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International Agricultural Trade and Policy Center

**A DESCRIPTIVE ANALYSIS OF THE NETHERLANDS AND
THE UNITED KINGDOM WHO IMPORT UNITED STATES
DAIRY PRODUCTS**

By

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MGTC 03-9

October 2003

MONOGRAPH SERIES



**UNIVERSITY OF
FLORIDA**

Institute of Food and Agricultural Sciences

INTERNATIONAL AGRICULTURAL TRADE AND POLICY CENTER

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A DESCRIPTIVE ANALYSIS OF THE NETHERLANDS AND THE UNITED KINGDOM WHO IMPORT UNITED STATES DAIRY PRODUCTS

By

Xumin Zhang, Richard L. Kilmer and Andrew Muhammad¹

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). Two countries in Europe, the Netherlands and the United Kingdom, 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 an 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 the Netherlands and the United Kingdom.

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 the Netherlands and the United Kingdom totaled 26,000,000 metric tons (Table 2), accounting for 5.3 percent of the world total cow milk production (Table 1).

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 the Netherlands and the United Kingdom totaled 256,000 metric tons (Table 2). This was 3.4 percent of the world total butter production in 2001 (Table 1).

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 the Netherlands and the United Kingdom totaled

1,047,400 metric tons in 2001 (Table 2), accounting for 6.2 percent of the world total cheese production in 2001 (Table 1).

Table 2. The Netherlands and the UK 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						
EUROPE						
Netherlands	11,291,000	130,000	662,400	108,000	68,000	219,000
UK	14,709,000	126,000	385,000	83,000	71,000	56,000
TOTAL	26,000,000	256,000	1,047,400	191,000	139,000	275,000

^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). The Netherlands and the United Kingdom produced a total of 191,000 metric tons of dry whole milk, which was about 7.3 percent of the world total dry whole milk production in 2001 (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). The Netherlands and the United Kingdom produced 139,000 metric tons of dry skim milk (Table 2), accounting for 4.1 percent of the world total dry skim milk production (3,374,176 metric tons, Table 1).

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). The Netherlands and the United Kingdom produced 275,000 metric tons of dry whey (Table 2), accounting for 14 percent of the world dry whey production (1,960,928 metric tons, Table 1).

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 the Netherlands and the United Kingdom were 8,718,899 metric tons in 2001 (Table 4), which was 13 percent of the world total dairy imports (Table 3).

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 the Netherlands and the United Kingdom totaled 208,193 metric tons (Table 4), or 16.3 percent of world total butter imports in 2001 (Table 3).

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). The Netherlands and the United Kingdom imported 426,909 metric tons in 2001 (Table 4), which were 12.7 percent of the world total cheese imports in 2001 (Table 3).

Table 4. The Netherlands and the UK dairy imports in 2001.

	Milk Equivalent	Butter	Cheese	Dry Whole Milk	Dry Skim Milk	Dry Whey
Metric Tons						
EUROPE						
Netherlands	5,957,434	95,275	150,339	76,517	145,923	273,103
UK	2,761,465	112,918	276,570	8,331	22,685	25,574
TOTAL	8,718,899	208,193	426,909	84,848	168,608	298,677

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 the Netherlands and the United Kingdom totaled 84,848 metric tons in 2001 (Table 4), accounting for 6.3 percent of the world total dry whole milk imports (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). Dry skim milk imports into the Netherlands

and the United Kingdom totaled 168,608 metric tons (Table 4), accounting for about 10.7 percent of the world total dry skim milk imports 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 imports into the Netherlands and the United Kingdom totaled 298,677 metric tons (Table 4), accounting for about 25.6 percent of the world total dry whey imports in 2001.

The rest of this paper covers the following information for the Netherlands and the United Kingdom: 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 NETHERLANDS

Overview of the Netherlands

The Netherlands is located in Western Europe, bordering the North Sea, between Belgium and Germany. The total area of the country is 41,526 square kilometers, slightly smaller than the size of New Jersey. The population of the Netherlands in 2001 was about 16.1 million, with a 0.53 population growth rate (CIA World Factbook, 2002).

The Netherlands is a prosperous and open economy, which depends heavily on foreign trade. Dutch trade and investment policies are among the most open in the world. Structural and regulatory reforms have been implemented since the early 1980s. Its economy is characterized by stable industrial relations, a current account surplus from trade, and overseas investments. Major industrial activities include food processing, chemicals, petroleum refining, and electrical machinery. Its agricultural sector is highly mechanized, and provides large surpluses for the food-processing industry and for exports (US Department of State, 2002). After more than four years of average four percent gross domestic product (GDP) growth, the Dutch economic growth decreased to 0.3 percent in the period 2001 to 2002. Real growth rates for exports, consumer spending, and corporate investment decreased as part of the global economic slowdown. In 2001, the Dutch GDP was \$434 billion (purchasing power parity), with per-capital purchasing power parity of \$26,900 (CIA World Factbook, 2002). Agriculture accounted for three percent of the total GDP (CIA World Factbook, 2002).

The Netherlands has an open market economy and a tradition of free trade. The country's total exports in 2001 were \$221.9 billion. Its total imports in 2001 were \$201.1 billion, of which the US shipped 9.9 percent. The country's main trading partners include the European Union (EU) members (Germany, Benelux, the United Kingdom, France, and Italy) and the United States (CIA World Factbook, 2002)

The Dairy Industry in the Netherlands

Production of Dairy Products

Despite the small size of the country, the Netherlands is one of the largest exporters of agricultural products. Innovation has played an important role in Dutch dairy farming. The Dutch dairy industry has been one of the most efficient and progressive in the world.

Since 1984, the Common Agricultural Policy (CAP) has imposed a quota on milk production for EU member states. The European Common Agricultural Policy determines how much milk a farm may produce and influences the price of milk. Milk quotas were introduced as a means of reducing overproduction and expenditures for the disposal of surplus milk and milk products (USDA-FAS, 2000). However, as a result of the General Agreement on Tariff and Trade (GATT) and the World Trade Organization (WTO), the EU, including the Netherlands, is required to move towards the removal of trade barriers, price supports, and export subsidies (Washington, 2000). It is expected that

the efficiency and added value of the Dutch dairy production will be further affected by future EU policies.

In the Netherlands, there were about 30,000 dairy farms, along with a dairy herd of 1.5 million cows, in 2000 (MANMF, 2000). More than 80 percent of its dairy farms are specialist farms, which are larger with more cows, and modern research and technologies play an important part in the farms. Dairy farms are primarily family farms. That is, the farmer and his family do most of the work, but the number of farm workers is growing (MANMF, 2000).

Since the quota system has been imposed, small farms have disappeared and their land has been taken over by larger more specialized farms. Production innovations, including mechanization, specialization, and upscaling, have contributed to an efficient dairy industry. This is in accordance with the aim of the Dutch Government to have a more market-oriented competitive dairy industry (MANMF, 2000).

Although the number of dairy farmers decreased during the 1990s, the increased adoption of modern technological practices and increased managerial expertise in the sector continues to increase milk yields. In 2000, there were approximately 1.5 million head of milking cows in the country, with an average milk yield of about 8,000 kilograms per cow, per year (MANMF, 2000). The milk yield in the Netherlands is one of the highest in the world. During the 1990s, the number of dairy cattle declined approximately 20 percent due to the production limitation caused by the milk quota, which is 11 million metric tons and has been extended to 2008 (USDA-FAS, 2000).

Dutch milk production in 2000 totaled 11,135,000 metric tons, which increased 87,660 metric tons from the 1991 level (Table 1). However, during the 1990s, milk production decreased at an average annual rate of –0.2 percent, reaching a low in 1994 of 10,872,660 metric tons (Table 1). Due to the milk quota imposed on the Netherlands, raw milk production remained around 11 million metric tons throughout the 1990s.

Table 1. Netherlands 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	11,047,340	166,300	602,480	175,852	52,100	4,432,000
1992	11,901,700	148,500	625,999	129,721	49,600	4,620,800
1993	10,952,650	146,832	627,910	142,951	57,800	4,573,600
1994	10,872,660	128,583	648,285	134,800	37,779	4,754,400
1995	11,293,929	131,837	680,076	122,400	32,122	4,977,600
1996	11,012,592	127,550	688,053	123,477	28,942	5,008,000
1997	10,922,310	134,539	693,000	112,000	39,000	5,115,200
1998	10,995,000	149,000	638,000	115,200	60,800	4,666,400
1999	11,174,000	139,900	645,600	110,100	58,600	4,707,200
2000	11,135,000	126,000	672,000	96,000	48,000	4,976,000

^a Whey production in milk equivalent pounds.

Source: FAO Statistical Databases, 2002.

The Dutch livestock sector was hit by the Foot-and-Mouth Disease (FMD) crisis somewhere in early 2001. In the quota period April 2000 to April 2001, Dutch milk production did not reach its quota (11 million metric tons) for the first time (USDA-FAS, 2001). In addition to this, FMD created significant uncertainty in the domestic livestock sector and the dairy sector.

