

DAIRY

Facts & Figures

Jamaica Dairy
Development Board
2003 - 2004

PREFACE

The Jamaica Dairy Development Board has completed its fifth year of operation as the agency charged with the responsibility for promoting the development of a sustainable and internationally competitive dairy sector.

During the past year our role as initiator and intervenor was brought to the fore in several joint initiatives with the local dairy farming community. We are sanguine that the impact of these initiatives will become evident within the near term.

In our continued pursuit of empowering our stakeholders, the Board presents its fifth volume of Dairy Facts and Figures. We have combined our review of the past year's performance with suggestions for effecting policy initiatives and improved operating efficiencies which may lead to a rebalancing to favour a growth in the demand for locally produced milk.

We remain open to our readers' comments and suggestions for improving the effectiveness of this publication.

The Board acknowledges the continued assistance of STATIN, the Data Bank of the Ministry of Agriculture, Trade Board Ltd, The Jamaica Dairy Farmers' Federation Ltd, Jamaica Livestock Association Ltd, Nestle' JMP Ltd, Serge Island Farms/Dairies Ltd and other agencies which have continued to provide much of the data used in this publication.

Paul Jennings, PhD
Chief Executive Officer

TABLE OF CONTENTS

	Page
PREFACE.....	i
TABLE OF CONTENTS	ii
LIST OF TABLES	iv
LIST OF FIGURES	v
DAIRY FACTS AND FIGURES	1
JAMAICA DAIRY DEVELOPMENT BOARD	1
<i>Activities Of The Dairy Development Board</i>	1
STATUS OF THE DAIRY SECTOR	2
<i>Overview</i>	2
<i>Levels Of Imports</i>	6
<i>Trends In International Price Of Milk Powder</i>	6
<i>Expenditure On Milk Solids In Jamaica</i>	7
<i>Value Of The Industry</i>	8
<i>Levels Of Export Of Dairy Products</i>	11
<i>Revenues From Imports Of Milk Solids</i>	12
<i>Local Milk Production</i>	13
COST OF PRODUCTION PER LITRE OF MILK IN JAMAICA IN YEAR 2003	15
ANNEXES	19
Annex 1. Annual Imports (Consumer Goods).....	20
Annex 2. Value Of Annual Imports (Consumer Goods)	20
Annex 3. Annual Imports (Raw Material).....	21
Annex 4. Value Of Annual Imports (Raw Material)	21
Annex 5. Annual Export Of Dairy Products.....	22

Annex 6. Value Of Export Of Dairy Products.....	22
Annex 7. Grade “A” And “B” Milk Production.....	23
Annex 8. Stamp Duties On Dairy Products	23

LIST OF TABLES

Page

Table 1: Annual Imports	5
Table 2: Value Of Annual Imports	5
Table 3: Trends In International Price Of Milk Powder (1999-2003).....	7
Table 5: Annual Exports Of Dairy Products	11
Table 6: Import Duties And GCT Collected On Milk And Milk Products (\$US).....	12
Table 7: Comparison Of Variable Cost/litre Among Farm Sizes.....	15
Table 8: Comparison Of Average Direct Cost/litre Among Farm Sizes	16
Table 9: Comparison Of Average Direct Cost Year 2000-2003	16
Table 10: Comparison Of Average Gross Margin/litre Among Farm Sizes.....	17

LIST OF FIGURES

FIGURE	Page
1. SOURCES OF MILK SOLIDS	3
2. DAIRY PRODUCT IMPORTS	4
3. WORLD MILK POWDER PRICES YR 2003.....	8
4. MEAN ANNUAL PER CAPITA CONSUMPTION OF DAIRY PRODUCTS	10
5. MILK PRODUCTION 1999 - 2003	15

DAIRY FACTS AND FIGURES

JAMAICA DAIRY DEVELOPMENT BOARD

Over the past year the Jamaica Dairy Development Board has continued to articulate initiatives at both the policy and operational levels aimed at promoting the restoration of the Dairy farming sector. It is anticipated that these will begin to yield positive responses in the near-term.

The mission of the Board continues to be:-

To ensure the creation of a policy environment, which will stimulate the orderly development of the Jamaican Dairy Industry in a sustainable and globally competitive manner for the benefit of the producers and consumers of milk in Jamaica.

In keeping with its mission of making the dairy sector globally competitive on a long-term sustainable basis, the Board continues to seek to:

- promote the interest of the dairy sector and assist in its development;
- increase efficiency in production and marketing;
- ensure a level playing field for all the players in the sector;
- promote policy, planning, analysis and monitoring the growth of the dairy sector through collecting, analysis and dissemination of reliable statistics.

Activities Of The Dairy Development Board

The major activities for the year 2003 included the following:

- Publication of Dairy Facts and Figure 2003/2004
- Reform of Tariff Regime
- Medium Term Policy Framework for the Dairy Sector
- Stakeholders Fora
- Cost of Production Survey 2003
- Cost of Production of Grass
- Presentation at SRC Conference on Science and Technology
- Dairy Farmers Training Workshop
- Demographic Survey of Dairy Farmers
- Tracking of local and international trends in dairy markets

STATUS OF THE DAIRY SECTOR

Overview

Local production of milk in Jamaica continued to show a declining trend. Output of fresh milk for 2003 was 18.4 million litres well below the 27 million produced in 1997-1999. Since the liberalization of the trade a decade ago, importation of dairy products has maintained much pressure on the local sector with a number of medium and small farmers reportedly having liquidated their herds since 2001. Imports in 2003 (19,068 metric tonnes) mirrored that of the previous year.

Powdered milk (skimmed and whole), cheese and ice cream remained the major imports accounting cumulatively for 88 and 90 percent of the total volume and value of imports respectively (Tables 1 & 2). Consumption of milk solids (expressed in fluid equivalents) declined by 4 percent over the past year (Fig. 1) and represented a mean per capita consumption of 156 ml. per day. Locally produced milk represented 12.3 percent of total consumption, marginally lower than the 13 percent for 2002.

