



Review of the Dairy Industry in Zambia

Final Report

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ACRONYMS AND ABBREVIATIONS

AAP	Animal and Animal Products
AIDS	Acquired Immuno Deficiency Syndrome
APH Sp	Animal Production and Health Sub Program
BSE	Mad Cow Disease
BOZ	Bank of Zambia
CBPP	Contagious Bovine Pleuropneumonia
COMESA	Common Market for Eastern and Southern Africa
CBI	Cross-Border Initiative
CBoH	Central Board of Health
DRC	Democratic Republic of Congo
DPB	Dairy Produce Board (Privatized and bought by Bonita (RSA), now Parmalat (Z) Ltd
DVO	District Veterinary Officer
DDMID	Deputy Director in charge of Marketing and Infrastructure Development
DRSS	Department of Research and Specialist Services
EU	European Union
EAC	East African Community
ECAPAPA	Eastern and Central Africa Program for Agricultural Policy Analysis Program
FDMB	Federal Dairy Marketing Board
FMD	Foot and Mouth Disease
GART	Golden Valley Agricultural Research Trust
GDP	Gross Domestic Product
GRZ	Government of the Republic of Zambia
HACCP	Hazard Analysis Critical Control Point
HIV	Human Immuno Deficiency Virus
ISC	International Sanitary Certificate
LIP	Livestock Import Permit
l	Litre
MACO	Ministry of Agriculture and Cooperatives
MoH	Ministry of Health
MMD	Movement for Multi Party Democracy
MRL	Maximum Residue Levels
NALEIC	National Livestock Epidemiology and Information Service
NISR – FTRU	National Institute for Scientific and Industrial Research – Food Technology Research Unit
NTEs	Non-Traditional Exports
OIE	International Office of Epizootics
RATES	Regional Agricultural Trade Expansions Program
RSA	Republic of South Africa
SADC	Southern African Development Community
SPS	Sanitary and Phytosanitary
SSA	Sub Saharan Africa
TV	Television
UHT	Ultra High Temperature (Long – Life Milk)
USAID	United States Agency for International Development
UTH	University teaching Hospital
VCA	Value Chain Analysis
VAT	Value Added Tax

ZAMBIA DAIRY SECTOR POLICY STUDY

WHO	World Health Organization
WTO	World Trade Organization
ZABS	Zambia Bureau of Standards
ZATAC	Zambia Agricultural Technical Assistance Centre
ZDEI	Zambia Dairy Enterprises initiative
ZDPC	Zambia Dairy Processors Committee
ZIF	ZATAC Investment Fund
ZMK	Zambian Kwacha

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EXECUTIVE SUMMARY

Background

One of the key objectives of trade integration program which Zambia has been pursuing under the aegis of COMESA, SADC and IOC, and at Multilateral level under the WTO and ACP/EU arrangements is to provide market export or import opportunities. Evidence has shown that while implementation of the trade integration programs has been at top gear, with the launch of the COMESA FTA in 2000 and imminent Launch of the Customs Union in 2004, this is not a panacea to increased trade. Beyond the macro provisions of the regional integration programs, there are pertinent provisions at commodity level, which are crucial to enhancing commodity trade. This poses as a challenge that requires urgent attention, at least for commodities deemed to have a potential to be traded regionally. One such commodity is dairy products.

Regional Agricultural Trade Expansion Support (RATES) Program, in collaboration with Eastern and Central Africa Program for Agricultural Policy Analysis (ECAPAPA)¹ Program COMESA, SADC, and EAC carried out targeted baseline studies addressing issues relevant to regional and extra regional trade in dairy products. Zambia is among eight countries, which were sampled for the study on account of its meeting the criteria of being a principal importing country, with potential for exporting in the regional market. Other countries, which were covered by the study, include Ethiopia, Kenya, Tanzania, Rwanda, Uganda, Malawi, and Mauritius. The thrust of the studies was the identification of national and regional policies and regulatory requirements in the dairy sector that may be impeding intra and extra regional exports of dairy products as well as inventorize key dairy sector players in the region.