According to the Dutch Ministry of Agriculture's Nature Management and Fisheries (MANMF), the first dairy cooperatives were established in the 19th century.

Cooperatives owned by dairy farmers are the foundation of the Dutch dairy industry's success (MANMF, 2000). The Dutch dairy industry is highly concentrated, coupled with continued expansion overseas by all major dairy groups. Friesland Coberco and Campina are the biggest two and account for over 90 percent of all milk processed within the country. In the Netherlands, more than 95 percent of all Dutch milk is processed in factories, and the remainder is processed at the farms (MANMF, 2000).

During the 1990s, butter production in the country decreased at an average annual growth rate of 2.8 percent (FAO Statistics, 2002). Between 1991 and 2000, butter production fluctuated, but decreased 40,300 metric tons, reaching a high of 166,300 metric tons in 1991 and reaching a low of 126,000 metric tons in 2000 (Table 1). The decrease in butter production during the 1990s is associated with the increased use of milk for cheese production (USDA-FAS, 2000).

Cheese has remained the mainstay of Dutch milk production, with about 55 percent of all milk going into cheese production (USDA-FAS, 2000). Cheese production in 2000 totaled 672,000 metric tons (Table 1). This was up 69,520 metric tons (11.5 percent) from the production level in 1991 of 602,480 metric tons (Table 1). During the 1990s, cheese production increased at an average annual growth rate of 1.3 percent, which was driven by export demand. Cheese production peaked at 693,000 metric tons in 1997 (Table 1). However, a significant decrease occurred in 1998 when cheese production decreased from 693,000 metric tons in 1997 to 638,000 metric tons in 1998 (Table 1).

During the 1990s, Dutch dry whole milk production decreased at an average annual decrease rate of -6.0 percent. Between 1991 and 2000, Dutch dry whole milk production decreased 79,852 metric tons, from 175,852 metric tons in 1991 to 96,000 metric tons in 2000, for an overall decrease of 45.4 percent (USDA-FAS, 2000).

Dutch dry skim milk (nonfat dry milk or skim milk powder) production in 2000 totaled 48,000 metric tons (Table 1). Between 1991 and 2000, dry skim milk production fluctuated, but decreased 4,100 metric tons, for an overall decrease of eight percent. In the period 1994 to 1997, dry skim milk production remained at a low level, ranging from 28,942 metric tons in 1996 to 39,000 metric tons in 1997. The decrease in dry skim milk production was due to the fact that more milk was used in the production of value added products, which offered better margins such as cheese. Since 1998, lower cheese production has caused dry skim milk production to increase (USDA-FAS, 2000).

Between 1991 and 2000, Dutch whey production (in milk equivalent metric tons) increased 544,000 metric tons, from 4,432,000 metric tons in 1991 to 4,976,000 metric tons in 2000, peaking in 1997 at 5,115,200 metric tons (Table 1). During the 1990s, Dutch whey production increased at an average annual rate of 1.4 percent (FAO Statistics, 2002).

Demand for Dairy Products

Dutch milk production is mainly for domestic use, including fluid use, factory use, and feed use. The liquid use of milk in the Netherlands accounted for less than 20 percent

of the total milk available during the 1990s. The majority of Dutch milk production goes for factory use, which accounts for more than two-thirds of production. Only about two percent of the milk goes for feed purposes (USDA-FAS, 2001). During the 1990s, the Dutch milk market stabilized, and milk utilization by factories remained relatively static. However, industrial use of fluid milk for cheese production increased during the 1990s, which was driven by high export demand and high prices for cheese (USDA-FAS, 2001).

There is a strong tradition of consuming dairy products in the Netherlands. However, the household market has been saturated, and consumption declined during the 1990s, which caused product innovation. In response to consumer demand, the Netherlands has developed a number of dairy products, including functional drinks, yogurts, and organic dairy foods (Dairy Industries International, 1999). In the Netherlands, promotions for milk products have intensified, and milk and dairy products are increasingly sold in supermarkets.

The image of milk as a healthy food has remained unharmed among the Dutch, despite the BSE crisis that emerged in 1986 in Europe. In the Netherlands, dairy products are the most popular types of functional foods. The most important aspect is taste and delicacy of the product. During the 1990s, consumption of milk, cream, and butter decreased, while consumption of cheese and dairy drinks, such as yogurt drinks, fruit yogurt, and chocolate milk increased (USDA-FAS, 2001).

Per-capita dairy consumption (including food and other uses such as factory and feed) decreased at an average annual rate of -0.15 percent (Table 2). Per-capita dairy

consumption has experienced fluctuations from year to year, but trended downward. Per-capita dairy consumption reached a high of 626.58 kilograms in 1995 and a low of 521.16 kilograms in 2000 (Table 2). Between 1991 and 2000, per-capita dairy consumption decreased 28.13 kilograms (Table 2).

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

Year	All Milk ^a	Butter	Cheese	Skim Milk ^a	Whole Milk ^a	Whey ^a
	Kilograms					
1991	549.29	3.29	13.60	377.44	636.29	378.54
1992	595.45	3.01	13.59	333.00	721.11	416.04
1993	516.04	2.10	16.05	309.19	628.41	387.37
1994	562.03	2.06	16.15	343.36	632.76	405.72
1995	626.58	2.18	19.30	352.81	675.74	412.59
1996	540.27	2.11	16.64	296.05	661.03	436.44
1997	573.74	2.27	21.32	304.93	653.05	407.67
1998	543.00	2.07	19.20	277.50	651.08	400.44
1999	556.71	2.17	19.12	277.76	653.80	434.68
2000	521.16	2.13	19.82	238.73	659.86	411.95
Average Annual Growth (%) 1991-2000	-0.15	-4.0	5.1	-4.6	0.6	1.1

^a Included food and other uses, such as cattle feed.

Source: FAO Statistical Databases, 2002

Per-capita whole milk consumption increased slightly at an average annual rate of 0.6 percent during the 1990s (Table 2). Between 1991 and 2000, per-capita whole milk consumption increased 23.57 kilograms, peaking in 1992 at 721.11 kilograms and reaching a low in 1993 of 628.41 kilograms (Table 2).

In the Netherlands, skim milk consumption accounts for a fairly large proportion of the dairy consumption. However, per-capita skim milk consumption decreased at an average annual rate of 4.6 percent during the 1990s. Between 1991 and 2000, per-capita skim milk consumption decreased 138.71 kilograms, from 377.44 kilograms in 1991 to 238.73 kilograms in 2000 (Table 2). The decrease was mainly due to the fact that more milk was used in cheese production, which caused the domestic skim milk supply to decrease. Another reason for the decrease in Dutch skim milk consumption is due to the increase in skim milk powder exports at the expense of decreased domestic supply (USDA-FAS, 2000).

As in most other European countries, butter consumption has been affected by concerns for fat intake. Per-capita butter consumption decreased at an average annual rate of four percent during the 1990s. This decline was due to the introduction of healthy margarine brands. Per-capita consumption of regular margarine has declined, while the consumption of low-fat margarine called “halvarine” has increased (USDA-FAS, 2001). Between 1991 and 2000, per-capita butter consumption decreased from 3.29 kilograms in 1991 to 2.13 kilograms in 2000 (Table 2).

Per-capita cheese consumption increased during the 1990s, at an average annual rate of 5.1 percent (Table 2). Increased per-capita consumption was contributed to cheese powder and processed cheese, which are commonly used for pasta, pizza, and hamburgers (USDA-FAS, 2001). Between 1991 and 2000, per-capita cheese consumption increased 6.22 kilograms, peaking in 1997 at 21.32 kilograms (Table 2). In

the Netherlands, sales of convenience products, such as grated cheese or cheese slices, have increased. In addition, consumption of cottage cheese doubled during the last decade and is expected to grow further, reflecting concerns about high calorie intake (USDA-FAS, 2001).

Per-capita whey consumption experienced an increase during the 1990s, at an average annual rate of 1.1 percent (Table 2). However, whey consumption fluctuated throughout the 1990s, ranging from 378.54 kilograms in 1991 to 436.44 kilograms in 1996 (Table 2). Between 1991 and 2000, per-capita whey consumption increased 33.41 kilograms. Whey is mainly used in feed and food manufacturing. In 2000, about 75 percent of the total whey production was used in feed manufacturing (FAO Statistics, 2002).

The Netherlands is one of the world's largest producers of milk and dairy products. Moreover, the Netherlands is actively involved in the world dairy trade market. It is also one of the world's largest dairy importers and exporters of dairy products. More than 40 percent of the exports are destined for EU countries (MANMF, 2000).

Imports of Dairy Products

The Netherlands participates in significant trade in milk products. In 2000, the Netherlands imported 6,297,773 metric tons of dairy products, and ranked first among all countries in total dairy products imported in milk equivalent metric tons (Table 3). In 2000, its share of the world imports of dairy imports (in milk equivalent metric tons) was about 9.2 percent (FAO Statistics, 2002).