The high margins which prevail throughout the dairy trade, have suppressed demand. Local dairy farmers and processors will need to initiate the process of making milk products more affordable by increased efficiency throughout the chain. With respect to consumer imports, the high margins have denied the intended benefits to the consumer which provided the justification for the retention of a low tariff regime for dairy imports.

The persistence with an exclusively single-product industry (packaged liquid milk) for locally produced milk has contributed significantly to the decline in demand. Product diversification becomes an imperative in any expansion strategy. Products such as yoghurt, ice cream and cottage cheeses represent a potential market for local milk estimated at over 8 million litres per annum.

Figure 1: Sources Of Milk Solids

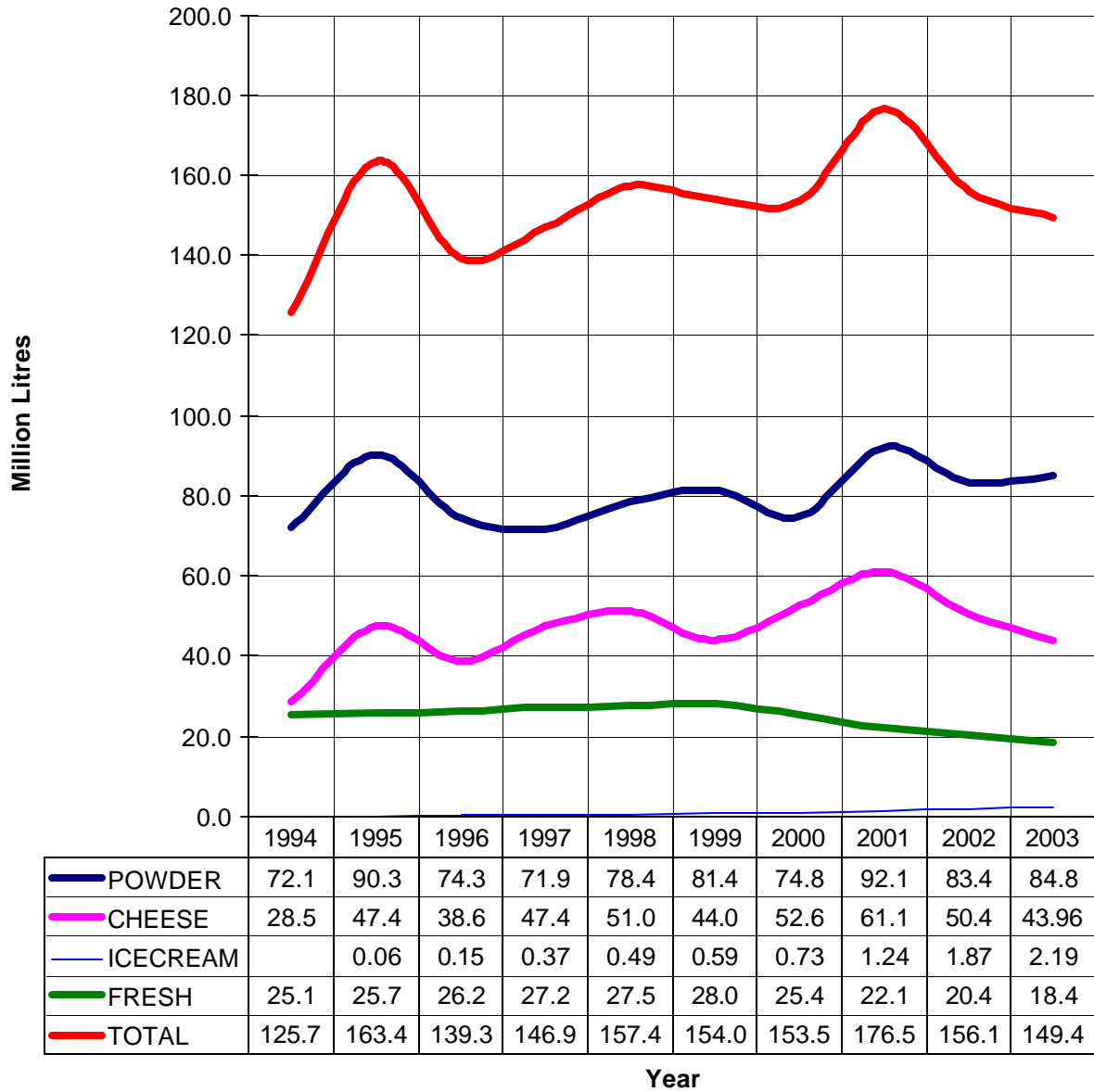


Figure 2: DAIRY PRODUCT IMPORTS

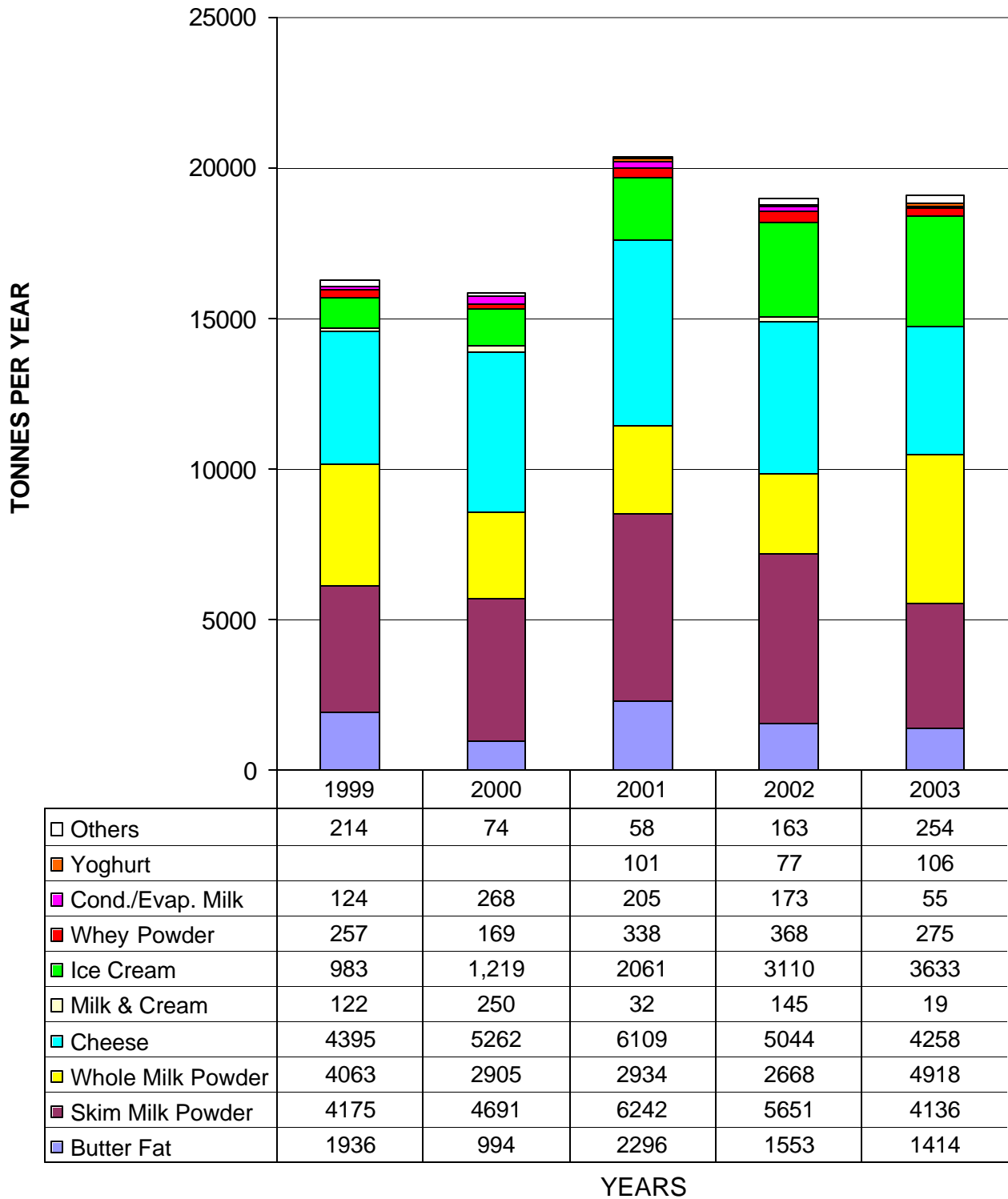


Table 1: Annual Imports

Annual Import of Dairy Product (Kg)					
	1999	2000	2001	2002	2003
Milk & Cream	122,797	249,881	31,719	145,192	19,167
Skim Milk Powder	4,175,753	4,691,927	6,241,947	5,650,822	4,135,532
Whole Milk Powder	4,063,298	2,904,849	2,933,666	2,668,064	4,917,873
Condensed/Evap Milk	124,885	267,836	204,667	172,987	55,312
Whey Powder	257,436	169,211	337,678	367,726	275,387
Ice cream	983,381	1,219,198	2,061,170	3,110,243	3,632,825
Yoghurt			100,698	77,435	106,379
Cheeses	4,395,802	5,262,478	6,108,772	5,044,332	4,257,946
Butter Fat	1,936,929	993,632	2,296,295	1,553,113	1,414,346
Others	214,026	73,625	57,834	163,038	253,927
Total	16,274,307	15,832,637	20,374,446	18,952,056	19,068,694

Table 2: Value Of Annual Imports