The overall goal of the study was to facilitate harmonization of regional and national dairy sector policies and regulations in the region and to identify the dairy sector network of traders and stakeholders whom RATES could work with in promoting regional trade in the dairy produce. The study was carried out over the period starting 9th February to 19th March 2004

The Dairy Industry

Dairy Producers

Zambia's dairy sector is presently characterized by three categories of milk producers; commercial farmers, traditional/smallholder dairy farmers and emergent dairy farmers. Smallholder dairy farmers' contribution is about 40% of the all marketed milk (190 million litres per annum) and 70% is supplied by large-scale commercial and emergent farmers. In total, all these farmers produce approximately 190 million litres of milk per year compared to the country's total milk requirement of 253 million litres of milk per year. This yields a milk deficit, which renders Zambia to about 25% of its milk requirement.

Cattle Population

The Cattle population increased modestly by approximately 1.5% to 2,522,896 head in 2003 as compared to a 2002 population of 2,485,612. This increase is partly attributed to the reduction in the spread of disease due to the vigorous vaccination and treatment program conducted by the Ministry of Agriculture and Cooperatives.

The dairy sector also saw an increase in the production of milk. This is partly on account of the increase in donor funded projects in the sector that aim at assisting small scale farmers access dairy animals as well as markets for their produce. Milk production for 2002 stood at 80 million litres from Commercial farmers and 67 million litres from the traditional sector.

Milk production for 2003 increased to 120 million litres from the commercial sector, whilst output from the traditional sector increased to 70 million litres. Table 1 overleaf gives a summary of the raw milk

¹ ECAPAPA is a program of the Association for Strengthening Agricultural Research in Eastern and Central Africa

production trends from 1998 to 2003. It is worth noting that only 40% of milk produced by the traditional sector is marketed through formal marketing channels. Imports of powdered milk have also increased due to the lack of a powdered milk processing plant in Zambia.

Raw Milk Production Figures²

Year	Volume Produced (litres)
1998	138,000,000
1999	141,000,000
2000	135,000,000
2001	139,000,000
2002	147,000,000
2003	190,000,000

Future challenges to dairy farming in Zambia

The buoyant state of the market for milk and milk products now has resulted in commercial producers tending to ignore incipient problems and possible constraints to future development.

Apart from the possibility that the market may become saturated in the near future, a number of technical problems will become more pressing.

Among those are the following:

- a) pressure on feed supply, already considerable after periodic droughts may begin to affect profitability;
- b) the increasing density of dairy units around the urban areas may create risks of the spread of disease between herds;
- c) further advances in the spread of tsetse fly could confront dairy producers with a trypanosomiasis threat which would make milk production difficult or even impossible in some areas;
- d) zoonotic disease in the form of brucellosis and tuberculosis, currently a minor problem in the commercial herd but present at high rates in the surrounding traditional cattle population, could cause serious production losses if it becomes established and may result in those producers selling raw milk to lose their market; and
- e) the establishment of a relatively free market for milk has led to producers facing an increasing threat from more efficient producers particularly from Zimbabwe and South Africa.

Dairy Processors

The Dairy industry in Zambia is also characterized by processing industries which presently number 20, producing the following products liquid milk products (pasteurized, UHT, and flavoured milk), fermented milk products (yoghurt, lacto – Mabisi), butter, cheese, ice cream and diary blend fruit juices.

Milk Production

The dairy sector has also seen an increase in milk production from small holders due to projects sponsored by ZATAC, FAO, Plan Zambia, and GTZ. These projects aim at helping small-scale farmers acquire animals from GART.

There are no accurate and complete records of milk production in Zambia due to the inability by the Ministry of Agriculture to obtain production reports from the mainly private sector processors. Table 2 overleaf gives a summary of the main dairy processors, their installed capacities, capacity utilization, and product portfolios.