For individual dairy products, the Netherlands ranked fifth and eighth, respectively, among all countries in imports of butter and cheese in 2000 (Tables 4 and 5). Its share of world imports of butter and cheese was about seven and four percent, respectively (FAO Statistics, 2002). In 2000, the Netherlands ranked third in the world in total imports of dry whole milk, with about 4.1 percent of the world dry whole milk imports (Table 6). Additionally, the Netherlands ranked first in the world in total imports of dry skim milk and whey (Tables 7 and 8), with about 11.4 and 22.4 percent, respectively, of the world imports (FAO Statistics, 2002).

Table 3. Selected countries' total dairy imports (in milk equivalent) and ranking, 1996 through 2000.

	1996		1997		1998		1999		2000	
	Mt	Rank	Mt	Rank	Mt	Rank	Mt	Rank	Mt	Rank
Belgium	3,709,566	4	3,661,389	4	3,936,039	5	4,054,076	5	4,434,830	5
China	1,285,203	13	1,584,260	10	1,531,064	14	1,909,979	10	2,243,373	8
France	3,158,352	5	3,582,977	5	3,966,796	4	4,313,597	4	4,685,094	4
Germany	4,673,712	3	4,796,523	3	4,669,373	3	4,554,466	3	5,024,699	3
Italy	5,210,317	2	5,430,128	2	5,543,997	2	5,509,023	2	5,467,815	2
Mexico	1,912,993	8	2,121,080	8	2,021,171	7	2,217,376	7	2,310,820	7
Netherlands	6,385,562	1	6,061,069	1	5,633,207	1	7,113,321	1	6,297,773	1
Spain	1,450,968	11	1,583,212	11	1,652,153	11	1,661,739	12	1,918,970	10
UK	2,393,522	6	2,476,914	7	2,537,039	6	2,667,275	6	2,710,840	6
USA	1,380,531	12	1,466,204	12	1,873,207	8	1,953,107	9	1,953,940	9
Total	31,560,726	----	32,763,756	----	33,364,046	----	35,953,959	----	37,048,154	----
World	59,844,367	----	62,626,024	----	62,478,356	----	66,593,229	----	68,138,509	----

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

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

	1996		1997		1998		1999		2000	
	Mt	Rank	Mt	Rank	Mt	Rank	Mt	Rank	Mt	Rank
Belgium	100,015	5	103,759	5	101,137	4	100,491	4	112,073	4
Egypt	50,225	7	37,759	8	35,253	9	43,115	8	44,141	7
France	109,919	4	137,381	3	133,670	2	129,819	1	148,302	1
Germany	132,955	1	156,822	2	134,930	1	123,476	2	131,121	2
Italy	48,315	8	52,087	7	60,124	7	46,864	7	41,167	8
Mexico	18,529	14	24,793	9	27,325	10	34,047	9	34,078	9
Morocco	28,050	9	16,457	15	22,104	12	19,818	12	27,357	10
Netherlands	68,782	6	94,022	6	69,879	6	96,933	5	86,887	5
Russian	125,810	2	169,698	1	83,053	5	53,200	6	53,857	6
UK	111,619	3	101,210	4	109,287	3	122,076	3	122,922	3
Total	794,219	---	893,988	---	776,762	---	752,009	---	801,905	---
World	1,203,892	---	1,321,235	---	1,213,138	---	1,217,796	---	1,261,586	---

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

Table 5. Selected countries' total cheese imports and ranking, 1996 through 2000.

	1996		1997		1998		1999		2000	
	Mt	Rank	Mt	Rank	Mt	Rank	Mt	Rank	Mt	Rank
Belgium	176,745	4	186,681	5	197,185	4	199,602	5	208,949	5
France	151,238	7	153,718	7	167,326	7	188,472	6	213,138	4
Germany	458,261	1	476,361	1	441,518	1	417,503	1	424,721	1
Greece	50,747	12	68,059	11	94,838	9	67,341	11	76,944	10
Italy	294,875	2	305,861	2	305,419	2	318,681	2	347,233	5
Japan	164,164	5	171,407	6	183,448	5	186,905	7	205,123	6
Netherlands	92,067	9	84,895	9	100,869	8	116,845	8	122,438	8
Spain	81,511	10	81,046	10	86,363	10	94,223	9	104,688	9
UK	258,704	3	261,775	3	249,191	3	272,312	3	268,613	3
USA	154,764	6	142,793	8	170,557	6	203,042	4	192,342	7
Total	1,883,076	---	1,932,596	---	1,996,714	---	2,064,926	---	2,164,189	---
World	2,688,552	---	2,843,580	---	2,786,286	---	2,887,650	---	3,093,644	---

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

Table 6. Selected countries' total dry whole milk imports and ranking, 1996 through 2000.

	1996		1997		1998		1999		2000	
	Mt	Rank	Mt	Rank	Mt	Rank	Mt	Rank	Mt	Rank
Algeria	67,865	3	88,882	2	103,724	2	105,507	2	96,340	2
Belgium	66,029	5	53,781	9	54,362	7	46,786	10	57,289	7
Brazil	115,586	1	101,169	1	133,742	1	145,983	1	108,609	1
China	58,981	7	68,234	5	62,598	5	83,985	4	83,011	4
Malaysia	53,152	9	66,000	6	44,857	12	54,203	6	57,696	6
Netherlands	94,413	2	77,736	3	71,376	4	101,713	3	89,672	3
Philippines	36,476	11	39,656	12	40,511	13	36,958	12	56,072	8
Sri Lanka	35,027	12	37,364	13	48,788	10	48,308	9	49,070	9
Thailand	50,430	10	69,180	4	50,237	8	49,791	8	48,249	10
Venezuela	66,321	4	51,842	10	84,115	3	52,042	7	64,759	5
Total	644,280	---	653,844	---	694,310	---	725,276	---	710,767	---
World	1,281,604	---	1,357,158	---	1,401,542	---	1,439,868	---	1,418,968	---

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

Table 7. Selected countries' total dry skim milk imports and ranking, 1996 through 2000.

	1996		1997		1998		1999		2000	
	Mt	Rank	Mt	Rank	Mt	Rank	Mt	Rank	Mt	Rank
Algeria	58,468	9	78,893	5	87,040	4	71,272	8	91,339	5
Belgium	51,781	12	43,521	11	43,155	13	45,150	15	71,900	9
China	37,975	15	40,945	13	44,813	12	51,150	13	56,862	10
France	33,446	18	28,453	20	42,636	14	63,791	9	84,735	6
Indonesia	45,916	14	41,034	12	33,133	18	98,348	5	82,574	7
Italy	126,614	3	127,504	3	126,494	2	121,779	3	109,008	4
Malaysia	78,151	5	75,000	6	59,596	6	71,879	7	74,721	8
Mexico	126,700	2	132,849	2	102,600	3	125,137	2	129,078	2
Netherlands	216,085	1	224,214	1	162,459	1	230,438	1	205,379	1
Philippines	83,704	4	98,050	4	77,637	5	86,729	6	111,455	3
Total	858,840	---	890,463	---	779,563	---	965,673	---	1,017,051	---
World	1,716,935	---	1,727,457	---	1,607,154	---	1,879,505	---	1,805,896	---

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

Table 8. 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
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	675,559	----	652,831	----	704,234	----	768,061	----	795,712	----
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.

During the 1990s, imports of dairy products into the Netherlands increased. Since 1991, imports of all dairy products (in milk equivalent metric tons) have been increasing at an average annual rate of 1.4 percent (Table 9). Between 1991 and 2000, dairy imports increased 369,568 metric tons, peaking in 1999 at 7,113,321 metric tons (Table 9). A significant increase occurred in 1999 when dairy imports increased from 5,633,207 metric tons in 1998 to 7,113,321 metric tons in 1999 (Table 9). The increase was mainly due to increasing imports of butter, dry skim milk, and whey, which was caused by the decline in the domestic production of butter and milk powder. In 2000, the Netherlands imported 6,297,773 metric tons of dairy products (in milk equivalent metric tons), which was down 11 percent from the 1999 level (FAO Statistics, 2002).

Since the enactment of the UR GATT in 1995, the EU market access commitment to the WTO has required tariffication of its import duties. The tariffication of import restrictions and the reduction of export subsidies have had an effect on Dutch dairy imports; however, exports are still strong (Washington, 2000).

Butter imports increased at an average annual rate of 3.4 percent, although imports fluctuated, ranging from 68,782 metric tons in 1996 to 125,659 metric tons in 1993 (Table 9). However, between 1991 and 2000, butter imports decreased 5,260 metric tons. In 2000, the Netherlands imported 86,887 metric tons of butter (Table 9). Intra-EU imports decreased from the previous year (USDA-FAS, 2000).

The growth in cheese imports has been the most impressive among all the dairy products. During the 1990s, cheese imports increased at an average annual growth rate of

5.4 percent (Table 9). Since 1997, cheese imports have experienced a continuous increase, from 84,895 metric tons in 1997 to 122,438 metric tons in 2000. Cheese imports have increased, due to the enactment of UR GATT in 1995, which required the tariffication of EU import policies. Between 1991 and 2000, Dutch cheese imports increased 43,822 metric tons.

