896 metric tons (FAO Statistics, 2002). Guatemala ranked 33rd in imports of whey (Table 4), and its share of world total whey imports was about 0.22 percent in 2000 (FAO Statistics, 2002).

Table 3. Guatemala dairy imports, 1991 through 2000.

Year	Milk Equivalent	Butter	Cheese	Dry Whole Milk	Dry Skim Milk	Whey
			Metric Tons			
1991	89,427	270	182	8,018	2,541	813
1992	100,019	412	440	10,098	1,430	460
1993	98,424	575	456	9,026	1,169	739
1994	119,124	513	670	11,962	1,142	903
1995	103,709	694	1,052	9,148	1,420	1,012
1996	115,132	713	1,319	11,028	1,020	1,092
1997	163,633	683	1,802	15,283	1,472	1,767
1998	168,278	665	2,392	15,742	1,208	1,557
1999	182,305	709	2,486	16,932	1,802	1,367
2000	206,790	824	2,713	19,019	1,353	2,515
Average Annual Growth (%) 1991-2000	10.7	15.0	40.0	11.8	-1.9	20.1

Source: FAO Statistical Databases, 2002.

Table 4. Selected countries' total whey imports and ranking, 1996 through 2000.

	1996		1997		1998		1999		2000	
	Mt	Rank	Mt	Rank	Mt	Rank	Mt	Rank	Mt	Rank
Belgium	52,959	4	55,759	3	58,099	3	54,842	4	56,299	5
Canada	43,224	6	36,554	10	37,996	9	48,375	6	62,441	3
China	72,882	2	89,359	2	78,819	2	97,717	2	140,057	2
France	29,238	10	40,931	7	50,588	5	49,463	5	59,048	4
Germany	66,975	3	45,070	5	48,759	6	46,114	7	40,077	9
Guatemala	1,092	38	1,767	33	1,557	38	1,367	41	2,515	33
Italy	40,845	7	37,598	8	42,637	8	37,584	10	42,029	8
Japan	32,343	9	37,481	9	37,351	10	41,157	9	39,522	10
Mexico	48,636	5	49,174	4	56,642	4	55,947	3	55,031	6
Netherlands	251,310	1	217,543	1	248,474	1	292,637	1	252,099	1
Spain	37,147	8	43,362	6	44,869	7	44,225	8	49,109	7
Total	676,651	----	654,598	----	705,791	----	769,428	----	798,227	----
World	886,132	----	902,409	----	973,881	----	1,054,173	----	1,124,090	----

Source: Food and Agricultural Organization of the United Nations Statistical Databases, 2002.

Imports of dairy products (in milk equivalent metric tons) increased at an average annual rate of 10.7 percent (Table 3). In the period 1991 to 1996, dairy imports increased 25,705 metric tons, from 89,427 metric tons in 1991 to 115,132 metric tons in 1996 (Table 3). However, since the government implemented policies of economic reform and trade liberalization in 1996, dairy imports have increased significantly. In the period 1996 to 2000, dairy imports increased at an average annual rate of 16.5 percent (FAO Statistics, 2002). In 2000, Guatemala's total dairy imports were 206,790 metric tons (Table 3).

Butter imports have increased significantly. Between 1991 and 2000, butter imports increased 554 metric tons, or about 15 percent annually. Butter imports increased from 270 metric tons in 1991 to 824 metric tons in 2000 (Table 3), for an overall increase of 205 percent.

Cheese is relatively important to Guatemalans, particularly high-quality imported processed cheese. The growth of cheese imports has been the most impressive of all dairy products. Although the import volume was low in the beginning of the 1990s (182 metric tons in 1991), cheese imports increased continuously throughout the 1990s, for an average annual growth rate of 40 percent (Table 3). In 2000, Guatemala imported 2,713 metric tons of cheese (Table 3). Cheese imports are expected to increase further.

During the 1990s, Guatemala imported dairy products, mainly in the form of whole milk powder and skim milk powder. Milk powder was mainly used to make fluid milk and to process as other dairy products. Because domestic production could not keep up

with the increase in domestic consumption, large amounts of whole milk powder were imported into Guatemala. Between 1991 and 2000, whole milk powder imports increased from 8,018 metric tons to 19,019 metric tons, or about 11.8 percent annually (Table 3).

Guatemala also imported dry skim milk in the 1990s; however, because domestic production increased and Guatemalans do not like skim milk, dry skim milk imports decreased at an average annual rate of –1.9 percent, bottoming out in 1996 at 1,020 metric tons (Table 3). Between 1991 and 2000, dry skim milk imports decreased 1,188 metric tons (Table 3). In 1999, after Hurricane Mitch hit the country, dry skim milk imports increased to 1,802 metric tons (Table 3), mainly through the international aid program.

Guatemala's whey imports also increased significantly from a very low level in the 1990s. Between 1991 and 2000, whey imports increased 1,702 metric tons, from 813 metric tons in 1991 to 2,515 metric tons in 2000, reaching a low of 460 metric tons in 1992 (Table 3).

Exports of Dairy Products from the U.S.

The US has been the main supplier of dairy products to Guatemala, although the volume has never been high. The US is seeking to explore a free trade agreement with five Central American countries, including Guatemala, which would further benefit US dairy exporters. However, stiff competition has come from the European Union, New Zealand, and other American countries in the region (USDEC, 1997).

Table 5. Selected dairy products imported from the US into Guatemala, 1991 through 2000.

Year	Butter[a]	% of All Butter Imports[b]	Cheese[a]	% of All Cheese Imports[b]	Whole Dry Milk[a]	% of All WDM Imports[b]	Non-Fat Dry Milk[a]	% of All NFDM Imports[b]	Whey[a]	% of All Whey Imports[b]
	Mt	%	Mt	%	Mt	%	Mt	%	Mt	%
1991	64.0	23.7	116.3	63.9	49.5	0.6	29.9	1.2	268.6	33.0
1992	81.1	19.7	222.0	50.5	35.8	0.4	20.2	1.4	365.1	79.4
1993	215.7	37.5	225.4	49.4	260.8	2.9	493.9	42.2	338.6	45.8
1994	225.5	44.0	302.0	45.1	408.7	3.4	285.5	25.0	371.3	41.1
1995	263.5	38.0	384.1	36.5	548.2	6.0	177.9	12.5	456.0	45.1
1996	73.4	10.3	254.2	19.3	102.5	0.9	51.7	5.1	308.3	28.2
1997	7.9	1.2	438.2	24.3	146.5	1.0	99.7	6.8	443.2	25.1
1998	0.0	0.0	579.3	24.2	62.6	0.4	485.0	40.1	168.0	10.8
1999	0.9	0.1	765.8	30.8	200.2	1.2	522.9	29.0	402.9	29.5
2000	0.0	0.0	503.8	18.6	452.1	2.4	1,135.9	84.0	2,023.2	80.4

[a] Source: United States Department of Agriculture Foreign Agricultural Service, 2003.

[b] Data from Table 3.

The US was the main supplier of butter to Guatemala in the first half of the 1990s. The market share of US butter peaked in 1994 at 44 percent (Table 5). However, in 1998 and 2000, Guatemala did not import butter from the US, mainly due to higher prices. As with most Latin America countries, Guatemala is willing to import dairy ingredients from any source as long as the price is competitive and the quality is good (USDEC, 1997). In recent years, Guatemala had imported butter mainly from New Zealand (USDA-FAS, 2003).