Annual Value of Imports (US \$)					
	1999	2000	2001	2002	2003
Milk & Cream	184,892	584,498	71,039	282,439	1,642
Skim Milk Powder	6,122,434	8,069,559	14,364,756	10,048,595	7,288,683
Whole Milk Powder	6,710,659	5,440,283	6,775,969	4,480,202	9,784,043
Condensed/Evap Milk	158,940	353,869	492,294	240,005	83,885
Whey Powder	193,090	131,163	500,485	269,375	412,946
Ice Cream	2,200,218	2,562,182	3,952,259	5,455,626	5,527,857
Yoghurt			237,009	204,968	273,466
Cheeses	13,091,625	14,354,568	17,235,078	14,881,634	12,458,009
Butter Fat	4,368,593	1,654,174	4,546,202	2,713,621	2,765,396
Others	428,213	124,743	161,222	348,619	551,120
Total	33,458,664	33,275,039	48,336,313	38,919,954	39,147,051

Source: STATIN 2003

Levels Of Imports

Gross imports in volume and value were relatively stable between 2002 and 2003. There were, however, significant fluctuations in the level of individual commodities imported. Imports of whole milk powder increased 84 percent and this was partially compensated by a 27 percent fall in skimmed powder imports. The reasons for the resurgence in whole milk powder imports are not immediately apparent as the reported international prices would have continued to favour the importation of skimmed milk powder.

Imports of ice cream increased by 16.8 percent, suggesting approaching market saturation. Corresponding increases were 69 percent and 51 percent in 2001 and 2002 respectively.

Imports of cheese continued the characteristic fluctuation of the past decade and may be related to a decline in the export market for Jamaican cheddar reported for 2003.

Raw materials accounted for 69 percent of the total value of imports; milk powder imports representing 55 percent of expenditure on raw materials (Annexes 1-4).