Table 9. Netherlands dairy imports, 1991 through 2000.

Year	Milk Equivalent	Butter	Cheese	Dry Whole Milk	Dry Skim Milk	Dry Whey
	Metric Tons					
1991	5,928,205	92,147	78,616	49,154	232,758	207,094
1992	6,648,437	93,784	82,743	65,126	275,224	239,628
1993	6,176,884	125,659	80,499	62,461	276,318	210,390
1994	6,175,986	69,939	89,062	78,884	233,639	232,172
1995	6,999,816	79,081	84,708	132,020	297,174	222,982
1996	6,385,562	68,782	92,067	94,413	216,085	251,310
1997	6,061,069	94,022	84,895	77,736	224,214	217,543
1998	5,633,207	69,879	100,869	71,376	162,459	248,474
1999	7,113,321	96,933	116,845	101,713	230,438	292,637
2000	6,297,773	86,887	122,438	89,672	205,379	252,099
Average Annual Growth (%) 1991-2000	1.4	3.4	5.4	10.9	1.1	3.0

Source: FAO Statistical Databases, 2002.

During the 1990s, dry whole milk imports increased at an average annual growth rate of 10.9 percent, which is the most impressive in dairy products (Table 9). Between 1991 and 2000, dry whole milk imports increased 40,518 metric tons. Imports reached a high

of 132,020 metric tons in 1995 to a low of 49,154 metric tons in 1991. In 2000, the Netherlands imported 89,672 metric tons of dry whole milk (Table 9).

The Netherlands is the largest dry skim milk importer in the world (Table 7). During the 1990s, skim milk imports increased at an average annual growth rate of 1.1 percent, which is somewhat misleading (Table 9). Between 1991 and 2000, dry skim milk imports decreased 27,379 metric tons. Imports reached a high of 297,174 metric tons in 1995 to a low of 162,459 metric tons in 1998. A significant decrease occurred in 1998 when dry skim milk imports decreased from 224,214 metric tons in 1997 to 162,459 metric tons in 1998 (Table 9). The decrease was due to the increase in domestic dry skim milk production (USDA-FAS, 1999). In 2000, the Netherlands imported 205,379 metric tons of dry skim milk (Table 9).

Dutch dry whey imports increased at an average annual rate of three percent during the 1990s (Table 9). Between 1991 and 2000, whey imports fluctuated up and down year to year, but increased 45,005 metric tons overall, peaking in 1999 at 292,637 metric tons and reaching a low of 207,094 metric tons in 1991 (Table 9).

Exports of Dairy Products from the U.S.

The United States did not export much butter to the Netherlands during the 1990s. Dutch butter imports came mainly from Ireland, Belgium, Luxembourg, and the United Kingdom (USDA-FAS, 2000). The US exported 366.1 metric tons of butter into the Netherlands in 1998, peaking at a 0.5 percent market share (Table 10).

Table 10. Selected dairy products exported from the US to the Netherlands, 1991 through 2000.

Year	Butter ^a	% of Butter Imports ^b	Cheese ^a	% of Cheese Imports ^b	Whole Dry Milk ^a	% of WDM Imports ^b	Non-Fat Dry Milk ^a	% of NFDM Imports ^b	Whey ^a	% of Dry Whey Imports ^b
	Mt	%	Mt	%	Mt	%	Mt	%	Mt	%
1991	0.0	0.0	40.3	0.1	0.0	0.0	0.9	0.0	7,563.9	3.7
1992	0.0	0.0	43.9	0.1	0.0	0.0	0.0	0.0	3,417.5	1.4
1993	182.1	0.1	23.5	0.0	348.9	0.6	5.4	0.0	114.5	0.1
1994	0.0	0.0	35.7	0.0	384.7	0.5	10.4	0.0	123.8	0.1
1995	47.0	0.1	31.9	0.0	396.4	0.3	5.6	0.0	7,419.5	3.3
1996	0.0	0.0	142.3	0.2	25.0	0.0	81.6	0.0	2,390.7	1.0
1997	19.2	0.0	817.9	1.0	39.0	0.1	17.6	0.0	698.5	0.3
1998	366.1	0.5	283.9	0.3	2,517.4	3.5	702.8	0.4	50.8	0.0
1999	2.2	0.0	305.7	0.3	472.6	0.5	20.0	0.0	231.5	0.1
2000	0.0	0.0	920.3	0.8	78.9	0.1	205.1	0.1	67.1	0.0

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

^b Data from Table 9.

The US was also not a big supplier of cheese to the Netherlands. Although the US exported cheese to the Netherlands throughout the 1990s, its market share was not high. However, US cheese imports did increase gradually in the late 1990s as a result of the implementation of the UR GATT. In 2000, the market share of US cheese was 0.8 percent, or a total of 920.3 metric tons (Table 10). Dutch cheese imports came mainly from EU member states such as Germany, Belgium, and France. However, cheese imports from outside the EU countries have risen as a consequence of opening tariff quotas for milk products. Australia and New Zealand have become main cheese suppliers other than intra-EU sources. Dutch imports of Australian cheese are mainly cheddar for the food processing and food service sectors (USDA-FAS, 2001).

In 2000, the Netherlands imported 89,672 metric tons of whole dry milk (Table 9) and exported 179,002 metric tons (FAO Statistics, 2002). Although the Netherlands imported some whole dry milk from the US, the quantity was low (Table 10). In 2000, US whole dry milk exported to the Netherlands was only 78.9 metric tons, with a 0.1 percent market share (Table 10).

The Netherlands is the largest importer of dry skim milk (Table 6). In 2000, the Netherlands imported 205,379 metric tons of nonfat dry milk (Table 9) and exported 110,937 metric tons (FAO Statistics, 2002). Although the Netherlands imported some nonfat dry milk from the US, the quantity was low (Table 10). In 2000, US nonfat dry milk exported to the Netherlands was only 205.1 metric tons, with a 0.1 percent market share (Table 10). Most of the dry skim milk imports come from EU member countries

such as Germany, Ireland, and the UK. However, in recent years, imports from Eastern European countries, such as the Ukraine and Poland, have gradually increased (USDA-FAS, 2001).

In 1991, 7,563.9 metric tons of whey were exported from the US to the Netherlands (Table 10). However, during the 1990s, the market share of US whey experienced fluctuations due to competition with the EU member states. US whey experienced a significant increase in 1995, at 7419.5 metric tons and a 3.3 percent market share, but again decreased to 67.1 metric tons in 2000, with a market share of less than 0.05 percent (Table 10).

The Netherlands is one of the biggest dairy exporters in the world market of dairy products (MANMF, 2000). In 2000, while the Netherlands imported 86,887 metric tons of butter (Table 9), it also exported 119,076 metric tons, mainly to other EU member states (FAO Statistics, 2001). In the same year, the Netherlands imported 122,438 metric tons of cheese (Table 9), and exported 438,008 metric tons, mainly to other EU member states (FAO Statistics, 2002). During the 1990s, nonfat dry milk imports exceeded exports. In 2000, Dutch nonfat dry milk imports totaled 205,379 metric tons (Table 9), and exports totaled 110,937 metric tons (FAO Statistics, 2002). Most exports went to other EU member states, Africa, and the Americas (USDA-FAS, 2001). Due to competition from Australia and New Zealand, the Netherlands's share of the world dairy market decreased, particularly in the Far East. For example, outside the EU, sales of

cheese dropped by 32 percent between 1995 and 1998, and by another 16 percent in 1999 (Dairy Industries International, 2001).

Under the UR GATT, the EU (including the Netherlands) is required to reduce export subsidies in accordance with commitments, which include a 21 percent quantity reduction and a 36 percent expenditure reduction. Nevertheless, even in compliance with commitments, the EU, including the Netherlands, still remains a large export subsidizer. It is believed by many in the industry that only the new round of WTO negotiations will lead to the further removal of export subsidies in the EU (Washington, 2000).

Trade Policy and Tariff

The Netherlands is a prosperous and open economy, depending heavily on foreign trade. Dutch trade policy is among the most open in the world. Its economic growth has been slowed down in recent years due to the global economic slowdown, which has caused decreasing exports and foreign investments (US Department of State, 2002).

The Netherlands has been a WTO member since 1995. It is also a member state of the European Union. As with each of its 15-member States, the EU is a WTO member, which is known officially as the European Communities (EC) in WTO business transactions. Within the EU, the European Commission has the authority to develop the EU-wide external trade policy, and most trade barriers in EU member states are the result of common EU policies (WTO, 2003).

After the Uruguay Round of GATT negotiation, the EU has attempted to further liberalize agricultural markets, including dairy, and move from market-distorting supports to less market-distorting regulation. According to the WTO, an average tariff of 17.3 percent applies at the European borders, but preferential trade agreements with tariff quotas allow some countries access to the EU markets at reduced rates. The US is not a party to any bilateral trade agreements. As a result, the US cannot access the EU market at reduced tariff rates for agricultural products below the Most Favored Nation (MFN) rate (Adams and Kilmer, 2003).