The US dominated the Guatemalan imported cheese market in the early 1990s, with New Zealand as another major cheese supplier to Guatemala. Because of its cost advantages in bulk cheese, the strong competition caused the market share of US cheese to decline. Between 1991 and 2000, the US share of cheese imports declined from 63.9 percent to a low of 18.6 percent, although cheese imports have increased from 116.3 metric tons in 1991 to a high of 765.8 metric tons in 2000. In 2000, Guatemala imported 503.8 metric tons cheese from the US (Table 5). However, a strong market still exists for US in processed cheeses and specialty cheeses.

Guatemala's nonfat dry milk production increased during the 1990s (Table 1). Although in competition with the European Union, the US was a main supplier of nonfat dry milk to Guatemala. The market share of US nonfat dry milk fluctuated with a low of 1.2 percent in 1991 and peaking in 2000 at 84 percent. In 2000, Guatemala imported 1,135.9 metric tons of nonfat dry milk from the US with a low of 20.2 metric tons in 1992 (Table 5). The US was not a main supplier of whole dry milk to Guatemala. During the 1990s, the market share of US whole dry milk ranged from a low of 0.4 percent in 1992 and 1998 to a high of 6.0 percent in 1995 (Table 5). In 2000, Guatemala imported

452.1 metric tons of whole dry milk from the US, or a market share of 2.4 percent (Table 5).

In the 1990s, the US dominated Guatemala's imported whey market (Table 5). In 2000, US whey exports to Guatemala totaled 2,023 metric tons, or 80.4 percent of Guatemala's total whey imports (Table 5). This was up from 402.9 metric tons in 1999 and up from a previous high of 456.0 metric tons in 1995 (Table 5).

If US dairy exporters can compete with EU milk powder and New Zealand cheese, market opportunities still exist in nonfat dry milk and processed and specialty cheeses (USDEC, 1997).

Trade Policy and Tariff

Guatemala's efforts at achieving sustainable economic growth through economic liberalization and public sector modernization have contributed to promoting growth. Since Guatemala became a member of the World Trade Organization (WTO) in 1995, trade has played an important role in promoting growth. Under the commitment of the WTO, there has been considerable progress in reducing tariff and non-tariff trade barriers, although protection remains significant in a few areas (WTO, 2002).

Guatemala is a member of the Central American Common Market (CACM), which includes Guatemala, Costa Rica, El Salvador, Nicaragua, and Honduras. Guatemala applies the common external tariff (CET) schedule of the Central American Common Market. According to the common external tariff (CET) schedule, there are no tariffs on capital goods originating within the CACM and tariffs from zero to 15 percent on most agricultural and industrial goods originating within the CACM (WTO, 2002).

The government of Guatemala requires all food products sold in the domestic market to be tested, registered, and carry labels in Spanish (USTR, 2000). Enforcement of the product registration and labeling requirement has been irregular but is becoming stricter.

In February 2000, the Guatemalan government decreased tariffs on dairy products. Government Decree 70-2000 decreased tariffs on cream, yogurt, butter, whey, cheese, and ice creams, from levels of 39 and 20 percent to 15 percent. This decrease was a reversal of the tariff increase in July 1999, under pressure from dairy processors. The newly elected government lowered the tariffs to keep a competitive market and to protect consumers from high prices (USDA-FAS, 2000). However, after the tariff decrease on dairy imports, the Dairy Producer's Association has pressured the government to raise tariffs on milk products again. Milk producers argue that local processors are using imported milk powder instead of fresh domestic milk in dairy production to keep competitive with imported dairy products. Based on higher tariffs on dairy products and less international competition, Guatemala's dairy processors will use fresh milk in their production. However, with 70 percent of the population consuming milk powder, the government cannot afford to raise duties on those dairy products (USDA-FAS, 2002). At present, duties on dairy products are kept low by the government. For example, milk powder, including skim and whole milk powder, has a duty of 15 percent. Butter and cheese imports also have duties of 15 percent. Import duties on whey is at ten percent (USDA-FAS, 2002).

HONDURAS

Overview of Honduras

Honduras is located in Central America, bordering the Caribbean Sea to the north and the North Pacific Ocean to the south, between Guatemala and Nicaragua. The total area of Honduras is 112,090 square kilometers, slightly more than the size of Tennessee. The population in 2001 was about 6.56 million, with a 2.34 percent growth rate. In 2001, over 40 percent of its population was under 14 years old (CIA World Factbook, 2002).

Honduras is one of the poorest countries in the world, with an estimated 72 percent of households affected by poverty (US Department of Commerce, 1999). Its distribution of income is extraordinarily unequal. The Honduran government has been known for its unwieldy size for many years. Although the government has been privatizing its public services and modernizing its society since 1994, the Honduran government still maintains a high degree of centralization and control of a large number of public enterprises. Agriculture represents the most important sector in the Honduran economy, accounting for 18 percent of its total gross domestic product (GDP), which is heavily dependent on commodity prices, particularly coffee and sugar (CIA World Factbook, 2002). The US is the major trading partner, so the status of the US economy is important for Honduras' economy. In 2001, the real GDP of Honduras was about $17 billion (purchasing power parity). The per-capita purchasing power parity was estimated to be $2,600, with a real GDP growth rate of 2.1 percent for 2001 (CIA World Factbook, 2002).

Honduran total exports in 2001 were $2 billion, and its total imports were about $2.6 billion. The US was Honduras' major trading partner, accounting for about 40 percent of Honduras' total exports and about 46 percent of its total imports in 2001 (CIA World Factbook, 2002). Honduras' other important trading partners include Mexico, Japan, Taiwan, Korea, and other Central American countries (El Salvador, Guatemala, Costa Rica, and Nicaragua) (CIA World Factbook, 2002).

Dairy Industry in Honduras

Production of Dairy Products

Honduras is one of the poorest countries in the Western Hemisphere. The economy relies heavily on agriculture. Beginning in the early 1980s, the Honduran government abandoned its industrialization strategy and focused on increasing agricultural exports, mainly high value crops such as fruit, cattle feed, and shrimp, and removing most of the tariffs and barriers to international trade (Barbier and Bergeron, 1998). As a result, Honduran livestock and milk production grew during the 1990s.

As in many other Latin American countries, dairy farms in Honduras are characterized by mostly small to medium-scale producers, with numerous small farms each delivering a small amount of milk to the processing plant each day. Dual-purpose operations dominate the Honduran livestock and dairy farms. Dual-purpose cattle offer the option of selling either milk or beef, depending on market conditions. However, due to the lack of specialization and the limited level of technology utilized, the dual-purpose operations are inefficient (USDA-FAS, 2002). In 1993, there were about 0.1 million

farms that had cattle (LSUAC, 2001). Among all the livestock operations, only nine percent specialize in meat production and seven percent in dairy production (USDA-FAS, 2002). The milk cattle, consisting of *Bos indicus* (mainly Brahman) and crossbreds with *Bos taurus* breeds (usually Holstein), are used for the production of milk and beef (Holmann, 2001).