Trends In International Price Of Milk Powder

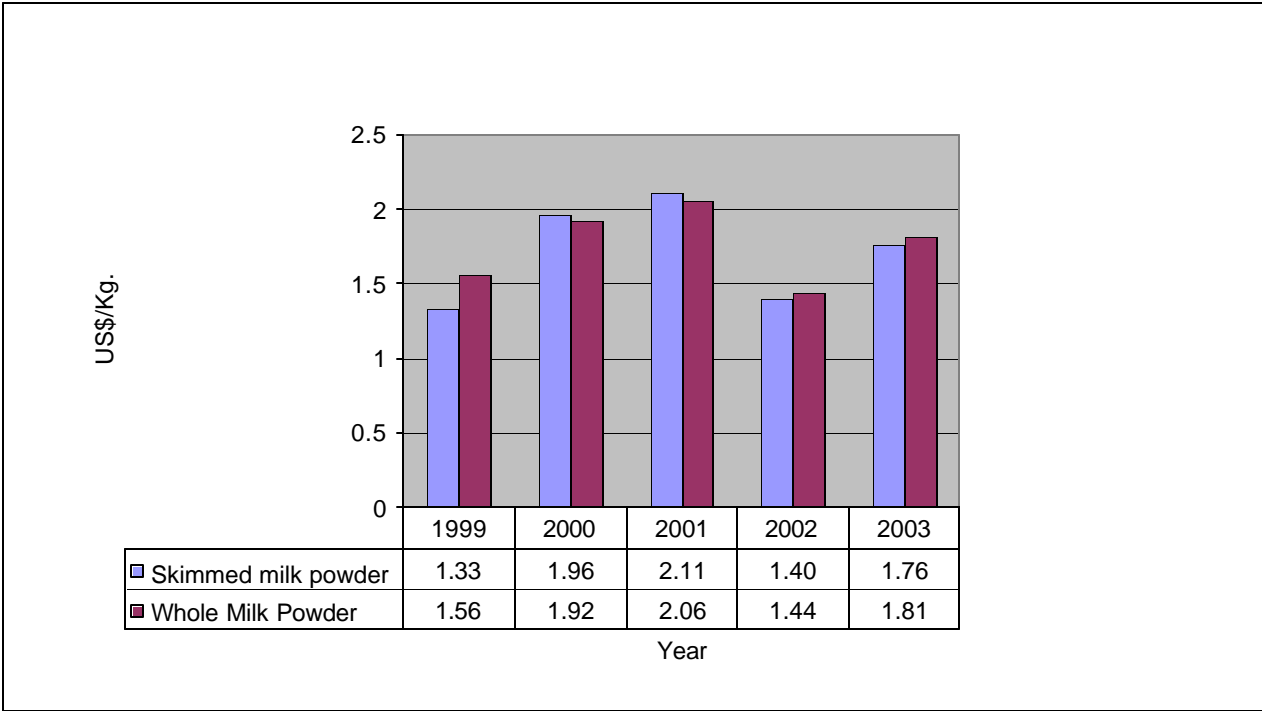
Milk powder prices (SMP and WMP) increased on average by 26 percent compared to 2002 prices, sustaining the upward trend started since the last quarter of 2002 (Table 3). European milk powder closed the year at US\$1900 and US\$2000 for SMP and WMP respectively.

The hardening in prices in 2003 was conditioned by several factors major among which were:

- i) Weakening of the US dollars against the other major currencies
- ii) Persistent drought conditions in Australia affecting prices ex Oceania, a principal player in milk powder exports
- iii) Continued increased demand for milk powder imports in the former Soviet States and China.

For 2004 the hardening in world prices for powdered milk is expected to persist given forecasted reductions in world production, a 20 percent price increase granted to US farmers at the end of the first quarter 2004 as well as the record high US trade and fiscal deficit.

Table 3: Trends In International Price Of Milk Powder (1999-2003).



Source: USDA/FAS

Expenditure On Milk Solids In Jamaica

Mean per capita expenditure on dairy products for 2003 at \$2620, was similar to the average of the previous year (\$2598) (Table 4). Expenditure within urban centres increased on average by 6.7 percent, an apparent attempt to maintain consumption levels. The marginal decline in expenditure within the rural areas (2250 v 2266) reflects an inability to keep pace with inflation.

With reference to expenditure within wealth groups, the wealthiest quintile of the population accounted for 37 percent and the poorest, 8 percent of expenditure on dairy products (Fig. 4). Expenditure by the wealthiest quintile decreased by 3 percent, possibly reflecting the impact of aggressive campaigning against dairy products. Contrastingly the poorest quintile increased nominal expenditure by 4.6 percent.

Overall expenditure on dairy products represented 7.8 percent of total per capita expenditure on food.

Table 4: Mean Per Capita Expenditure On Selected Dairy Products.

Product	Jamaica (\$)	KMA (N=1741) (\$)	Other Towns (N=1297) (\$)	Rural Areas (N=4071) (\$)
1. Liquid Milk inc. flavoured	253.62	438.66	285.10	163.06
2. Condensed/Evap. Milk	707.61	761.79	752.65	671.31
3. Food Drink (inc Lasco Supligen Nutrament)	585.26	846.77	627.29	457.95
4. Powdered Milk	257.42	147.90	244.09	309.57
5. Butter or Margarine	256.55	296.68	262.44	237.17
6. Cheese	268.29	413.54	320.40	189.71
7. Other Dairy Products (yoghurt, ice cream)	291.75	400.49	372.52	221.51
Total	2620.50	3305.83	2864.49	2250.28