Under the WTO commitment of market access, the EU, including the Netherlands, is required to have tariffication of its import policies and variable levies imposed on imports of dairy products have been replaced by fixed tariffs. In 1995, the EU established tariff rate quotas (TRQ) for nonfat dry milk, butter, cheese, and other dairy products. The most significant market access commitment was the TRQ established for EU cheese imports. Since 2000, the minimum access quotas for cheese that could be imported into the EU at the reduced tariff rate have been 104,000 metric tons, which have increased from 18,000 metric tons in 1995 (WTO, 2003).

Since 2000, the minimum access quota for skim milk powder imported at the reduced tariff rate of 475 ECU per ton has been 69,000 metric tons. The over quota tariff rate since 2000 has been 1,188 ECU per metric ton (WTO, 2003). The minimum access quota of butter imported at the reduced tariff rate of 948 ECU per metric ton has been 10,000 metric tons. The over quota tariff rate since 2000 has been 1,896 ECU per metric ton

(WTO, 2003). The tariff for whey powder (not containing added sugar or other sweetening matter) at present is 70 ECU per metric ton (WTO, 2003).

The Netherlands has an open market economy and a strong tradition of free trade. There are no significant Dutch barriers to U.S. exports, including dairy products. However, the existing trade barriers result from common EU policies (US Department of State, 2002).

THE UNITED KINGDOM

Overview of the United Kingdom

The United Kingdom (UK) is located in Western Europe, between the North Atlantic Ocean and the North Sea, northwest of France. The total area of the UK is 244,820 square kilometers, slightly smaller than the size of Oregon. The population of the UK in 2002 was about 59.8 million, with a 0.21 percent growth rate (CIA World Factbook, 2002).

The UK is one of the largest economies in the world. It has experienced economic expansion since the 1991 to 1992 recession; however, the global economic slowdown and the outbreak of foot-and-mouth disease hurt the economy in 2001. As a result, its gross domestic product (GDP) growth decreased in 2001 and 2002. Real GDP growth was 1.9 percent in 2001, down from 2.2 and 3.1 percent in 1999 and 2000, respectively (US Department of State, 2002). In 2002, the UK's real GDP was \$1.52 trillion (purchasing power parity), with a per-capita purchasing power parity of \$25,300. Agriculture accounted for only one percent of the total GDP (CIA World Factbook, 2002).

Over the past two decades the UK government has reduced public ownership and contained the growth of social welfare programs. Agriculture is intensive, highly mechanized, and efficient. Services, particularly banking, insurance, and business services, account for the largest proportion of GDP while industry continues to decline in importance (CIA World Factbook, 2002).

The UK economy promotes free markets and open competition within the European Union (EU) and in the world. The UK's total exports in 2001 were \$286.3 billion, of which the US received 15.4 percent. Its total imports in 2001 were \$330.1 billion, of which the US shipped 13.2 percent. The UK's main trading partners include the US and the European Union (EU) countries of Germany, France, and the Netherlands, primarily (CIA World Factbook, 2002). The UK is a member of the EU; however, it has not adopted the single European currency yet.

The Dairy Industry in the UK

Production of Dairy Products

The UK is one of the biggest milk producers in the world, with milk production around 14 to 15 million metric tons annually during the 1990s, ranking third in the EU after Germany and France. Dairy farming is the largest sector of agriculture, representing about 22 percent of the UK's agricultural production by value (DEFRA, 2002).

There were five Milk Marketing Boards in 1986, which have statutory power to buy milk from producers. The Milk Marketing Boards' main responsibility was to regulate the marketing of milk and to offer farm management services to help increase efficiency on the farm (DEFRA, 2002). The Boards were abolished in 1994.

Since the deregulation of the UK milk market in November 1994, producers are able to join voluntary farmer-owned cooperatives that purchase milk from producers. In

addition, many dairy companies buy milk from producers, and various independent producer groups have been set up to market their members' milk. Over two-thirds of the farmers joined milk groups that were approved by the government. However, the numbers of dairy farmers have decreased due to a drop in commodity prices influenced by the strength of the sterling and a retailer price war in the last decade. In addition, UK dairy farmers have had to cope with an added burden from the quotas that were imposed by the Common Agriculture Policy (CAP) within the EU. More than 4,200 dairy farms had ceased operation during the period 1994 to 2000 (Dairy Industries International, 2000). In 2000, there were approximately 26,500 dairy farmers in the UK (USDA-FAS, 2000).

Since 1984, the Common Agricultural Policy (CAP) has imposed a quota on milk production for EU member states along with restrictions on imports. Milk quotas were introduced as a means of restricting excess production and reducing expenditures on the disposal of surplus milk and milk products (DEFRA, 2002). However, as a result of the General Agreement on Tariff and Trade (GATT) and the World Trade Organization (WTO), the EU, including the UK, is required to remove trade barriers, price supports, and export subsidies (Washington, 2000). As a result, the UK will increasingly operate in a free market environment.

The main milk production regions in the UK are Cumbria, Cheshire, and Devon in England; Carmarthenshire in Wales; Dumfries and Galloway in Scotland; and Antrim, Down, and Tyrone in Northern Ireland (DEFRA, 2002). Although the numbers of dairy

farmers were reduced during the 1990s, the increased adoption of modern technological practices and increased managerial expertise in the sector continues to increase milk yields. In 2000, there were approximately 2.4 million head of milking cows in the country, with an average milk yield of about 6,000 kilograms per cow, per year (USDA-FAS, 2000).

Since the deregulation of the milk market in 1994, dairy farmers have been free to sell their milk. Prices are no longer regulated and determined on the basis of the fat and protein content as well as on volume. This has resulted in an increase in fat and protein over the last decade, but has led to a conflict with market requirements for reduced and low fat dairy products (Dairy Industries International, 1998).

Cow milk production decreased at an average annual rate of -0.55 percent during the period 1994 to 2000 (FAO Statistics, 2002). UK milk production in 2000 was 14,488,000 metric tons, which decreased 274,812 metric tons from the 1991 level (Table 1). During the 1990s, milk production decreased at an average annual rate of -0.2 percent, reaching a low in 1998 of 14,632,000 metric tons (Table 1). Due to the domestic and EU shortages in milk supplies since 2000, market prices increased, including the prices for fluid milk at the farm gate. However, the UK's Foot-and-Mouth Disease (FMD) outbreak in early 2001 created significant uncertainty in the domestic livestock sector and the dairy sector.

UK butter production in 2000 was 132,000 metric tons. This was up 20,288 metric tons (18 percent) from the 1991 production of 111,712 metric tons (Table 1). During the 1990s, butter production increased at an average annual growth rate of 2.5 percent. Production

fluctuated, ranging from 111,712 metric tons in 1991 to 155,000 metric tons in 1994 (Table 1). However, since the milk market deregulation in 1994, butter production decreased at an average annual rate of two percent during the period 1994 to 2000.

Table 1. UK 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	14,762,812	111,712	298,052	72,649	133,276	2,301,710
1992	14,776,300	127,000	327,000	84,000	102,049	2,485,100
1993	14,828,900	151,557	331,004	71,001	125,061	2,406,544
1994	14,990,700	155,000	330,000	83,257	134,179	2,368,608
1995	14,844,300	127,000	354,000	90,000	117,000	2,538,400
1996	14,808,300	120,000	369,000	83,000	108,000	2,672,000
1997	14,841,000	138,662	377,000	96,000	109,000	2,777,600
1998	14,632,000	137,000	366,000	97,000	107,000	2,683,200
1999	15,014,000	141,000	368,000	102,000	102,000	2,716,000
2000	14,488,000	132,000	340,000	105,000	83,000	2,440,000

^a Whey production in milk equivalent pounds.

Source: FAO Statistical Databases, 2002.

UK cheese production in 2000 was 340,000 metric tons (Table 1). This was up 41,948 metric tons (14 percent) from the 1991 production of 298,052 metric tons (Table 1). During the 1990s, cheese production increased at an average annual growth rate of 1.6 percent, and the deregulation of the milk market in 1994 did not have big impacts on it. Cheese production reached a peak in 1997 at 377,000 metric tons (Table 1).

UK dry whole milk production in 2000 was 105,000 metric tons (Table 1). Between 1991 and 2000, dry whole milk production increased 32,351 metric tons, for an overall

increase of 44.5 percent. During the period 1991 to 2000, dry whole milk production increased at an average annual rate of 4.7 percent.

UK dry skim milk (nonfat dry milk or skim milk powder) production in 2000 was 83,000 metric tons (Table 1). Between 1991 and 2000, dry skim milk production decreased 50,276 metric tons, for an overall decrease of 38 percent. The decrease started after the deregulation of the milk market in 1994. During the period 1994 to 2000, dry skim milk production decreased at an average annual rate of -7.5 percent.

Between 1991 and 2000, UK whey production (in milk equivalent pounds) increased 138,290 metric tons, from 2,301,710 metric tons in 1991 to 2,440,000 metric tons in 2000, peaking in 1997 at 2,777,600 metric tons (Table 1). During the 1990s, whey production increased at an average annual rate of 0.8 percent (FAO Statistics, 2002).