Dairy cattle on Honduran farms are fed mainly through grassland feeding. A large percentage of land area is devoted to pastures (improved varieties are not widespread and soil conditions do not permit adequate pasture growth). As a result, the quality and quantity of cattle feed is low. Supplemental feeding with concentrates and mineral rations are only available among few operations with higher degrees of technology. As a result of poor nutrition and inadequate herd management, milk productivity is low. In addition, milk production in Honduras is unstable during the year, peaking in the rainy season and dropping in the dry season. During the dry season, from December to May, the quantity of forage is very low, which means milk production drops sharply compared to the rainy season, which is from June to November, when there is an abundance of green pastures. Total milk production during the rainy season is about twice that during the dry season, causing a surplus and deficit in each period (Holmann, 2001).

It is worth noting that the Tropileche Consortium (on-farm evaluation of improved legume-based feeding systems for smallholder dual-purpose cattle production in tropical Latin America) has operated in Honduras since the mid-1990s. Its objective is to test and promote legume-based forages to increase the productivity of both milk and beef in small-scale, dual-purpose farms. Tropileche is led by CIAT (International Center for Tropical Agriculture) and operates under the system-wide livestock program convened by

ILRI (International Livestock Research Institute), which has increased milk production in dual-purpose operations by some extent (Holmann, 2001).

Although milk production in Honduras increased in the 1990s, milk yields were still among the lowest in Central America. Per-cow milk production is less than 1,000 kilograms every lactation period (Holmann, 2001). Increasing milk production per cow became a major goal in Honduras. However, the dairy industry is facing other difficulties, such as trying to transport milk over poor roads, and stiff competitions in the domestic market from subsidized foreign dairy imports.

Milk production in Honduras increased by 5.2 percent, on average, per year in the 1990s (FAO Statistics, 2002). This growth was continued until 1999, when Hurricane Mitch swept Honduras at the end of 1998. Most of the financial damages Hurricane Mitch caused occurred in the agricultural and livestock production sectors. Honduras experienced direct cattle losses and dramatic damage to pastures around the country. Over 60 percent of the dairy operations were affected to some extent (USDA-FAS, 2002). Milk production decreased in the 1998 to 1999 period, from 604,882 metric tons in 1998 to 562,671 metric tons in 1999 (Table 1), for a seven percent decrease (FAO Statistics, 2002). In 2000, milk production recovered slightly to 571,111 metric tons (Table 1). Between 1991 and 2000, Honduran milk production increased 198,486 metric tons, from 372,625 metric tons in 1991 to 571,111 metric tons in 2000 (Table 1).

Honduras did not produce much butter in the 1990s, with production only increasing from 4, 050 metric tons in 1991 to 4,442 metric tons in 2000 (Table 1), for an average annual increase rate of one percent (FAO Statistics, 2002). Due to the low production of butter, dry skim milk production was also low. According to Food and Agricultural

Organization, Honduras produced about 200 metric tons of dry skim milk annually in the 1990s (Table 1).

Table 1. Honduras milk and selected dairy products production, 1991 through 2000.

Year	Cow Milk, Whole, Fresh	Butter and Ghee	Cheese (All Kinds)	Skim Milk, Dry	Whey[a]
			Metric Tons		
1991	372,625	4,050	8,306	200	43,975
1992	395,860	4,050	8,306	200	43,975
1993	380,000	3,800	7,879	200	41,606
1994	424,218	3,335	7,083	200	32,183
1995	444,001	3,650	7,620	200	40,168
1996	528,526	3,909	8,067	200	42,648
1997	524,000	4,256	8,685	200	46,086
1998	604,882	4,290	8,639	200	45,830
1999	562,671	4,330	8,808	200	46,544
2000	571,111	4,442	8,976	200	47,676

[a] Whey production in milk equivalent pounds.
Source: FAO Statistical Databases, 2002.

In Honduras, on the traditional dairy farm, milk is not cooled and must be sent to processing shortly after milking. Due to the lack of refrigeration facilities, milk left unsold is processed to cheese immediately. Cheese processing developed early in important cattle growing areas like Olancho and Choluteca. Cheese curd and whey are separated out, with cheese mainly for people consumption and whey for pigs. Honduran cheese production decreased in the 1993 to 1994 period, mainly due to depressed economic conditions of high inflation and recession; however, since 1994, cheese production has been increasing at a rate of about four percent on average (FAO Statistics, 2002). In 2000, cheese production in Honduras was 8,976 metric tons (Table 1). Although Honduras produced whey in the 1990s, production was not high. In 2000, Honduran whey production (in milk equivalent pounds) was 47,676 metric tons (Table

1), which was much less than the production in Columbia (187,000 metric tons) and Chile (237,935 metric tons) in that year (FAO Statistics, 2002).

Demand for Dairy Products

Income distribution in Honduras is extremely unequal. A large percentage of households live in poverty, and as a result, food expenditure accounts for a large portion of each household's income. Milk consumption is historically low compared to other Latin American countries (USDA-FAS, 1996). Honduras started economic reform and trade liberalization in 1994, which increased economic growth, household income, and the standard of living. In addition, trade liberalization has provided consumers with greater access to imported products. As a result, dairy consumption in Honduras has increased.

The fresh milk that reaches the consumer in Honduras comes from two sources: the commercial sector and the artisan market. There were only five commercial milk plants in Honduras in 2001 (Holmann, 2001). Those plants collected about 25 percent of the milk production in the country (Holmann, 2001). Milk from commercial dairy plants is usually packed and pasteurized under good quality standards. Because commercial dairy plants buy milk from farmers who produce good quality milk, the prices they pay the farmers is higher than the prices paid in the artisan sector. However, about 75 percent of the milk produced in Honduras is marketed by the artisan sector, which is mainly constituted by small-scale rural cheese factories that do not pasteurize milk. Although all dairy plants, both commercial plants and artisan factories, are required to have health

permits from the Ministry of Health to operate, the poor quality of milk is still a serious problem in Honduras (Holmann, 2001).

Per-capita milk consumption increased by 2.2 percent on average per year (Table 2). The growth was continuous until 1999 after Hurricane Mitch hit Honduras at the end of 1998. Decreased production and other financial losses led to per-capita milk consumption decreases in 1999, and further decreases in 2000. According to the Food and Agricultural Organization of the United Nation, per-capita milk consumption decreased by about 12 percent in the period 1998 to 2000, from 111.90 kilograms in 1998 to 98.71 in 2000 (Table 2).

As for overall dairy consumption, whole milk consumption followed almost the same pattern in the 1990s. In the period 1993 to 1994, high inflation occurred in Honduras, and therefore prices increased for most dairy products, Hondurans found it difficult to afford the higher prices, and cut back consumption, primarily in whole milk. Per-capita whole milk consumption decreased in that period, from 86.64 kilograms in 1992 to 77.77 kilograms in 1994 (Table 2). Despite this, the overall growth of per-capita whole milk consumption was about 2.3 percent, on average, per year in the 1990s (Table 2). Hondurans prefer whole milk to skimmed milk because of their preference for higher fat content. Per-capita skim milk consumption increased throughout the 1990s, with a growth rate of about 4.1 percent (Table 2). However, the overall per-capita consumption decreased to 16.36 kilograms in 2000 from the 1991 level of 17.29 kilograms (Table 2). The reason for the dramatic increases of per-capita skim milk consumption in 1995 and 1997 is probably due to the US aid programs, which mainly provided Honduras with nonfat dry milk in the 1990s, especially after Hurricane Mitch.