² Source – Ministry of Agriculture and Cooperatives

Summary of Processors

#	Processor	Installed Capacity (l/day)	Present Capacity Utilization (l/day)	Percent Utilization (%)	Products
1	Parmalat	120,000	50,000	41.6	A, B, C, D, E, F, H, I, J, K
2	Finta	120,000	20,000	41.6	B, F, J
3	Zammilk	20,000	15,000	75.0	A, C, J
4	Diamondale	15,000	8,000	66.7	A, C, J, E, I, M, G
5	Kaposhi	6,000	4,500	75.0	G, H, A, I
6	Kalwa	2,500	1,000	40.0	A
7	Cedrics Farm	3,000	1,700	56.7	A
8	Ndola Dairy Farm	5,000	3,500	70.0	A, J, H, I
9	Maplehurst Farm	2,500	1,000	40.0	G, E
10	Mosi O Tunya Dairy	8,000	1,000	12.5	A, C, H
11	Eastern Dairies Ltd	16,000	1,000	6.25	A, J, C, E, L
12	Greenveld Farm	6,000	4,000	66.7	A
13	Sayyah Enterprises	800	800	100.0	A, E, C
14	Dairy King	1,800	1,000	55.6	C, E, J,
15	Kabwe Farmers' Dairy Cooperative	20,000	0	(100.0)	A
16	Manyana Farms	300	270	90.0	A
	Daily Total	346,900	112,770	33%	
	Annual Total	126,618,500	41,161,050		

Key

A – Pasteurized milk	G – Cheese
B – UHT milk	H – Butter
C – Cultured sour milk (Lacto Mabisi)	I – Cream
D – Milk shake	J – Flavoured milk
E – Yoghurt	K – Maheu
F – Mineral Water	L – Juice
M – Ghee	

Milk Marketing

An increasing number of commercial dairy farmers near urban centres have purchased their own pasteurization equipment with capacities of 500-1000 litres per hour. The milk is in some instances standardized and packed in printed plastic sachets manually sealed.

Milk sales from the commercial dairy farmers was approximately 35 million litres in 1993/94 of which 15 million litres was sold to Parmalat (formerly DPB) (43%) for processing, 8 million litres (23%) was processed and sold by the private sector and nearly 12 million litres (34%) was sold as raw milk.

The main product made out of the 23 million litres milk available for processing is fresh milk mainly marketed as pasteurized whole milk in half-litre plastic sachets. Other popular products are chocolate milk (Dairy Choc), fermented skim milk (Lacto), flavoured yoghurts, and ice cream products. The high rate of urban population in Lusaka Province has the highest average consumption of milk in the country followed by the Southern Province, which has a large traditional cattle herd. The Copperbelt Province also ranks high followed by the Central and Western Province. The population of Luapula has no tradition of cattle keeping and average milk consumption is the lowest in the country. On average, the highest incoming

groups spent some five times more on milk than the lower income groups. As is the case in Zimbabwe, milk is primarily used as a whitener for tea and coffee.

The main players in the formal liquid milk market in Zambia are Parmalat (Zambia) Limited, ZAMMILK, Dimondale, and Finta Danish Dairies Limited. Apart from imported and local long life milk in the rural areas, the informal sector is the only source of supply of milk, which is sold either by the cattle owners or through vendors.

Dairy Development Initiatives

The National Dairy Workshop, held in 1992, recommended that in order to increase milk production and quality, strategies for implementing dairy policy be improved as follows:

- a) Collection, quality control, marketing and distribution centres be set-up in tradition sector;
- b) Breeding units be set in priority areas;
- c) Credit facilities to farmers be provided at an affordable interest rates;
- d) Specialized dairy extension staff be trained;
- e) More staff, facilities and funds be committed to dairy farming research;

Strict and strong measures for disease prevention and control be instituted. It was further suggested that, for sustainability, Government should only facilitate the establishment of breeding centres by individuals. With respect to setting-up collection points, it was suggested that a survey of the market be conducted in the tradition sector, where it is felt the production potential can be further exploited. These recommendations are in line with the present atmosphere of liberalised economy, where greater participation by the producers is sought.