N= number of household members

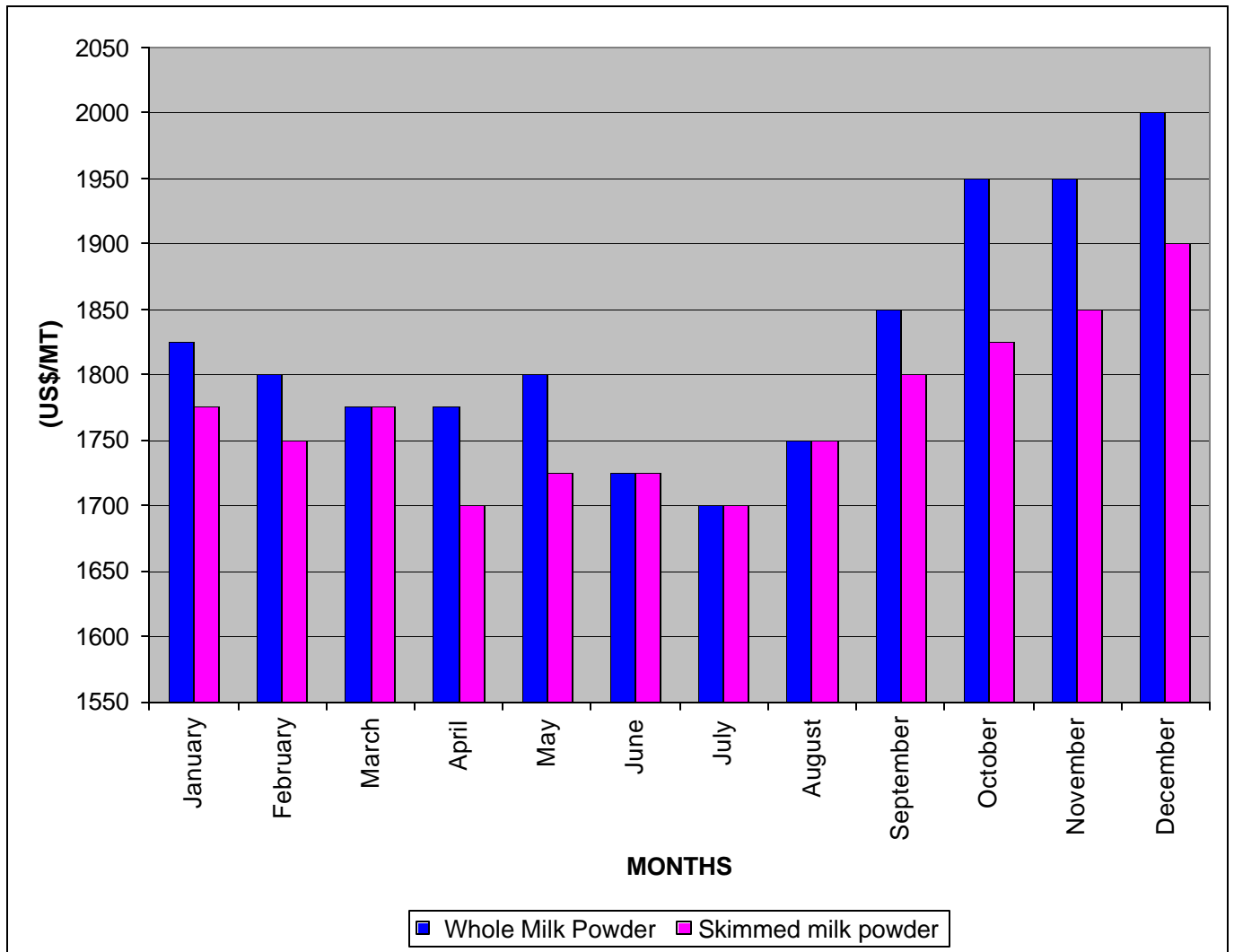
Source: STATIN SLC (2003).

Value Of The Industry

The value of the Jamaican dairy products market for 2003 was estimated at J\$8.72 billion. Per capita expenditure on milk and milk products for the year in review was approximately J\$2,620 not including a reported 22 percent of food expenditure away from home. The farmers' share of this market declined to J\$368 million or 4.3 percent. Local production, which peaked in 1992 at 24 percent of local consumption, declined to 13 percent in 2003. The need remains for farmers to increase production efficiencies in order to enhance their competitiveness with imported milk solids.

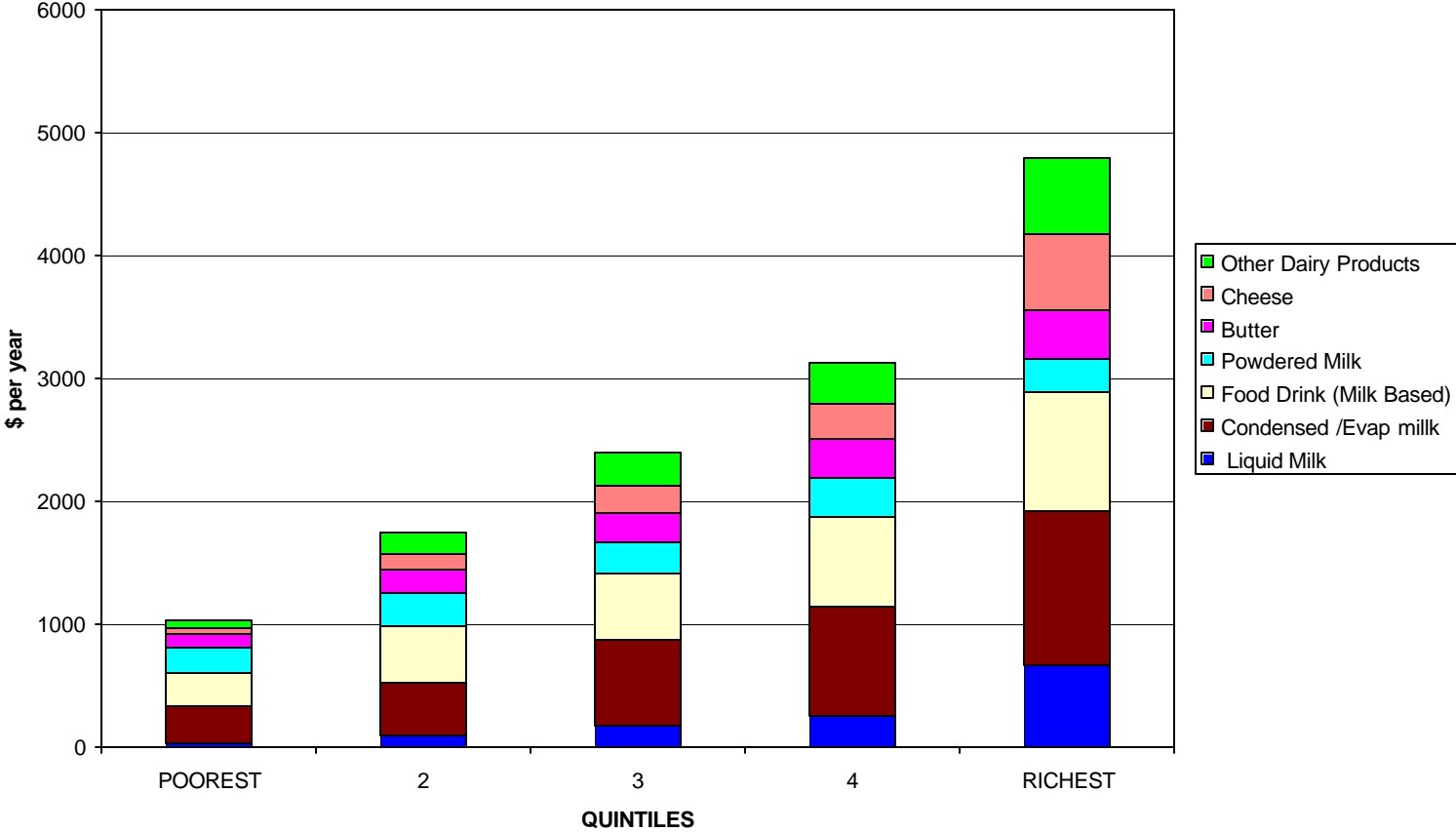
The per capita consumption of milk and milk products was equivalent to 154 millilitres of milk per day, a decrease of 5 percent below the previous year and significantly below the WHO standard of 200 ml per day.