UK dairy production is estimated to decrease in the near future. Because of the outbreak of FMD, cattle numbers have decreased. In addition, FMD has accelerated the pre-existing rationalization that was already evident in the sector. Many farmers have taken the opportunities offered by FMD to opt out of the sector (USDA-FAS, 2001).

Demand for Dairy Products

The majority of UK milk production goes for domestic consumption. The liquid milk market in the UK has an important bearing on milk availability for other sectors of the industry. In 2000, total domestic dairy consumption was about 14 million metric tons, of which about 50 percent was fluid milk consumption. During the 1990s, UK's milk

market stabilized, and milk utilization by dairies has been relatively static despite fluctuating supply (USDA-FAS, 2001).

The household market has been saturated, with over 98 percent of households purchasing milk from different sources. Although sales in the household sector declined during the 1990s, the shortfall has been made up by increases in the school and catering markets (Dairy Industries International, 1998). The source of purchasing continued to change during the 1990s. Fewer consumers use a doorstep delivery service. Most purchase their milk from supermarkets. While nearly 80 percent of consumers bought milk only from a door-to-door milkman in the 1980s, by 1990, the number had fallen to 50 percent (Dairy Industries International, 1990), and by 1999, the share of doorstep delivered milk was down to 28 percent (Dairy Industries International, 2000). The decline in doorstep deliveries throughout the 1990s has had a negative impact on milk consumption. Changing lifestyles seems to be one of the reasons behind the decline in doorstep delivery. More women work outside the home, no longer require a regular delivery service, and prefer to buy all grocery needs at the supermarket. In addition to these, the cost of home-delivered milk has become almost twice that of products bought in supermarkets (Dairy Industries International, 1990 and 2000).

The image of milk as a healthy food has remained unharmed despite the emergence of Bovine Spongiform Encephalopathy (BSE) since 1986. This is particularly true in children's markets, which used an advertising campaign in 1992 concentrating on the idea of milk as a cool drink (Dairy Industries International, 1994). In addition, the school

milk scheme, which was introduced in 1977 by the EU to encourage milk consumption, has been implemented in the UK for many years (DEFRA, 2002).

Advertising also has had a positive effect among adults. In 2000, the UK launched a generic milk campaign called "The White Stuff". The White Stuff campaign, featuring well-known UK celebrities, targeted adults, rather than children. The campaign, which was funded by producers and processors through the National Dairy Council (NDC), reaped rewards. The NDC plans to extend the scheme to other dairy products (USDA-FAS, 2000).

The liquid milk market has fractured throughout the past decade. As the dairy industry has provided choice, there no longer has been a single demand for whole milk. Consumption is moving away from whole milk to semi-skimmed milk, skimmed milk, and ultra high temperature (UHT) milk. This is related to the continuing changes in lifestyles brought about by increasing health awareness (Dairy Industries International, 2000).

Per-capita all milk consumption decreased 7.6 kilograms at an average annual rate of -0.3 percent from 1991 through 2000 (Table 2). Dairy consumption stabilized during the 1990s, ranging from 255.53 kilograms in 1995 to 274.64 kilograms in 1996 (Table 2). The increase in the 1995 to 1996 period was mainly due to the dissolution of the Milk Marketing Board in 1994, which reduced dairy prices. The decrease in dairy consumption during the second half of the 1990s was due to the reduction in milk quotas among EU

members, including UK (DEFRA, 2002). In 2000, UK's per-capita dairy consumption was 258.70 kilograms (Table 2).

Per-capita whole milk consumption decreased at an average annual rate of -0.1 percent during the 1990s. Between 1991 and 2000, per-capita whole milk consumption decreased 2.74 kilograms, peaking in 1999 at 250.49 kilograms (Table 2). However, skim milk consumption increased at an average annual rate of 1.3 percent during the 1990s. Between 1991 and 2000, per-capita skim milk consumption increased 2.11 kilograms, peaking in 1994 at 58.26 kilograms (Table 2).

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

Year	All Milk ^a	Butter	Cheese	Skim Milk ^a	Whole Milk ^a	Whey ^a
	Kilograms					
1991	266.31	3.05	8.26	41.05	243.94	39.03
1992	269.47	3.48	8.39	51.88	244.55	38.27
1993	264.51	3.64	8.21	56.56	248.51	38.56
1994	263.36	3.73	8.26	58.26	247.69	38.02
1995	255.53	3.06	8.24	47.11	240.90	40.55
1996	274.64	3.07	9.67	50.83	241.90	43.56
1997	268.84	2.87	9.97	45.26	250.32	45.80
1998	260.32	3.07	9.44	47.18	245.13	45.67
1999	265.30	3.48	9.74	45.11	250.49	42.82
2000	258.70	3.51	9.25	43.16	241.20	35.41
Average Annual Growth (%)						
1991-2000	-0.3	2.0	1.5	1.3	-0.1	-0.8

^a Included food and other uses, such as cattle feed.

Source: FAO Statistical Databases, 2002

Butter consumption increased at an average annual rate of two percent during the 1990s. However, butter consumption has been affected by the Government White Paper,

“The Health of the Nation”, in 1994, which recommended a reduction in fat intake levels (Dairy Industries International, 1994). As a result, per-capita butter consumption decreased from 3.73 kilograms in 1994 to 2.87 kilograms in 1997 (Table 2). However, butter consumption increased in the period 1997 to 2000, while sales of vegetable-based low fat alternatives remained static (USDA-FAS, 2000). Between 1991 and 2000, per-capita butter consumption increased 0.46 kilograms, from 3.05 kilograms in 1991 to 2.51 kilograms in 2000 (Table 2).

UK’s per-capita cheese consumption increased during the 1990s, with an average annual rate of 1.5 percent (Table 2). Although per-capita cheese consumption was at just under ten kilograms during the 1990s, it remained low in the European context. Much of the growth was from the specialty and added value segments. Convenient cheese snacks and the pizza sector also provided good opportunities for cheese producers (Dairy Industries International, 2000). Between 1991 and 2000, per-capita cheese consumption increased 0.99 kilograms, peaking at 9.97 kilograms in 1997 (Table 2). While cheddar has dominated the market in recent years, consumers have broadened their horizons to include the growing range of domestic and imported specialty cheeses (Dairy Industries International, 2000).

Per-capita whey consumption experienced a decrease during the 1990s, with an average annual rate of -0.8 percent (Table 2). However, the abolition of the Milk Marketing Boards in 1994 and lower prices of dairy products caused whey consumption to increase in the period 1994 to 1997. Between 1991 and 2000, per-capita whey

consumption decreased 3.62 kilograms (Table 2). The overall decrease can be also associated with the decreasing use of dairy ingredients in animal feeds (DEFRA, 2002).

Import of Dairy Products

Although the UK has a high self-sufficiency rate (about 95 percent) in dairy products (FAO Statistics, 2002), it participates in trade in milk products. In 2000, the UK imported 2,710,840 metric tons dairy products, and ranked sixth among all countries in total imported dairy products, in milk equivalent metric tons (Table 3). In 2000, the UK's share of the world imports of dairy imports (in milk equivalent metric tons) was about four percent (FAO Statistics, 2002).

For individual dairy products, the UK ranked third among all countries in imports of butter and cheese in 2000 (Tables 4 and 5). Its share of world imports of butter and cheese was about 9.7 and 8.7 percent, respectively (FAO Statistics, 2002). In 2000, the UK ranked 29th in total world imports of dry whole milk (Table 6). In 2000, the UK ranked 24th and 15th, respectively, in total world imports of dry skim milk and whey (Tables 7 and 8), with about 1.0 and 1.7 percent, respectively, of world imports (FAO Statistics, 2002).

Table 3. Selected countries' total dairy imports (in milk equivalent) and ranking, 1996 through 2000.