Land O' Lakes International Development (Zambia Dairy Enterprise Initiative)

This is a five - year project funded by the USAID Dairy Directive Program in Washington DC. Its objectives are:

- a) to increase rural incomes of smallholder dairy farmers;
- b) to improve and ensure the quality of processed milk sold within formal market channels;
- c) to increase the consumption of liquid milk and dairy products within the country through promotion and education initiatives; and
- d) to develop export markets for Zambian products.

Activities Undertaken

Raw Product Supply Improvement – Smallholder Dairy Development

Working with its local partners, Zambia Agricultural Technical Assistance Centre (ZATAC), and Heifer Project International, Land O' Lakes offers training small-scale farmers in the principles of dairy production including animal husbandry, nutrition, forage production, milk handling, and marketing.

Processing Development and Improvement, Quality Assurance Systems

Land O' Lakes provides support for the dairy processors to improve their output, efficiency, and quality, and Research and Development for the development of higher value products.

Industry led Education and Promotional Campaigns

Land O' Lakes provides support by conducting promotional activities designed to increase the awareness of the nutritional benefits of consuming milk and other dairy products. It also assists in the establishment of new regional markets for Zambian Dairy Products.

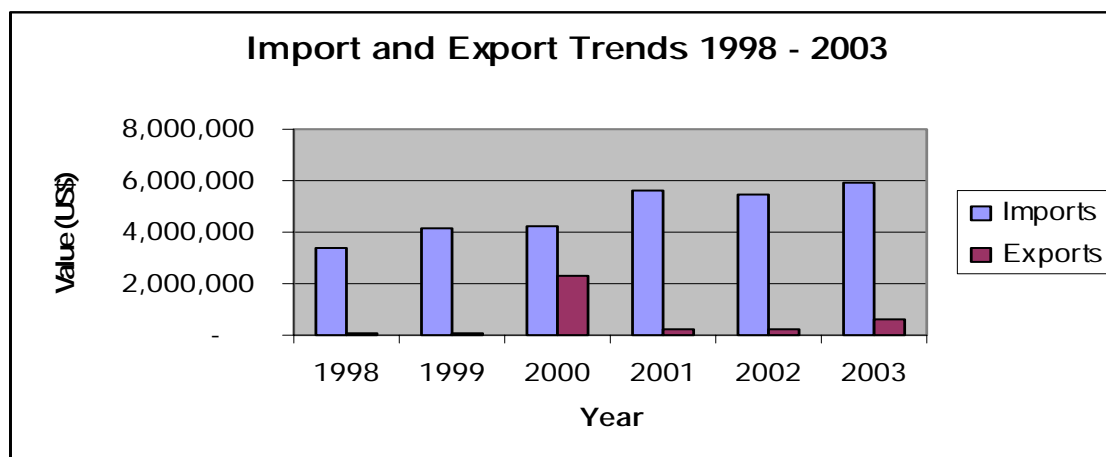
Trade Flow Analysis

Zambia imports a wide variety of dairy products from South Africa and Zimbabwe. These imports include the following products:

- a) Long Life Milk Products;
- b) Liquid Milk Products;
- c) Dried Milk Products;
- d) Sweetened Milk;
- e) Buttermilk;
- f) Yoghurt;
- g) Butter;
- h) Cheese; and
- i) Other Products such as animal genetic material.