Table 2. Per-capita consumption of dairy products in Honduras, 1991 through 2000.

Year	All Milk[a]	Butter	Cheese	Skim Milk[a]	Whole Milk[a]	Whey[a]
			Kilograms			
1991	82.65	0.89	1.66	17.29	80.54	8.97
1992	87.74	0.87	1.60	16.00	86.64	8.66
1993	87.28	0.80	1.47	16.73	84.09	7.88
1994	88.44	0.87	1.27	21.95	77.77	5.96
1995	89.12	0.80	1.35	13.38	88.09	7.25
1996	101.24	0.86	1.30	14.73	100.09	7.47
1997	102.05	0.88	1.54	25.86	88.50	7.84
1998	111.90	0.96	1.44	17.15	107.53	7.64
1999	108.35	0.76	1.60	17.16	102.57	7.58
2000	98.71	0.66	1.58	16.36	93.80	7.57
Average Annual Growth (%) 1991-2000	2.2	-2.7	-0.1	4.1	2.3	-1.2

[a] Includes food and other uses, such as cattle feed.
Source: FAO of the United Nations Statistical Databases, 2002.

Hondurans traditionally do not consume much butter (consumption ranged from 0.66 kilogram to 0.96 kilogram in the 1990s). Per-capita consumption decreased over the 1990s. Cheese is relatively important to Honduras and is available in both supermarkets and artisan markets. In recent years, American processed cheese has caught the attention of Hondurans for its higher quality. However, in the 1990s, per-capita cheese consumption decreased by 0.1 percent, on average, per year. Between 1991 and 2000, the overall decrease was about five percent, from 1.66 kilograms in 1991 to 1.58 kilograms in 2000 (Table 2). This decrease was probably due to the development of milk collection facilities in Honduras, and as a result, less milk needs to be processed into cheese. Whey is purely a by-product of cheese production and is mainly utilized for animal feed and as ingredient for other food production. Per-capita whey consumption decreased in the

1990s by 1.2 percent, on average, per year (Table 2). In 2000, per-capita whey consumption was about 7.57 kilograms (Table 2).

Imports of Dairy Products

Honduras is a net importer of dairy products, although Honduras' dairy self-sufficiency was relatively high, about 85 percent in most of the 1990s and 90 percent in 2000 (FAO Statistics, 2002). However, the volume of its dairy imports has never been high. In 2000, Honduras ranked out of the top 40 countries in total dairy products imported (in milk equivalent pounds). Honduras' total dairy imports in that year were 100,955 metric tons, accounting for 0.15 percent of the total world imports of dairy products (FAO Statistics, 2002). In addition, Honduras ranked out of the top 40 countries in imports of butter, cheese, dry skim milk, and whey in the 1990s. In 2000, Honduras' total butter and cheese imports were 936 metric tons and 4,615 metrics tons, respectively (Table 3). Its share of world imports of butter and cheese was about 0.07 and 0.15 percent, respectively (FAO Statistics, 2002). Dry skim milk imports were 1,822 metric tons in 2000, or about 0.1 percent of world imports of dry skim milk (FAO Statistics, 2002). In 2000, Honduras imported only 936 metric tons of whey. Its share of world whey imports was only 0.1 percent (FAO Statistics, 2002).

Table 3. Honduras dairy imports, 1991 through 2000.

Year	Milk Equivalent	Butter	Cheese	Dry Skim Milk	Whey
			Metric Tons		
1991	41,035	443	98	980	1,002
1992	56,515	423	18	569	752
1993	80,166	483	97	1,668	296
1994	62,640	1,442	165	1,991	388
1995	60,640	862	256	593	720
1996	65,880	1,204	413	1,096	548
1997	75,788	1,003	521	1,927	472
1998	80,901	1,678	834	2,442	800
1999	109,001	886	1,767	2,622	936
2000	100,955	936	4,615	1,822	936
Average Annual Growth (%)					
1991-2000	12.5	24.1	100.4	29.4	8.9

Source: FAO of the United Nations Statistical Databases, 2002.

Imports of all dairy products (in milk equivalent pounds) increased by an average annual growth rate of 12.5 percent (Table 3). However, in the period 1993 to 1994, when high inflation, followed by a recession, hit Honduras quite hard, Honduras' dairy imports decreased significantly, from 80,166 metric tons in 1993 to 60,640 metric tons in 1995, for an annual decrease of 12 percent (FAO Statistics, 2002). Although Hurricane Mitch in 1998 caused huge losses in Honduras, it did not affect dairy imports. On the other hand, it caused dairy imports to increase dramatically in 1999, due to the shrinkage of domestic dairy production, reaching a peak of 109,001 metric tons (Table 3). The dairy imports in that year were mainly in the form of dry skim milk.

Although Honduras did not import much butter and cheese in the 1990s, butter and cheese imports increased significantly. Butter imports increased by an average annual growth rate of 24.1 percent, but the butter imports fluctuated throughout the 1990s, and reaching a peak in 1998 of 1,678 metric tons and dropped the next year to 886 metric tons

(Table 3). Butter imports increased from 443 metric tons in 1991 to 936 metric tons in 2000, for an overall increase of 111 percent. Cheese is relatively important to Hondurans, especially high-quality imported cheese. The growth of cheese imports has been the most impressive of all dairy products. Cheese imports increased continuously throughout the 1990s, for an average annual growth rate of 100.4 percent (Table 3). In 2000, Honduras imported 4,615 metric tons of cheese, with cheese imports expected to increase further (Table 3).

Honduras imports milk powder, mainly in the form of skim milk powder. Skim milk powder is mainly used to recombine fluid milk to fill the deficit of domestic milk production. In addition, Honduras also imports dry skim milk through several international aid programs. The US is the main source of the nonfat dry milk donations to Honduras. Dry skim milk imported into Honduras increased in the 1990s, for an average annual growth rate of 29.4 percent (Table 3). Dry skim milk imports peaked in 1999 after Hurricane Mitch swept Honduras, at 2,622 metric tons (Table 3). Honduras imported very little whey in the 1990s. Whey imports decreased from 1,002 metric tons in 1991 to 936 metric tons in 2000 (Table 3), for an overall decrease of seven percent.

Exports of Dairy Products from the U.S.

Although the trading volume has never been high, the US has been one of the main suppliers of dairy products to Honduras. In addition, the US is exploring a free trade agreement with five Central American countries, including Honduras, which would further benefit US dairy exporters. However, stiff competition has come from the European Union, New Zealand, and other Latin American countries in recent years.

Honduras does not import much butter from the US, which caused the market share fluctuate throughout the 1990s. Prices for butter were the main reason behind the fluctuation. As with most Latin America countries, Honduras is willing to import dairy ingredients from any source as long as the price is competitive and the quality is good. In 2000, Honduras imported 39.5 metric tons of butter from the US, with a share of 4.2 percent (Table 4).

Table 4. Selected dairy products the US exported to Honduras, 1991 through 2000.