	1996		1997		1998		1999		2000	
	Mt	Rank	Mt	Rank	Mt	Rank	Mt	Rank	Mt	Rank
Belgium	3,709,566	4	3,661,389	4	3,936,039	5	4,054,076	5	4,434,830	5
China	1,285,203	13	1,584,260	10	1,531,064	14	1,909,979	10	2,243,373	8
France	3,158,352	5	3,582,977	5	3,966,796	4	4,313,597	4	4,685,094	4
Germany	4,673,712	3	4,796,523	3	4,669,373	3	4,554,466	3	5,024,699	3
Italy	5,210,317	2	5,430,128	2	5,543,997	2	5,509,023	2	5,467,815	2
Mexico	1,912,993	8	2,121,080	8	2,021,171	7	2,217,376	7	2,310,820	7
Netherlands	6,385,562	1	6,061,069	1	5,633,207	1	7,113,321	1	6,297,773	1
Spain	1,450,968	11	1,583,212	11	1,652,153	11	1,661,739	12	1,918,970	10
UK	2,393,522	6	2,476,914	7	2,537,039	6	2,667,275	6	2,710,840	6
USA	1,380,531	12	1,466,204	12	1,873,207	8	1,953,107	9	1,953,940	9
Total	31,560,726	----	32,763,756	----	33,364,046	----	35,953,959	----	37,048,154	----
World	59,844,367	----	62,626,024	----	62,478,356	----	66,593,229	----	68,138,509	----

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

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

	1996		1997		1998		1999		2000	
	Mt	Rank	Mt	Rank	Mt	Rank	Mt	Rank	Mt	Rank
Belgium	100,015	5	103,759	5	101,137	4	100,491	4	112,073	4
Egypt	50,225	7	37,759	8	35,253	9	43,115	8	44,141	7
France	109,919	4	137,381	3	133,670	2	129,819	1	148,302	1
Germany	132,955	1	156,822	2	134,930	1	123,476	2	131,121	2
Italy	48,315	8	52,087	7	60,124	7	46,864	7	41,167	8
Mexico	18,529	14	24,793	9	27,325	10	34,047	9	34,078	9
Morocco	28,050	9	16,457	15	22,104	12	19,818	12	27,357	10
Netherlands	68,782	6	94,022	6	69,879	6	96,933	5	86,887	5
Russian	125,810	2	169,698	1	83,053	5	53,200	6	53,857	6
UK	111,619	3	101,210	4	109,287	3	122,076	3	122,922	3
Total	794,219	---	893,988	---	776,762	---	752,009	---	801,905	---
World	1,203,892	---	1,321,235	---	1,213,138	---	1,217,796	---	1,261,586	---

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

Table 5. Selected countries' total cheese imports and ranking, 1996 through 2000.

	1996		1997		1998		1999		2000	
	Mt	Rank	Mt	Rank	Mt	Rank	Mt	Rank	Mt	Rank
Belgium	176,745	4	186,681	5	197,185	4	199,602	5	208,949	5
France	151,238	7	153,718	7	167,326	7	188,472	6	213,138	4
Germany	458,261	1	476,361	1	441,518	1	417,503	1	424,721	1
Greece	50,747	12	68,059	11	94,838	9	67,341	11	76,944	10
Italy	294,875	2	305,861	2	305,419	2	318,681	2	347,233	5
Japan	164,164	5	171,407	6	183,448	5	186,905	7	205,123	6
Netherlands	92,067	9	84,895	9	100,869	8	116,845	8	122,438	8
Spain	81,511	10	81,046	10	86,363	10	94,223	9	104,688	9
UK	258,704	3	261,775	3	249,191	3	272,312	3	268,613	3
USA	154,764	6	142,793	8	170,557	6	203,042	4	192,342	7
Total	1,883,076	---	1,932,596	---	1,996,714	---	2,064,926	---	2,164,189	---
World	2,688,552	---	2,843,580	---	2,786,286	---	2,887,650	---	3,093,644	---

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

Table 6. Selected countries' total dry whole milk imports and ranking, 1996 through 2000

	1996		1997		1998		1999		2000	
	Mt	Rank	Mt	Rank	Mt	Rank	Mt	Rank	Mt	Rank
Algeria	67,865	3	88,882	2	103,724	2	105,507	2	96,340	2
Belgium	66,029	5	53,781	9	54,362	7	46,786	10	57,289	7
Brazil	115,586	1	101,169	1	133,742	1	145,983	1	108,609	1
China	58,981	7	68,234	5	62,598	5	83,985	4	83,011	4
Malaysia	53,152	9	66,000	6	44,857	12	54,203	6	57,696	6
Netherlands	94,413	2	77,736	3	71,376	4	101,713	3	89,672	3
Philippines	36,476	11	39,656	12	40,511	13	36,958	12	56,072	8
Sri Lanka	35,027	12	37,364	13	48,788	10	48,308	9	49,070	9
Thailand	50,430	10	69,180	4	50,237	8	49,791	8	48,249	10
UK	11,184	26	9,872	31	9,152	32	9,560	33	11,208	29
Venezuela	66,321	4	51,842	10	84,115	3	52,042	7	64,759	5
Total	655,464	---	663,716	---	703,462	---	734,836	---	721,975	---
World	1,281,604	---	1,357,158	---	1,401,542	---	1,439,868	---	1,418,968	---

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

Table 7. Selected countries' total dry skim milk imports and ranking, 1996 through 2000.

	1996		1997		1998		1999		2000	
	Mt	Rank	Mt	Rank	Mt	Rank	Mt	Rank	Mt	Rank
Algeria	58,468	9	78,893	5	87,040	4	71,272	8	91,339	5
Belgium	51,781	12	43,521	11	43,155	13	45,150	15	71,900	9
China	37,975	15	40,945	13	44,813	12	51,150	13	56,862	10
France	33,446	18	28,453	20	42,636	14	63,791	9	84,735	6
Indonesia	45,916	14	41,034	12	33,133	18	98,348	5	82,574	7
Italy	126,614	3	127,504	3	126,494	2	121,779	3	109,008	4
Malaysia	78,151	5	75,000	6	59,596	6	71,879	7	74,721	8
Mexico	126,700	2	132,849	2	102,600	3	125,137	2	129,078	2
Netherlands	216,085	1	224,214	1	162,459	1	230,438	1	205,379	1
Philippines	83,704	4	98,050	4	77,637	5	86,729	6	111,455	3
UK	12,394	29	13,286	29	11,194	29	17,823	24	17,600	24
Total	871,234	---	903,749	---	790,757	---	983,496	---	1,034,651	---
World	1,716,935	---	1,727,457	---	1,607,154	---	1,879,505	---	1,805,896	---

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

Table 8. 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
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
UK	18,456	14	23,938	13	29,223	11	21,814	16	19,474	15
Total	694,015	----	676,769	----	733,457	----	789,875	----	815,186	----
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.

During the 1990s, imports of dairy products into the UK increased. Since 1991, imports of all dairy products (in milk equivalent metric tons) have been increasing at an average annual rate of 4.6 percent (Table 9). Between 1991 and 2000, dairy imports increased 759,415 metric tons, for an overall increase of 39 percent from the 1991 level. In 2000, the UK imported 2,710,840 metric tons of dairy products (in milk equivalent metric tons), which was up 1.6 percent from 1999 (Table 9). Since the enactment of the UR GATT in 1995, the EU market access commitment to the WTO has required the tariffication of its import duties. The tariffication of import restrictions and the reduction of export subsidies have had some effect on imports; however, exports are still strong (Washington, 2000). In addition to increased exports, UK dairy imports have increased (Table 9).

Butter imports have increased at an average annual rate of 2.4 percent, although imports have fluctuated, ranging from 101,210 metric tons in 1997 to 126,074 metric tons in 1992 (Table 9). Between 1991 and 2000, butter imports increased 18,702 metric tons. In 2000, UK imported 122,922 metric tons of butter. Intra-EU imports have increased, while imports from countries such as New Zealand have declined (USDA-FAS, 2000).

During the 1990s, UK cheese imports increased, with an average annual growth rate of 5.4 percent (Table 9). A significant increase occurred in 1996, when cheese imports increased from 180,497 metric tons in 1995 to 258,704 metric tons in 1996, mainly due to the recovery of the Sterling in 1995 and the enactment of the UR GATT, which required tariffication of its imports policies (USDA-FAS, 1997). Between 1991 and 2000, UK

cheese imports increased 77,392 metric tons, peaking in 1999 at 272,312 metric tons (Table 9). In 2000, the UK imported 268,613 metric tons of cheese (Table 9).

Table 9. UK dairy imports, 1991 through 2000.

Year	Milk Equivalent	Butter	Cheese	Dry Whole Milk	Dry Skim Milk	Dry Whey
	Metric Tons					
1991	1,951,425	104,220	191,221	3,112	7,701	22,238
1992	2,511,722	126,074	229,500	4,961	26,154	22,910
1993	2,041,756	112,741	186,002	5,777	13,422	18,678
1994	2,257,989	116,250	214,734	7,279	11,625	19,491
1995	2,035,913	102,764	180,497	7,248	12,920	20,209
1996	2,393,522	111,619	258,704	11,184	12,394	18,456
1997	2,476,914	101,210	261,775	9,872	13,286	23,938
1998	2,537,039	109,287	249,191	9,152	11,194	29,223
1999	2,667,275	122,076	272,312	9,560	17,823	21,814
2000	2,710,840	122,922	268,613	11,208	17,600	19,474
Average Annual Growth (%) 1991-2000	4.6	2.4	5.4	17.6	26.0	-0.04

Source: FAO Statistical Databases, 2002.

During the 1990s, UK dry whole milk imports increased, with an average annual growth rate of 17.6 percent (Table 9). A significant increase occurred in 1996, when dry whole milk imports increased from 7,248 metric tons in 1995 to 11,184 metric tons in 1996. Between 1991 and 2000, UK dry whole milk imports increased 8,096 metric tons, peaking in 2000 at 11,208 metric tons (Table 9).