Summary of Total Imports and Exports of Dairy Products

Year	1998	1999	2000	2001	2002	2003
Total Imports (US\$)	3,362,001	4,147,024	4,237,172	5,602,062	5,434,403	5,956,409
Total Exports (US\$)	88,743	89,490	2,315,452	201,463	211,492	610,194



Dairy Regulations

Trade policies and regulations that affect trade in dairy products in Zambia are enshrined in Dairies and Dairy Produce Act Cap. 342, the Stock Diseases Act CAP 252, of 1964 (Sanitary regulations); the Food Safety statutes, which include the Public Health Act and the Food and Drugs Act; and Customs and Excise Act through which import duties and customs documentation procedures and practices are provided, for all commodities, including dairy products.

The livestock sector is currently governed by the Stock Diseases Act No.13 of 1994 Cap. 252, the Prevention of Cruelty to Animals Act No. 13 of 1994, the Veterinary Surgeons Act No. 13 of 1994, the Brands Act No. 13 of 1994 Cap. 244, the Public Health Act, Tsetse Control Act Cap 249, the Dairies and Dairy Produce Act No. 13 of 1994 Cap. 230, Cold Storage Board of Zambia Act, the Pig Industry Act No.13 of 1994 Cap. 251, the Zambia Bureau of Standards Act No. 20 of 1994 Cap. 416 and the Science

and Technology Act. These pieces of legislation will continue to be updated from time to time in accordance with the policy changes and production trends.

Major Trading Partners in Dairy Products

Zambia trades in dairy products with several countries within COMESA, SADC and the rest of the world. The table overleaf gives a summary of the source of imports and destinations for exports.

Zambia's Trading Partners in Dairy Products

Description	Source of Imports	Export Destinations
Milk and Cream not concentrated nor containing sugar or other sweetening matter	COMESA, SADC, Europe, Americas, Middle East, Asia	COMESA, SADC, Rest of the World
Milk and Cream concentrated or containing sugar or other sweetener	COMESA, SADC, Middle East, Asia	COMESA, SADC, Asia
Buttermilk, curdled milk cream, yoghurt, Kephir, and other fermented or acidified milk	COMESA, SADC, Middle East	SADC
Whey, whether or not concentrated	Europe, SADC	SADC
Butter and other fats and oils derived from milk, dairy spreads	COMESA, SADC, Middle East, Europe	COMESA
Cheese and curd	Europe, COMESA, Asia, SADC, USA	COMESA
Live Bovine Purebred	Europe, SADC, COMESA	COMESA
Bovine Semen	Europe, SADC, COMESA	-

Effect of Food Safety Standards on Trade in Dairy Products

Impact on Trade

The SPS/Food Safety Laws affect trade between Zambia and the other COMESA and SADC member states. Most of the key players in the import and export of agricultural products have an idea of the SPS/Food Safety requirements and have adjusted their operations accordingly. However, when dealing with the local market, they do not apply the same level of diligence as they would when exporting. This is slowly changing as the local Zambia consumers slowly become aware and enlightened such that they demand good quality and safe foodstuff. This in turn forces the traders to be more diligent in terms of Food Safety regulations. Ultimately, this has had the effect of increasing the manufacturers' awareness of the importance of SPS/Food Safety Laws.

Sanitary Measures

Apart from the Dairy Produce Marketing and Levy Act (CAP 348), there are no specific regulations that govern the production and marketing of dairy products. Generic regulations that affect trade in dairy products include the following:

- a) Food & Drugs Regulations of 1978;
- b) Public Health (Infectious Diseases) Regulations;
- c) Public Health (Control of Habitation in factories, workplaces, and trade premises) Regulations;
- d) Public Health (Food in Airtight containers) Regulations
- e) Dairies and Dairy Produce Act Cap. 342;
- f) Stock Diseases Act Cap. 252; and
- g) Control of Goods Act Cap. 421;

Institutions Involved in the Dairy Sector

The Zambia Dairy Processors Committee

Since the privatization of DPB, there have been plans to establish a Dairy Authority. However, this has yet to be realized, leaving the industry to coordinate efforts through the Zambia Dairy Processors Committee (ZDPC). ZDPC mainly works to increase the consumption of milk and milk products through advertising campaigns.