FIGURE 3: WORLD MILK POWDER PRICES YEAR 2003



Source: USDA/FAS

Figure 4: Mean Annual Per Capita Consumption Of Dairy Products



Levels Of Export Of Dairy Products

Export volumes declined by 14.6 percent compared to 2002 due largely to reduced exports of condensed milk and cheese. The value of exports, however, increased by 6.4 percent due to an apparent 36 percent increase in the price received for cheese. The significant increase in the volume of milk (and cream) exported to CARICOM in 2003 is encouraging as accession to the Caribbean Single Market and Economy (CSME) in 2005 approaches.

Table 5: Annual Exports Of Dairy Products

	Annual Exports of Dairy Products (kg)				
	1999	2000	2001	2002	2003
Milk & Cream	18461	0	624,014	270,877	431,582
Skim Milk Powder	194	9879	0	0	8,413
Whole Milk Powder	9606	298500	17	201	46,178
Condensed/ Evap Milk	9606	0	2,372,481	326,410	36,900
Whey Powder	0	198315	0	0	0
Ice Cream	29069	206759	38,242	1,909	264
Cheeses	794275	611788	891,015	1,235,793	946,988
Butter Fat	0	191	51	628	248
Others	0	611788	0	0	103,375
Total	861211	1937220	3,925,820	1,835,818	1,573,948.00
	Annual Value Of Exports (US\$)				
	1999	2000	2001	2002	2003
Milk & Cream	32671	0	885984	395,772	581,393.72
Skim Milk Powder	2083	12652	0	0	4,989.24
Whole Milk Powder	11935	367996	75	1,336	209,107.65
Condensed/ Evap Milk	11935	0	2947696	478,551	44,003.26
Whey Powder	0	564990	0	0	0
Ice Cream	69083	655201	113423	5,088	2,473.91
Cheeses	3955216	2606557	4346437	4,775,212	5,021,585.55
Butter Fat	0	250	218	3,054	340.00
Others	0	2736439	0	0	154,613.27
Total	4082923	6944085	8293758	5,659,013	6,018,506.60

Source: STATIN 2003

Revenues From Imports Of Milk Solids

Table 6: Import Duties And GCT Collected On Milk And Milk Products (\$US)

Value of Import Duties Collected on Milk Products (\$US)					
	1999	2000	2001	2002	2003
Milk & Cream	330168	19364	4460	137246	6910
Skim Milk Powder	317998	384709	682449	253582	140895
Whole Milk Powder	2081046	2439932	2664223	1552140	1491458
Condensed/Evap Milk	32849	54776	39327	41651	20295
Whey Powder	0	0	0	0	0
Ice Cream	476166	175275	336086	453954	542750
Cheeses	196278	195207	112138	220597	241478
yoghurt			45824	40641	55415
Butter Fat	189409	0	180579	141993	145864
Others	66123	0	379932	22600	19249
Total	3690038	3269263	4445018	2864403	2664315
Value of GCT Collected					
	1999	2000	2001	2002	2003
Milk & Cream	45329	861	199373	4761	3801
Skim Milk Powder	7738	30253	199446	337	21120
Whole Milk Powder	8191	12231	314	81369	72713
Condensed/Evap Milk	12509	22130	9374	41169	9281
Whey Powder	10360	5489	8802	37651	19148
Ice Cream	394584	161416	319772	876850	930695
Cheese	286602	424018	154097	605909	695439
Yoghurt			40812	37339	49852
Butter Fat	326628	35100	394597	322441	309713
Others	60358	2217	25250	29536	30123

Source: STATIN 2003

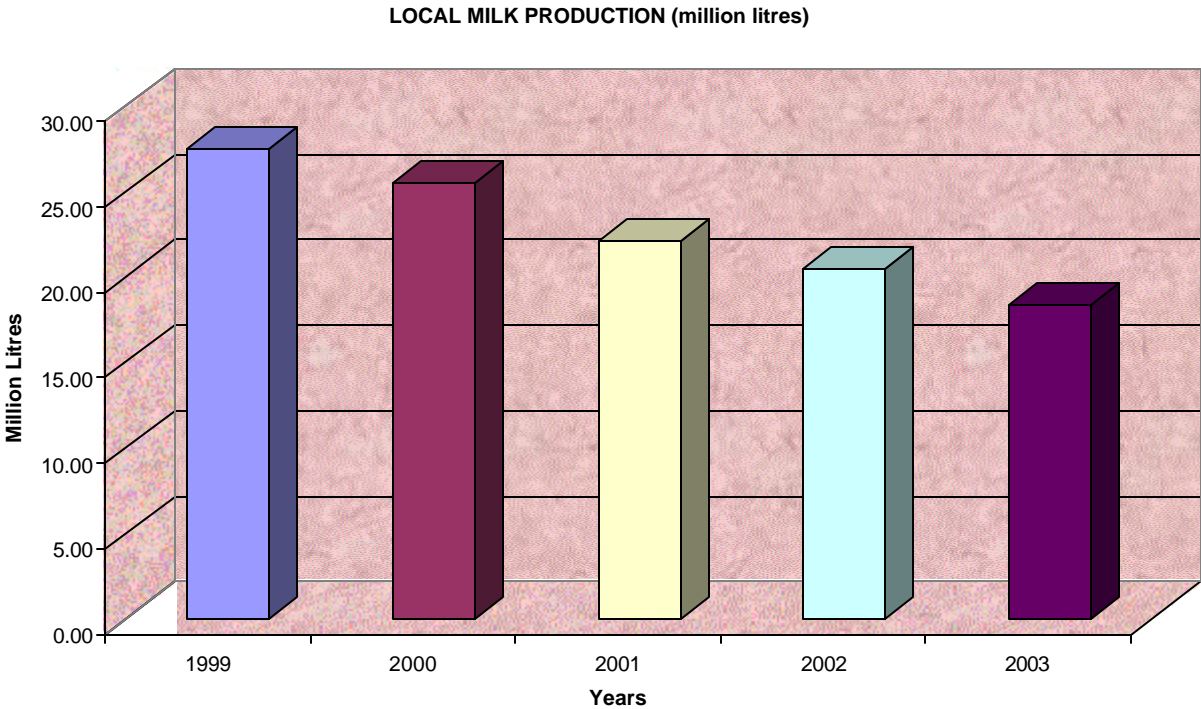
The aggregate import duties earned from the various dairy products (Table 6) continued to reflect the difficulties experienced in applying the current duty regime. Import duties for 2003 fell 7 percent although the volume of dairy products imported remained within the average of the preceding three years.