The growth in dry skim milk imports was the most impressive among the dairy imports during the 1990s. Skim milk imports increased at an average annual growth rate

of 26 percent (Table 9). A significant increase occurred in 1992, when dry skim milk imports increased from 7,701 metric tons in 1991 to 26,154 metric tons in 1992 (Table 9), due to the tight production of domestic skim milk powder. During the same period, dry skim milk production decreased from 133,276 metric tons in 1991 to 102,049 metric tons in 1992 (Table 1). In 2000, the UK imported 17,600 metric tons of dry skim milk (Table 9).

The UK's dry whey imports decreased slightly at an average annual rate of -0.04 percent during the 1990s (Table 9). Between 1991 and 2000, whey imports decreased 2,764 metric tons, peaking in 1998 at 29,223 metric tons (Table 9).

Exports of Dairy Products from the U.S.

The United States was not a major supplier of dairy products to the UK during the 1990s. UK butter imports were mainly from Denmark, Ireland and New Zealand (DEFRA, 2002). The US only exported butter into the UK during the period 1996 to 1999, with a lower than 0.2 percent market share (Table 10).

The US was also not a big supplier of cheese to the UK. In 2000, the market share of US cheese peaked at 0.5 percent, or 1,378.1 metric tons (Table 10). UK cheese imports were mainly from the EU member states such as Ireland, France, and Germany (USDA-FAS, 2001).

Table 10. Selected dairy products exported from the US to the UK, 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	Dry Whey ^a	% of Dry Whey Imports ^b
	Mt	%	Mt	%	Mt	%	Mt	%	Mt	%
1991	0.0	0.0	70.7	0.0	0.0	0.0	0.0	0.0	47.8	0.2
1992	0.0	0.0	62.2	0.0	0.0	0.0	0.0	0.0	336.7	1.5
1993	0.0	0.0	128.2	0.1	52.1	0.9	0.0	0.0	145.5	0.8
1994	0.0	0.0	164.7	0.1	18.2	0.3	12.5	0.1	81.0	0.4
1995	0.0	0.0	495.3	0.3	5.3	0.1	22.9	0.2	136.7	0.7
1996	101.6	0.1	758.9	0.3	0.0	0.0	49.7	0.4	61.1	0.3
1997	231.1	0.2	712.1	0.3	46.8	0.5	0.0	0.0	84.7	0.4
1998	3.1	0.0	830.4	0.3	39.6	0.4	2.7	0.0	365.5	1.3
1999	177.1	0.1	577.5	0.2	0.0	0.0	27.4	0.2	250.1	1.1
2000	0.0	0.0	1,378.1	0.5	6.3	0.1	19.9	0.1	390.9	2.0

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

^b Data from Table 9.

The UK is a net exporter of whole milk powder. In 2000, the UK imported 11,208 metric tons of whole dry milk (Table 9) and exported 101,917 metric tons (FAO Statistics, 2002). In 2000, US whole dry milk exported to the UK was 6.3 metric tons, with a 0.1 percent market share (Table 10). This was down from 52.1 metric tons in 1993 with a market share of 0.9 percent (Table 10).

The UK is a net exporter of skim milk powder. In 2000, the UK imported 17,600 metric tons of nonfat dry milk (Table 9) and exported 52,671 metric tons (FAO Statistics, 2002). As a result, in 2000, US nonfat dry milk exported to the UK was 19.9 metric tons, with a 0.1 percent market share (Table 10). This was down from 49.7 metric tons in 1996 with a market share of 0.4 percent (Table 10).

The US exported a certain amount of dry whey to the UK during the 1990s. Compared to other dairy products, the market share of US dry whey was higher. However, the market share of US whey fluctuated due to competition with other EU countries (USDA-FAS, 2000). In 2000, the market share of US whey peaked at two percent, or 390.9 metric tons (Table 10).

The UK also actively participated in the export market of dairy products. For example, in 2000, while the UK imported 122,922 metric tons of butter (Table 9), it also exported 45,321 metric tons, mainly to other EU member states (FAO Statistics, 2002). In the same year, the UK imported 268,613 metric tons of cheese (Table 9), but it only exported 57,088 metric tons, mainly to other EU member states and North America (FAO Statistics, 2002). During the 1990s, the UK's exports of nonfat dry milk exceeded its

imports. For example, in 2000, UK nonfat dry milk exports were 52,671 metric tons, mainly to other EU member states, Africa and the Americas (FAO Statistics, 2002).

Under the UR GATT, the EU, including the UK, is required to reduce export subsidies in accordance with the commitments of a 21 percent quantity reduction and a 36 percent expenditure reduction. Nevertheless, even in compliance with the commitment, the EU, including the UK, still remains a large export subsidizer. It is believed that only the new round of WTO negotiations may lead to further export subsidy removals in the EU (Washington, 2000).

Exports of UK dairy products have been caught in the secondary effects of the BSE crisis. Although the EU has publicly stated that milk is not linked to its export ban on UK beef products, and that there are no questions concerning the safety of UK dairy products, public concern in a number of the other EU countries has resulted in a decreased demand for UK dairy products. A number of countries outside the EU have also imposed official or semi-official import restrictions on EU dairy products (DEFRA, 2002).

Trade Policy and Tariff

Being one of the largest economies in the world, the UK has experienced economic expansion since the 1991 to 1992 recession. Two big impacts on the economy in recent years have been the global economic slowdown, particularly the downturn of the U.S. economy, and the outbreak of foot-and-mouth disease (FMD) in 2001 (US Department of State, 2002).

The United Kingdom has been a WTO member since 1995. It is also a member state of the European Union (EU). As with each of its 15-member States, the EU is a WTO member, which is known officially as the European Communities (EC) in WTO business transactions. Within the EU, the European Commission has the authority to develop the EU-wide external trade policy, and most trade barriers in EU member states are the result of common EU policies (WTO, 2003).

After the Uruguay Round of GATT negotiation, the EU has attempted to further liberalize agricultural markets, including dairy, and move from market-distorting supports to less market-distorting regulations. According to the WTO, an average tariff of 17.3 percent applies at the European borders, but preferential trade agreements with tariff quotas allow some countries access to the EU markets at reduced rates. The US is not a party to any bilateral trade agreements. As a result, the US cannot access the EU market at reduced tariff rates for agricultural products below the Most Favored Nation (MFN) rate (Adams and Kilmer, 2003).

Under the WTO commitment of market access, the EU, including the UK, is required to have tariffication of its import policies, and variable levies imposed on imports of dairy products have been replaced by fixed tariffs. In 1995, the EU established tariff rate quotas (TRQ) for nonfat dry milk, butter, cheese, and other dairy products. The most significant market access commitment was the TRQ established for EU cheese imports. Since 2000, the minimum access quota for cheese that could be imported into the EU at

the reduced tariff rate has been 104,000 metric tons, which have increased from 18,000 metric tons in 1995 (WTO, 2003).

Since 2000, the minimum access quota for skim milk powder imported at the reduced tariff rate of 475 ECU per ton has been 69,000 metric tons. The over quota tariff rate since 2000 has been 1,188 ECU per metric ton (WTO, 2003). The minimum access quota for butter imported at the reduced tariff rate of 948 ECU per metric ton has been 10,000 metric tons. The over quota tariff rate since 2000 has been 1,896 ECU per metric ton (WTO, 2003). The tariff for whey powder (not containing added sugar or other sweetening matter) at present is 70 ECU per metric ton (WTO, 2003).

The UK economy is characterized by free markets and open competition. Structural reforms and open market policies make dairy imports relatively easy to enter UK markets. The UK does not maintain any barriers to U.S. exports, except those implemented as a result of existing EU policies (US Department of State, 2002).

SUMMARY

Over the last decade, the total world 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).

The European Union, the dominant world dairy trader for the past several decades, has experienced a general loss of export volumes over the past years due to the export subsidy limits under the Uruguay Round WTO agricultural agreement (USDEC, 2002).

The Netherlands is one of the largest importers and exporters of dairy products. As a member of the EU, the Netherlands has experienced declining dairy export performance since implementation of subsidy limits, while dairy imports increased (FAO Statistics, 2002).

As export subsidies are removed and trade distorting-domestic supports are reduced, it is believed that these policies will lead to the deregulation of major importing markets and reduced market shares for the EU through subsidy reductions, leading to an even greater potential for imports into the Netherlands. However, given that the US dairy industry is subsidized, these policies will also affect the US as well. The future for US dairy exporters, in terms of the Dutch market, is uncertain.

As a member of the EU, the UK has also experienced declining dairy export performance since implementation of subsidy limits. The UK is a net exporter of whole milk powder, skim milk powder, and dry whey. These are the products most affected by export subsidy limits. However, as a net importer of butter and cheese, the UK has increased its imports, and subsidy limits have had almost no effect. The 2001 outbreak of foot-and-mouth disease has caused dairy exports to decrease and dairy imports to increase in the UK, and to some extent in the EU.

As export subsidies are removed and trade-distorted domestic supports are reduced, it is believed that these policies will lead to the deregulation of major importing markets and reduced market shares for the EU through subsidy reductions, leading to even a greater potential for imports into the UK. However, given that the US dairy industry is subsidized, these policies will also affect the US as well. The future for US dairy exporters, in terms of the UK market, is uncertain.

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