Ministry Of Health / Central Board of Health

Ministry of Health (MoH) is in charge of policy formulation on health delivery system of Zambia. The Central Board of Health (CBoH) is in-charge of implementation of the health delivery system of Zambia. One of the major mandates of the MoH/CBoH is promotion of public health, which includes Food Safety. The food laws, which influence food safety, animal health (Zoonoses) and trade, administered by the MoH/CBoH are Food and Drugs Act and Public Health Act CAP 295 of the laws of Zambia. Although no National Dairy Policy exists per se, which influences food safety, animal health (Zoonoses) and trade, the existing standards have comprehensively addressed all concerns for food safety aspects.

Sanitary and Phytosanitary Inspection Service

This is a section in the Ministry of Agriculture that has Quarantine Officers who are responsible for implementing and enforcing the sanitary and phytosanitary (SPS) requirements of both plant and animal products for the purposes of import or export.

The Food and Drugs Control Laboratory

The Food and Drugs Laboratory carries out chemical and microbiological analysis for food products and other materials. The analysis uses WHO and CODEX guidelines for testing. The laboratory issues a "Public Analysts Certificate for all the materials tested. This certificate is recognized by the importing countries, even though the laboratory is not accredited.

Institutional Framework

Zambia has put into place the appropriate institutional framework for addressing concerns related to SPS and food safety. All matters pertaining to SPS and food safety are collectively the responsibilities of the Ministries of Agriculture, Food & Fisheries, the Ministry of Science and Technology, the Ministry of Health, and the Zambia Bureau of Standards day-to-day oversight and operational matters falling to the appropriate departments and agencies.

Institutional Constraints

There is very little co-ordination between the various Government institutions in the enforcement of SPS regulations. There is an absence of suitably qualified personnel to enforce the laws and regulations at all the border entry points of the country. The lack of proper communications with the current staff from other line departments tasked with attending to SPS/Food Safety issues at the border points. There is inadequate testing equipment at border points.

The level of enforcement of the current legal framework to deal with SPS/Food Safety issues pertaining to AAPs is very low. Several reasons are attributed for this low level of enforcement. There is limited capacity to develop standards based on science and conduct risk assessment. There has been lack of deliberate efforts to train and create awareness amongst the Health Inspectors on the regulations enshrined in the Stock Diseases and other related regulations. Secondly, there have been inadequate resources to retrain Inspectors on the application of SPS/FS measures.

The capacity to adequately enforce the law and regulations is low mainly due to the inadequate staffing levels, the lack of suitably trained personnel, and lack of logistical support to the enforcement staff. These constraints lead to the poor implementation of even clearly spelled out requirements of import and export permits for AAPs. The enforcement of SPS/Food safety controls for AAPs is particularly weak at the borders due to the non-availability of suitably qualified inspectors to man these points. The DRSS does not have any inspector at all the border entry points and relies on staff from other institutions such as the Zambia Revenue Authority (ZRA) and the Ministry of Health to inspect and enforce the stipulated requirements of the import or export permit for the AAPs. Zambia does not maintain an appropriate database to keep track of information on important requirements and has limited electronic facilities to transmit on time information received from other countries to interested parties.

There is limited infrastructure to conduct tests and carry out risk analysis of pests, diseases, and inimical organisms. Appropriate technology to adjust to and comply with SPS measures necessary to achieve the levels of SPS requirements in foreign markets is lacking.

Third parties

The Food Science and Technology Laboratory at the University of Zambia has undergone pre-accreditation process through the COMESA-EU SQMT Project in 2000. This also the only food Laboratory participating in international laboratory testing scheme under AGRILASA (Agricultural Laboratory of Southern Africa) and indirectly with Campden Chorleywood Laboratories in UK. It also certifies food products for many testing companies. The laboratory has highly qualified manpower.