The indications are that, at current levels of duty, revenue collected is substantially below expectation. A proposal for a revised tariff regime is currently under discussion and is projected to result in a three-fold increase in duty revenues.

The increased revenues would enable more direct intervention by Government in improving the status of a significant proportion of the population by employing schemes such as the School Feeding Programme and the Food Stamps (PATH) Programme.

Local Milk Production

Figure 5: Milk Production 1999-2003 (million litres)



(Source: Data Bank and Evaluation Division Ministry of Agriculture.)

The difficulties being experienced by Jamaican dairy farmers are showing no immediate sign of easing. During the past year local production fell by 10 percent (18.4 million). Production of grade A and B milk fell by 11.5 and 5.3 percent respectively over the 12 month period. Overall, milk production has fallen by 33 percent over the past five years. Small farmers have been hardest hit by the vagaries of the market; B-grade milk collection having declined by 72 percent during this period.

Traditionally dairy farming has been a major contributor to the socio-economic stability of rural communities. A resurgence in the dairy farm sector therefore remains a key strategy in any rural development initiative.

COST OF PRODUCTION PER LITRE OF MILK IN JAMAICA IN YEAR 2003

Over the last decade, the importation of milk solids has remained essentially constant, partially because milk produced in Jamaica is not competitively priced coupled with the fact that the Government has a responsibility of sourcing affordable food for the poor. In order to achieve true competitiveness on a global level the real cost of producing milk in Jamaica must be determined. To this end we continued our annual survey conducted between January and March 2003.

A total of 33 farmers were initially selected randomly from across the island for the survey. However, only 24 provided completed data set in the time allocated to the survey. Farmers' holdings ranged from less than 10 cows (small non-irrigated) to greater than 100 cows (organized farms), and included irrigated and non-irrigated farms ranging in size from 1.82 to 937.25 hectares.

Table (7) presents a comparison of the variable cost per litre among farm size groups. Small non-irrigated farms with very little overhead produced milk at \$16.81 per litre; medium non-irrigated farms, \$14.15; medium irrigated, \$18.15; large non-irrigated \$17.93 and large irrigated \$16.68.

Table 7: Comparison Of Variable Cost/litre Among Farm Sizes

Category	Direct Cost/litre
SNI	16.81
MNI	14.15
MI	18.15
LNI	17.93
LI	16.68
AVERAGE	16.05

Footnote: Average direct cost \$16.05; farmers margin \$1.95, contribution to fixed cost 11%. Total animal units recorded in survey were 4,903.

Source: Cost of Production per Litre of Milk in Jamaica in Year 2003 (Ffrench, D. L.; Miller, R. C.; Jennings, P.G.)

The study suggested that organised farms with irrigation had higher cost of production per litre of milk, approximately \$17.42 per litre, compared to non-irrigated farms \$16.04, an 8 percent advantage to non irrigated farms (Table8). The prevailing circumstance is due mainly to the level of uncertainties facing the farmers.

Another factor that accounts for the difference between the two is that the optimal volume of milk that must be produced by irrigated farms cannot be realized because of the unwillingness of major processors to use liquid milk. The low price that was offered to the dairy farmers by the processors also contributed to the reduced levels of milk production.

Table 8: Comparison Of Average Direct Cost/litre Among Farm Sizes

Category	Average Stocking Rate/ha	Average Direct Cost/litre
SNI	2.26	16.81
MNI	1.89	14.15
MI	2.67	18.15
LNI	1.83	17.93
LI	3.13	16.68

Average stocking rate on irrigated farms was 2.90 cows per hectare compared to 1.86 cows per hectare on non-irrigated farms. Average stocking rate per hectare across all size groups declined significantly for the year in review, while the total number of dairy animals declined by 18 percent for the same time period.

Table 9: Comparison Of Average Direct Cost Year 2000-2003

ITEMS	2000	2001	2002	2003
Average variable cost per litre J \$	15.91 (US\$ 0.34)	17.41 (US\$ 0.36)	17.02 (US\$0.35)	15.76 (US\$0.26)
Irrigated farms	15.36	21.31	18.33	17.42
Small non-irrigated farms	8.00	12.34	12.21	16.81
Non-irrigated (M,L)	18.30	18.83	17.23	16.04
Price per litre	22.14	22.14	18.00	20.00
Percentage Contribution	28%	21%	6%	11 %

The average variable cost per litre of milk since 2001 has shown a 9.5 percent decline. A 10 percent increase in cost was projected for the same time period. The average inflation rate for the period was 8.7 percent (Statistical Digest, January 2002).

However, average inflation rate for 2003 rose to 14.1 percent (Statistical Digest, January 2003). Over the four years being reviewed, the cost of inputs to the dairy farmer became a real challenge as they strove to improve the returns on their investment. Small farmers with very little overhead costs experienced a \$4.60 increase from \$12.21 to \$16.81 per litre, several exiting the business. In real terms with a contribution to fixed cost of 11 percent, the dairy sector is in real trouble. Only medium non-irrigated farmers can survive such prevailing circumstances.