Year	Butter[a]	% of All Butter Imports[b]	Cheese[a]	% of All Cheese Imports[b]	Non-Fat Dry Milk[a]	% of All NFDM Imports[b]	Whey[a]	% of All Whey Imports[b]
	Mt	*%*	*Mt*	*%*	*Mt*	*%*	*Mt*	*%*
1991	0.0	0.0	125.4	128.0[c]	71.8	7.3	0.0	0.0
1992	0.0	0.0	197.6	1,097.8[c]	2648.8	465.5[c]	163.6	21.8
1993	437.7	90.6	179.5	185.1[c]	336.9	20.2	103.5	35.0
1994	500.2	34.7	195.3	118.4[c]	355.6	17.9	77.7	20.0
1995	608.6	70.6	53.9	21.1	100.0	16.9	96.0	13.3
1996	2.5	0.2	216.0	52.3	176.1	16.1	112.0	20.4
1997	174.5	17.4	318.8	61.2	1690.0	87.7	328.3	69.6
1998	224.0	13.3	347.7	41.7	2627.8	107.6[c]	493.8	61.7
1999	269.6	30.4	434.3	24.6	1265.4	48.3	364.7	39.0
2000	39.5	4.2	373.7	8.1	2200.4	120.8[c]	298.5	31.9

[a] Source: United States Department of Agriculture Foreign Agricultural Service, 2003.
[b] Data from Table 3.
[c] The reason for this discrepancy is unknown and needs further analysis.

The US has dominated the Honduran cheese market for most of the 1990s, and was the main supplier of its cheese imports. In 2000, Honduras imported 373.7 metric tons of cheese from the US. New Zealand was a major cheese supplier to Honduras. Because of New Zealand's cost advantages in bulk cheese, its strong competition caused the market share of US cheese to drop in recent years. However, a strong market still exists in

processed cheeses and specialty cheeses for US products. American processed cheese is very popular in Honduras, where it is called Queso Kraft after the company that makes it in the United States. This cheese is also used in ham and cheese sandwiches and makes a good grilled cheese sandwich (Honduras This Week, 2000).

Honduras produces a very small amount of nonfat dry milk. As a result, most of the nonfat dry milk consumption is imported. In 2000, Honduras imported 2200.4 metric tons of nonfat dry milk from the US (Table 4). The discrepancy may be because the data from FAO only include special trade volume, not general trade volume (FAO Statistics, 2002). The US is also a major supplier of whey to Honduras. A big proportion of the whey imported to Honduras comes from the US (Table 4).

If US dairy exporters can get past the competition from EU milk powder and New Zealand cheeses, opportunities still exist for nonfat dry milk as well as processed and specialty cheeses. The US exporters need to better inform Hondurans about the benefits of dairy ingredients, which would increase whey and lactose exports (USDEC, 1997).

Trade Policy and Tariff

Honduras enhanced and strengthened its economic reform and trade liberalization in 1994, and has been a member of the World Trade Organization (WTO) since 1995. Although Honduras is still a poor country in the world, its economy has developed since the middle 1990s. However, its growth is heavily dependent on commodity prices, particularly coffee and sugar (WTO, 2003). Honduras also is a member of the Central American Common Market (CACM). CACM members are working toward a Common External Tariff (CET) of zero to 15 percent for most products, including dairy products.

With the exception of a limited number of agricultural items, such as coffee, sugar, and corn flour, there are no duties for products traded among CACM members (USTR, 2000). For countries outside the CACM, restrictions to agricultural products include price band mechanism and seasonal restrictions for several commodities. Imports entering with values within the defined band are assessed a 20 percent tariff. Imports entering with prices above the band are assessed lower duties according to a predetermined schedule. Seasonal restrictions are used to protect local farmers during harvest time. From September to January, the minimum duties for most agricultural products are 15 percent, and for the rest of the year, duties are set according to the price band (USTR, 2000).

Although Honduras has eliminated all import licensing requirements, the government of Honduras requires that all imported food products be labeled in Spanish. In addition, these products much be registered with the Division of Food Control of the Ministry of Public Health. These requirements may affect US dairy imports to some extent (USTR, 2000).

Duties for most dairy products were set at 15 percent in Honduras. Since 1995, the Government of Honduras has lowered duties for dairy products, including whole and skimmed milk powders. Honduras lowered the duties to help counter the rise in international milk prices, which, in turn, is having a large impact on consumer prices of imported powdered milk. The duty for dry skim milk was lowered from 15 percent to two percent, and from 15 percent to five percent for whole milk powder. As a result of these changes, export possibilities have been enhanced for US suppliers (USDA-FAS, 1996).

PANAMA

Overview of Panama

Panama is located in Central America, bordering the Caribbean Sea and the North Pacific Ocean, between Colombia and Costa Rica. The total area of Panama is 78,200 square kilometers, slightly smaller than the size of South Carolina. The population of Panama in 2001 was about 2.88 million, with a 1.26 percent growth rate (CIA world Factbook, 2002).

Well-developed, services is the major sector in Panama's economy, accounting for three-fourths of the total gross domestic product (GDP). Services include the Panama Canal, banking, the Colon Free Zone, insurance, container ports, flagship registry, and tourism (CIA World Factbook, 2002). Panama has implemented economic policy reforms to liberalize the trade regime, privatize state owned enterprises, lower tariffs, and attract foreign investment in the early 1990s, right after a slowdown of economic growth. As a result, Panama has experienced continuous economic growth in the rest of 1990s, three to four percent every year.

However, in recent years, the global economic slowdown held back the economy of Panama. In 2001, Panama’s GDP was about $16.9 billion (purchasing power parity), with a 1.4 percent growth rate. Per-capita purchasing power parity was about $5,900, and agriculture accounted for seven percent of the total GDP (CIA World Factbook, 2002).

Panama’s total exports in 2001 were $5.9 billion, of which the US received 45.9 percent. Panama’s total imports in 2001 were $6.7 billion, of which the US composed 33.1 percent. Panama’s main trading partners are the US, Costa Rica, Ecuador, Venezuela, and Japan (CIA World Factbook, 2002).

Dairy Industry in Panama

Production of Dairy Products

Panama has a varied topography from mountains towards the Caribbean coast, to small hills and vast savannas towards the Pacific. Lowlands make up over 85 percent of the country's territory (CIA World Factbook, 2002). The raising of livestock and dairy farming is not new to Panama. Dairy farming started during colonial times, and continued to be a common practice in recent years. Almost all cattle ranches are extensive type operations (one head per hectare), maintain their animals in artificially cultivated grasslands, and provide few additional feeds (USDA-FAS, 1997).

Panama's livestock industry is important for the economy, particularly for those farms which depend fully on farming activities. As many Central and Latin American countries, Panama has a mixture of dairy farmers, characterized by mostly small to medium scale producers. Dual-purpose operations dominated the livestock and dairy industry. Dual-purpose operations for both meat and milk were concentrated in the provinces of Chiriquí, Los Santos, and Veraguas (Library of Congress, 1987). Although some farms were specialized in dairy farming, the number was relatively small. The majority of ranches had fewer than 100 hectares, and cattle were almost entirely grass fed. Although some land was artificially cultivated lacking nutrients and other improvements, the grasslands were not particularly productive (USDA-FAS, 1997).

In Panama, the constraints to develop milk production include the lack of advanced technology and the difficulty in providing adequate nutrient feed. A majority of farms is

using the traditional grazing system, which is characterized as a low level technology. As a result, the milk yield is very low. In addition, low government credits and competition from neighboring countries, especially Colombia, have also hindered the growth of Panama's dairy industry.