Gross Margin: The mean gross margin for the participating farms was analysed (Table 10). In determining gross margin the farmers' best estimates or records available on the production of milk and the variable price received during year 2003, was used. Gross margin has declined from \$6.23 in year 2000, and a contribution to over-heads of 28 percent to \$1.95 or 11 percent contribution to fixed cost in 2003 (see Table 9). This may partially explain liquidating of several

herds over the past three years. Organized farms showed a distinct variation in their gross margin ranging from \$0.86 to \$ 6.80 (Table10).

Table 10: Comparison Of Average Gross Margin/litre Among Farm Sizes

Category	Average Rate/ha	Gross Margin/litre
SNI	2.26	4.70
MNI	1.89	6.80
MI	2.67	.86
LNI	1.83	1.84
LI	3.13	4.77

All farms showed a positive contribution to fixed cost although for the most part these margins were insufficient to cover their over-heads.

ABSTRACT

COST OF PRODUCING GRASS UNDER COMMERCIAL CONDITIONS IN JAMAICA

MILLER, R.C.; FFRENCH, D. L. and JENNINGS, P.G
JAMAICA DAIRY DEVELOPMENT BOARD

It has long been established that pastures provide the most economical source of feed for milk production. With the rising cost of imported concentrates the Jamaican dairy farmer, if he is to become competitive, must make better utilization of available resources. One such resource is pasture. Though the complete removal of concentrate feed from the diet is not being advocated, greater utilization of pasture presents the most convenient strategy for increased competitiveness for Jamaican dairy farmers.

A two-year study was therefore carried out to determine the cost of producing pasture at Serge Island Farms in St. Thomas, Jamaica, commencing April 2001. Other objectives of the study were to determine dry matter yield, average dry matter consumption per cow and nutritive value throughout the year. Two grasses were studied namely: Tifton Bermuda grass (*Cynodon spp*) and African Star (*Cynodon nlemfuensis*).

Pastures were fertilized at an average rate of 447.5kg N per hectare per annum. Grazing cycles were 18-21 days and stocking rate, 5.4 cows per hectare. Irrigation was applied for 86 days in 2001 and 35 days in 2002.

Mean dry matter yields of 26.1t and 20.76t per hectare per annum were recorded for Tifton and African Star respectively.

Mean daily dry matter intakes over the two years were 5.8kg and 3.8kg DM per cow, a superiority of 53 percent to the Tifton.

Cost per tonne of herbage dry matter averaged J\$402 and J\$528 for Tifton and African Star respectively, a 24 percent cost advantage to the Tifton.

The results suggest that Jamaican farmers are capable of producing grass at approximately 1/30th the current cost of concentrate feed and stresses the need to maximally exploit the proven potential of tropical pasture for producing milk in the pursuit of international competitiveness.

ANNEXES

Annex 1. Annual Imports (Consumer Goods)

Annual Imports of Dairy Products (Kg)	
	2003
Milk & Cream	19,428
Skim Milk Powder	297,054
Whole Milk Powder	712,362
Condensed/Evap Milk	55,403
Whey Powder	73,275
Ice cream	3,077,919
Yoghurt	106,750
Cheeses	1,081,223
Butter Fat	600,444
Others	114,848
Total	6,138,706

Annex 2. Value Of Annual Imports (Consumer Goods)

Annual Value of Imports (US\$)	
	2003
Milk & Cream	19,534
Skim Milk Powder	554,527
Whole Milk Powder	1,596,242
Condensed/Evap Milk	83,787
Whey Powder	104,197
Ice cream	4,821,946
Yoghurt	274,357
Cheeses	3,664,132
Butter Fat	1,333,540
Others	305,950
Total	12,758,2157

Annex 3. Annual Imports (Raw Material)

Annual Imports of Dairy Products (Kg)	
	2003
Milk & Cream	32
Skim Milk Powder	3,821,021
Whole Milk Powder	4,171,800
Condensed/Evap Milk	8,088
Whey Powder	202,112
Ice cream	636,860
Yoghurt	1,205
Cheeses	3,210,089
Butter Fat	843,490
Others	132,245
Total	13,026,942

Annex 4. Value Of Annual Imports (Raw Material)

Annual Value of Imports (US\$)	
	2003
Milk & Cream	583
Skim Milk Powder	6,706,953
Whole Milk Powder	8,305,180
Condensed/Evap Milk	6,552
Whey Powder	308,749
Ice cream	871,865
Yoghurt	3,836
Cheeses	8,933,245
Butter Fat	1,490,677
Others	286,095
Total	26,913,740

Annex 5. Annual Export Of Dairy Products

Annual Export of Dairy Products (Kg)	
	2003
Milk & Cream	431,582
Skim Milk Powder	8,413
Whole Milk Powder	46,178
Condensed/Evap Milk	36,900
Whey Powder	
Ice cream	264
Yoghurt	
Cheeses	946,988
Butter Fat	248
Others	103,375
Total	1,573,948

Annex 6. Value Of Export Of Dairy Products

Annual Value of Export (US\$)	
	2003
Milk & Cream	581,393
Skim Milk Powder	4,989
Whole Milk Powder	209,107
Condensed/Evap Milk	44,003
Whey Powder	
Ice cream	2,473
Yoghurt	
Cheeses	5,021,585
Butter Fat	340
Others	154,613
Total	6,018,506

Annex 7. Grade “A” And “B” Milk Production

Unit = Litres

Year	Milk Production (litres)		Total
	Grade A	Grade B	
1999	24,889,571	2,593,762	27,483,333
2000	23,772,538	1,686,610	25,459,148
2001	20,969,300	1,158,715	22,128,015
2002	19,692,380	771,726	20,464,106
2003	17,665,431	732,519	18,397,950

Annex 8. Stamp Duties On Dairy Products

Annual Stamp Duty (US\$)	
	2003
Milk & Cream	438
Skim Milk Powder	73,399
Whole Milk Powder	76,954
Condensed/Evap Milk	16,888
Whey Powder	5,617
Ice cream	86,757
Yoghurt	4,362
Cheeses	122,783
Butter Fat	38,685
Others	4,718
Total	430,606