In the mid 1990s, Panama's Ministry of Agriculture was convinced of the need to modernize the national dairy and beef sector. It has implemented a plan of dairy industry improvement, with extension, technology transfer, training, and production services, in partnership with cattle producers, cooperatives and the National Livestock Association (Perez Bernal, 1999). More dairy farms have started to adopt advanced technologies and improved farming systems. Some pastures have been fertilized, and concentrated feed and medicine have been used as well.

Milk production in Panama increased slightly during the 1990s at an average annual rate of 1.6 percent (FAO Statistics, 2002). Milk production increased continuously from 140,964 metric tons in 1992 to 161,270 metric tons in 1997 (Table 1), for an overall increase of 15 percent. In the period 1998 to 1999, as international beef prices trended lower and failed efforts to export beef to other countries, Panama's livestock sector experienced a rough time, and producers were forced to decrease cattle inventories. Due to the dual-purpose operation, Panama's milk production also decreased to 157,030 metric tons in 1998 and 150,000 metric tons in 1999 (Table 1). However, milk production recovered rapidly in 2000 back to 165,613 metric tons (Table 1). Between the year 1991 and 2000, Panama's milk production increased 21,198 metric tons (Table 1).

Table 1. Panama milk and selected dairy products production, 1991 through 2000.

Year	Cow Milk, Whole, Fresh	Butter and Ghee	Cheese (All Kinds)	Whole Milk Dry	Skim Milk, Dry	Whey[a]
1991	144,415	44	4,905	2,693	----	6,300
1992	140,964	47	5,117	2,693	----	6,573
1993	151,066	48	5,810	2,706	----	7,500
1994	154,930	48	6,007	2,706	----	8,000
1995	155,342	51	6,379	4,884	----	8,816
1996	159,911	52	7,032	4,752	----	9,457
1997	161,270	47	6,892	4,646	----	8,268
1998	157,030	53	8,753	4,646	----	11,220
1999	150,000	53	9,500	4,620	----	12,475
2000	165,613	23	8,081	4,752	----	10,866

[a] Whey production in milk equivalent pounds.
Source: FAO Statistical Databases, 2002.

Panama has a warm, humid tropical climate. The rainy season lasts from May to December, and provides adequate water for the growth of pastures. Since milk production mainly depends on grassland, milk production varies seasonally. The seasonal surpluses of milk are processed to whole milk powder and cheese. However, Panama didn't produce skim milk powder in the 1990s, and cheese production increased in the 1990s, by an average annual growth rate of 6.3 percent (FAO Statistic, 2002). Between 1991 and 2000, cheese production increased 3,176 metric tons, from 4,905 metric tons in 1991 to 8,081 metric tons in 2000, reaching a peak in 1999 at 9,500 metric tons (Table 1).

Dry whole milk production increased in the 1990s. Between 1991 and 2000, dry whole milk production increased 2,059 metric tons, reaching a peak in 1995 at 4,884 metric tons (Table 1).

Whey is a by-product of cheese production; as a result, Panama's whey production increased with its cheese production. Between the year 1991 and 2000, whey production (in milk equivalent pounds) increased 4,566 metric tons, reaching a peak in 1999 at 12,475 metric tons (Table 1).

Very little can be said about Panama's butter production. In the 1990s, Panama produced very small amounts of butter every year (Table 1). In 2000, Panama produced 23 metric tons butter, which was a decrease of 21 metric tons from 1991 (Table 1).

Demand for Dairy Products

Panama experienced economic growth in the 1990s, except 1995. The growth has caused an increase in household incomes and living standards among Panamanians. Per capita purchasing power parity increased from about $2,500 in 1995 to $5,900 in 2001 (CIA World Factbook, 2002).

Panama's economic growth and higher household incomes have led to an expansion of consumer spending. Increased demand for dairy products was also the result of improved economic conditions in the country, such as flat inflation, low unemployment and increased real income. In addition, increasing per capita incomes and living standards also allowed more households to acquire refrigerators and microwaves. In Panama, urban centers were growing at faster rate than rural areas. This urban growth was concentrated in and around Panama City and Colon City, which are located near the Panama Canal (USDA-FAS, 1996). Panama's population is comparatively well educated and informed, and is influenced by modern trends in nutritional matters, showing their preferences for certain products, including dairy products (USDA-FAS, 1996). All of these factors have maintained the growth of dairy consumption among Panamanians.

The increase in dairy consumption was also supported by the Panamanian government. For example, the government has ordered milk for public school students. The milk was from either domestic production or imported products. In addition,

Panama's trade liberalization enacted in 1996 made it possible for more Panamanians to access high quality imported dairy products, such as cheese and dry skim milk. As a result, milk consumption in Panama increased in the 1990s, with an average annual growth rate of 2.3 percent (Table 2).

Per-capita consumption was still low compared to those developed countries. In 2000, per-capita consumption of all milk (in milk equivalent pounds) was 74.91 kilograms. It was about one-fourth of that experienced in the US (FAO Statistics, 2002). A significant decrease occurred in 1995, when per-capita milk consumption decreased from 66.76 kilograms in 1994 to 59.04 kilograms in 1995 (Table 2). The decrease was due to the difficult economic conditions the country experienced in 1995.

As the government started its policy reforms, the economy recovered rapid in the following year, and milk consumption also recovered to 66.75 kilograms in 1996 (Table 2). In 1998, the decrease in international beef prices caused Panama's livestock industry to experience a rough time. With the cut back on dairy production, per-capita milk consumption decreased from 68.61 kilograms in 1997 to 65.27 kilograms in 1998 (Table 2). Between 1991 and 2000, per-capita milk consumption increased 12.16 kilograms (Table 2).

Table 2. Per-capita consumption of dairy products in Panama, 1991 through 2000.

Year	All Milk[a]	Butter	Cheese	Skim Milk[a]	Whole Milk[a]	Whey[a]
			Kilograms			
1991	62.75	0.15	2.72	0.96	60.28	2.95
1992	68.10	0.45	2.82	0.57	65.93	3.57
1993	64.03	0.22	2.92	0.66	62.10	3.78
1994	66.76	0.32	3.05	0.64	64.54	4.18
1995	59.04	0.41	2.39	0.57	58.93	3.82
1996	66.75	0.36	2.78	6.44	59.21	4.17
1997	68.61	0.37	2.77	9.57	57.34	4.13
1998	65.27	0.24	3.59	8.93	55.08	5.37
1999	70.10	0.35	4.41	11.01	55.87	5.68
2000	74.91	0.48	4.09	12.59	58.39	6.37
Average Annual Growth (%) 1991-2000	2.3	29.0	5.7	119.0	-0.2	9.5

[a] Included food and other uses, such as cattle feed.
Source: FAO Statistical Databases, 2002.

Panamanians did not consume much butter. Although the average annual growth rate was 29 percent in the 1990s, the absolute quantity was low. In 2000, per-capita butter consumption was about 0.48 kilograms (Table 2). Since health has become a concern to Panamanian consumers, low fat, low salt, high fiber products do particularly well in the country. As a result, consumption of butter is expected to decrease in the near future. For the same reason, the growth of skim milk consumption was the highest in dairy consumption. In addition to this, Panama's trade policy reforms liberalized dairy imports in 1996, and Panamanians can purchase high quality skim dry milk from other countries. Per-capita skim milk consumption increased from 0.57 kilogram in 1995 to 6.44 kilograms in 1996 (Table 2), for an annual increase of 1,030 percent. Per-capita skim milk consumption increased at an average annual rate of 119 percent in the 1990s (Table

2). Between 1991 and 2000, per-capita skim milk consumption increased 11.63 kilograms.

As many other Latin American and Caribbean countries, cheese is important to Panamanian daily life. Except for the 1995 economic slowdown, which decreased per capita cheese consumption, Panama's cheese consumption increased steadily throughout the 1990s. On average, the annual growth rate was about 5.7 percent (Table 2). Between 1991 and 2000, per-capita cheese consumption increased 1.37 kilograms, reaching a peak in 1999 at 4.41 kilograms and dropping to 4.09 kilograms in 2000 (Table 2).

Whey is a by-product of cheese production. In Panama, whey is mainly used for animal feed. As the feed industry developed in the 1990s, per-capita whey consumption (including food and other uses, such as feed) increased. Between the year 1991 and 2000, per-capita whey consumption increased 3.42 kilograms, increasing by an average annual growth rate of 9.5 percent (Table 2).

Imports of Dairy Products

Panama's dairy self-sufficiency was about 75 percent in 2000 (FAO Statistics, 2002). Dairy products have to be imported every year to meet domestic demand. As demand increases relative to production, it is estimated that Panama will not change the situation in the near future. However, although Panama is a net importer of dairy products, the volume of dairy imports has never been high. In 2000, Panama ranked out of the top 40 countries in total dairy products imported (in milk equivalent pounds). In that year, Panama's total dairy imports were 65,522 metric tons, accounting for 0.1 percent of the total world imports of dairy products (FAO Statistics, 2002).

For individual dairy products, Panama also ranked out of the top 40 countries in imports of butter, cheese, dry skim milk, and whey in the 1990s. In 2000, Panama's total butter and cheese imports were 1,360 and 4,284 metrics tons, respectively (Table 3). Its share of world imports of butter and cheese was about 0.11 and 0.14 percent, respectively (FAO Statistics, 2002). Dry skim milk imports were 1,352 metric tons in 2000, and the share was only 0.07 percent of world imports of dry skim milk (1,805,896 metric tons) (FAO Statistics, 2002). In 2000, Panama imported only 543 metric tons of whey (Table 3).

Table 3. Panama dairy imports, 1991 through 2000.

Year	Milk Equivalent	Butter	Cheese	Dry Skim Milk	Whey
		Metric Tons			
1991	22,005	334	2,172	55	67
1992	49,903	1,065	2,472	32	171
1993	30,347	498	2,314	52	154
1994	40,546	787	2,594	54	208
1995	21,266	1,031	531	10	91
1996	34,785	900	804	1,127	126
1997	45,653	965	1,205	2,139	145
1998	37,100	609	1,727	1,021	269
1999	58,565	932	3,423	1,045	260
2000	65,522	1,360	4,284	1,352	543
Average Annual Growth (%) 1991-2000	24.4	34.6	23.1	1,242.5	41.0

Source: FAO Statistical Databases, 2002.

To satisfy domestic dairy demand, Panama imported about one-fourth of its total dairy consumption in 2000. As the consumption increases relatively faster than the domestic production, Panama's self-sufficiency is expected to drop further in the near future. The growth of dairy imports was significant in the 1990s. The average annual

increase rate of dairy imports was about 24.4 percent in the 1990s. Between 1991 and 2000, the dairy imports (in milk equivalent pounds) increased from 22,005 metric tons in 1991 to 65,522 metric tons in 2000 (Table 3), for an increase of 43,517metric tons. However, a significant decrease occurred in 1995, mainly caused by Panama's depressed economic conditions. Dairy imports decreased from 40,546 metric tons in 1994 to 21,266 metric tons in 1995 (Table 3). However, as the economy recovered in the period 1998 to 2000, Panama's dairy imports increased 28,422 metric tons, for an average annual growth rate of 39 percent (FAO Statistics, 2002).

Panama produced very little butter in the 1990s. As a result, Panama imported over 95 percent of its total butter consumption (FAO Statistics, 2002). Panama's butter imports have never been high by the world standards. Panama's butter imports increased at an average annual rate of 34.6 percent in the 1990s. Between the year 1991 and 2000, butter imports decreased 1,026 metric tons (Table 3); however, annual imports were variable with year to year increases and decreases. In 2000, Panama imported 1,360 metric tons of butter (Table 3).

Cheese is important to Panamanians. Although Panama produced a relatively large amount of cheese domestically, cheese still needed to be imported throughout the 1990s. The continuous growth of cheese imports was interrupted in the period 1995 to 1996, when cheese imports dropped to less than one thousand metric tons per year in that period (Table 3). This was caused by a slowdown of the economy in 1995, which lowered income and caused people to cut back on cheese consumption which decreased the imports. In the 1990s, Panama's cheese imports increased at an average annual rate of 23.1 percent, and reached 4,284 metric tons in 2000 (Table 3).

Panama did not produce skim dry milk, and all of the skim dry milk consumption was from imports. Dry skim milk was mainly used in food manufacturing or to recombine with water to make fluid skim milk. During the 1990s, Panama's dry skim milk imports experienced an average annual increase of 1,242.5 percent, reaching a peak in 1997 at 2,139 metric tons (Table 3). Panama imported small amounts of dry skim milk every year until 1996 (Table 3). With its accession to the WTO in 1996, Panama implemented an open trade policy. Tariffs on dairy products were decreased. As a result, dry skim milk imports received the biggest impact, and imports increased rapidly from 10 metric tons in 1995 to 1,127 metric tons in 1996, for an annual increased of 11,170 percent. Between the years of 1991 and 2000, Panama's skim milk powder imports increased 1,297 metric tons, to 1,352 metric tons (Table 3).

As the uses of dairy ingredients in animal feed increased, whey imports also increased at an average annual rate of 41 percent in the 1990s (Table 3). Between 1991 and 2000, Panama's whey imports increased 476 metric tons. In 2000, Panama imported 543 metric tons of whey (Table 3).

Exports of Dairy Products from the U.S.

The US and New Zealand were the main suppliers of dairy products to Panama. Dairy products from New Zealand were mainly in the form of whole milk powder and milk fat. The US was the main supplier of cheese, nonfat dry milk, and whey. After Panama's accession to the WTO in 1996, its neighboring countries, such as Costa Rica and Colombia have become important suppliers of fluid milk to Panama (USDA-FAS, 1996).

The US was not a big supplier of butter to Panama. In the 1990s, the market share of US butter was low (Table 4). In 2000, the US exported 81.7 metric tons butter to Panama, accounting for six percent of its total butter imports (Table 4). Panamanians don't like the taste and low melting point of the US butter (USDA-FAS, 1996); as a result, most of butter was imported from Oceania countries, primarily from New Zealand.

Table 4. Selected dairy products exported from the US to Panama, 1991 through 2000.

Year	Butter[a]	% of All Butter Imports[b]	Cheese[a]	% of All Cheese Imports[b]	Non-Fat Dry Milk[a]	% of All NFDM Imports[b]	Whey[a]	% of Whey Imports[b]
	Mt	%	Mt	%	Mt	%	Mt	%
1991	31.5	9.4	133.5	6.1	34.9	63.5	27.0	40.3
1992	54.9	5.2	230.5	9.3	867.0	2,709.4[c]	94.3	55.1
1993	9.8	2.0	126.3	5.5	259.3	498.7[c]	64.0	41.6
1994	3.9	0.5	139.1	5.4	32.1	59.4	36.0	17.3
1995	15.5	1.5	131.0	24.7	469.7	4,697.0[c]	6.6	7.3
1996	1.2	0.1	105.4	13.1	75.9	6.7	73.1	58.0
1997	7.1	0.7	142.4	11.8	966.2	45.2	96.8	66.8
1998	7.4	1.2	460.5	26.7	686.5	67.2	74.6	27.7
1999	35.7	3.8	518.7	15.2	336.1	32.2	187.6	72.2
2000	81.7	6.0	500.5	11.7	32.9	2.4	290.0	53.4

[a] Source: United States Department of Agriculture Foreign Agricultural Service, 2003.
[b] Data from Table 3.

The US was one of the major suppliers of cheese to Panama. Between the year 1991 and 2000, US cheese imported to Panama increased 367 metric tons, reaching a peak in 1999 at 518.7 metric tons (Table 4). In 2000, Panama imported 500.5 metric tons cheese from the US. New Zealand was also a major cheese supplier to Panama. Because of its cost advantages in bulk cheese, the competition caused the market share of US cheese to decline in the late 1990s. The market share of US cheese peaked in 1998 at 26.7 percent, and decreased to 11.7 percent in 2000 (Table 4). Because US cheese has long been

known as a high quality product, a strong market still exists in processed cheese and specialty cheese for US exporters (USDEC, 1997).

Although Panama produced dry whole milk, it did not produce nonfat dry milk in the 1990s. To satisfy its domestic demand, all of the nonfat dry milk was imported. The US dominated Panama's nonfat dry milk imports in the 1990s. However, the market share of US nonfat dry milk declined due to competition with subsidized EU products (Table 4). In 2000, Panama imported 32.9 metric tons of nonfat dry milk from the US, and the market share was 2.4 percent (Table 4).

The US was a major supplier of whey to Panama. In the 1990s, the market share of US whey has increased overall with some decreases from year to year. In 2000, the US exported 290 metric tons of whey to Panama, with a market share of 53.4 percent (Table 4).

If US dairy exporters can contend with the competition from the EU milk powder (including nonfat dry milk and whole milk powder) and New Zealand cheese, opportunities still exist, particularly for nonfat dry milk as well as processed and specialty cheeses. Opportunities also exist for whey and US exporters need to let Panamanians know more about the benefits of using dairy ingredients in food manufacturing and feed industry, so that whey and lactose exports may increase (USDEC, 1997).

Trade Policy and Tariff

Starting from the mid 1990s, Panama implemented economic policy reforms to liberalize its trade regime, privatize state-owned enterprises, and lower tariffs. Panama became a member of the World Trade Organization (WTO) in 1997. In order to access

the WTO, the government of Panama implemented laws in June 1996, liberalizing the country's trading regime, primarily in the areas of tariff reductions, import licensing and phytosanitary standards (USTR, 2002).

Panama is not a member of the Central American Common Market or other regional economic groups. However, Panama has bilateral trade agreements with Costa Rica, Nicaragua, and El Salvador, which are its neighbor countries. Panama had also conducted trade negotiations with Chile, the Dominican Republic and Mexico, but in order to focus on trade efforts in Central America, the negotiations were suspended in recent years (USTR, 2002).

In 1997, Panama further reduced tariffs beyond the requirements of its 1997 entry into the WTO, with tariffs ranking among the lowest in Latin America (USTR, 2002). For agricultural products, including dairy products, tariffs were lowered to an average of 15 percent (USTR, 2002). However, in 1999, in order to complete a campaign promise for its domestic agricultural producers, the new government of Panama increased tariffs on 44 agricultural products, including dairy products. New tariffs for these products on average were over 100 percent. Tariffs on milk products were increased from 40 percent to 167 percent. The government also announced that these changes were temporary (USTR, 2002).

On January 12, 2000, in order to fulfill the tariff-rate quotas requirement for dairy products under the WTO commitment, the government resumed the tender to allocate imports of various dairy products under the reduced tariff (USDA-FAS, 2000). A tender is to allocate the right to export dairy products to Panama under a reduced tariff. The reduced tariffs on finished dairy products are 15 percent and tariffs on raw dairy material

are three percent (USDA-FAS, 2000). Although the tender partially complied with Panama's dairy Tariff Rate Quota (TRQ) requirement of its WTO accession agreement, it represented just more than one-half of the TRQ commitment for dairy products (USDA-FAS, 2000), and the situation seemingly won't change in the near future.

In Panama, other restrictions have been applied from time to time to help different sectors with Panama's progressive policy of trade liberalization. In recent years, the government has erected non-tariff barriers for certain agricultural products including chicken, beef, and dairy products. The mechanism utilized has been alleged phytosanitary deficiencies or simply the refusal or delays in processing phytosanitary permit applications for agricultural product (US Department of State, 2002). No US exporters have failed to be certified; however, inspections have been delayed many times for various reasons, including lack of personnel and budgetary constraints in the responsible Panamanian ministries (USTR, 2002).

SUMMARY

Over the last decade, the world total dairy imports increased. Since the establishment of the UR GATT in 1995, the share of EU dairy exports has declined, due in part to the impact of export subsidy limitations. As trade barriers and export subsidy levels are further phased down and world demand increases, the US is in a good position to gain greater access to the international markets. Although Australia and New Zealand are expected to be the primary gainers from the new trade environment, the US has the production capacity to be a major world supplier (Washington, 2000).

Although the Central American countries have a relatively high dairy self-sufficiency rate, compared to Caribbean countries, milk producers cannot keep pace with the demand, and as a result, we concluded that opportunities exist for US dairy products.

As the US seeks to conclude a free trade agreement with five Central American countries, US dairy exporters may benefit as well. Due to strong international competition and its government's open trade policy, Guatemala's domestic milk production cannot compete with dairy imports. As a result, dairy self-sufficiency has declined over the last decade. Since the US has been the large supplier of dairy products to Guatemala, US dairy exporters enjoy a well-founded relationship with Guatemala's dairy importers. If US dairy products can overcome high price disadvantages, the market share of US dairy products will likely increase.

Milk producers in Honduras also cannot keep pace with the demand, and as a result, opportunities exist, as well as challenges, for US dairy products, which have a good reputation in Hondurans. If U.S. traders can overcome the high prices and get past the stiff competition from the EU and New Zealand, strong markets exist for whole milk

powder and skim milk powder, as well as processed, cream, and specialty cheeses. Whey and lactose also has potential markets in Honduras.

Panama's milk production cannot keep up with the increasing demand. As a result, opportunities exist for most US dairy products. US dairy products have long been known for their high quality and good taste. However, due to the competition with the EU and Oceania countries, US dairy exporters have to overcome the high price disadvantage. If so, strong markets will exist for whole milk powder and skim milk powder as well as processed and specialty cheeses.

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