Constraints

Constraints faced by the dairy sector include the following:

Poor delivery of Veterinary services

Most dairy farmers spend between US\$ 1,200 – US\$ 1,400 per year on private Veterinary doctors. This increases their cost of production. In the words of one producer, "Government Veterinary officers often do not have transport. One has to organize transport for them. They are usually do not have drugs and they charge high fees approximately K 20,000 per day and if they have to come 3- 4 times in a week, the charge is colossal".

Additional taxes on the agricultural sector

In the 2004 Budget milk and other agricultural products have been removed from the VAT Exempt list and is now zero-rated. This has an effect of increasing production costs as VAT paid on inputs cannot be claimed against outputs. The agricultural sector has been affected.

Lack of Export Controls for Critical Ingredients for Stockfeeds

Critical ingredients such as cottonseed cake etc are freely exported thereby creating shortages in stockfeed. There is no monitoring of Soya (soya is an important addition to stock feed. However, Government allows the export of soya creating a shortage in Zambia even when production of Soya is high.

High Cost of Finance

The cost of borrowing is too high and even in instances where the interest rate is low; other conditions such as tangible collateral preclude most small-scale farmers to access finance. Government has dropped the interest on Government Bonds but the commercial banks have not yet started channelling funds to the private sector.

Livestock

Breeding is very expensive. For example, a Batoka f1 cross costs US\$ 500 which is usually too much for the small-scale farmers.

Rationalization and Harmonization of Policies and Regulations

Summary of Policy Issues

MAIN CONCERNS	SUGGESTED POLICY ISSUES	POSSIBLE ACTIONS
Poor delivery and high cost of veterinary services	The Government should enhance the efficiency of delivery of veterinary services, and reduce the costs of veterinary services.	Enhance and improve the existing extension system and increase the efficiency of veterinary service delivery by employing more veterinary officers to be located within each community.
Poor regulation of animal genetic resources and maintenance of genetic resource data bank	Improve the enforcement of reporting procedures and capacity to maintain data on imports and exports of animal genetic material	Increase capacity for enforcement and surveillance at ports of entry
Lack of capacity to control livestock diseases	There is need to strengthen disease control measures for diseases such as Foot and Mouth Disease (FMD)	Increased funding for disease control activities and improve the capacity of veterinary services
Lack of a dairy regulating body such as a Dairy Council	Revise the Dairy Produce and Marketing Levy Acts	This revision should take into account the prevailing situation, as the private sector is involved in production and processing of dairy products. There is need to have a controlling body that will regulate the operations of the dairy sector.
Poor quality and high cost of livestock	Improve the quality and availability of livestock for the dairy sector and possible subsidy for livestock breeding centres.	Increase the capacity of breeding centres to produce more crossbred animals at affordable costs.
High taxes	Reduce tax rates and broaden the tax net.	Tax should be lowered from 15% to 10% for dairy producers and revert to the old classification of classifying agricultural inputs and products as VAT Exempt and not Zero Rated.
Lack of enforcement capacity at ports of entry	Enhance enforcement wings of the ports of entry (employ more Environmental Health Officers)	Increase number of Environmental Health Officers at ports of entry, publicity campaign and enhanced training of Environmental Health Officers
High cost of Finance	Reduce interest rates and offer concessionary finance	Set up a special fund to assist agricultural enterprises
Bureaucracy in issuing import and	Streamline the Procedure	Create a one – stop bureau to

MAIN CONCERNS	SUGGESTED POLICY ISSUES	POSSIBLE ACTIONS
export permits	for Approving import and export permits	handle all applications for import and export permits, decentralise the approving offices to provincial centres.
High cost of farm equipment and machinery	Reduce duty on farm equipment and machinery	Offer duty concessions on farm equipment and machinery
High transport costs	Reduced costs for fuel and oil for agricultural purposes	Concessional pricing of agricultural fuel and oil

The dairy industry is regulated by statutes and regulations as shown in tables 24 and 25 below. It is worth noting that there are some statutes and regulations that are generic and there are some, which are specific to the industry.

Policy and Regulations Governing Dairy Production and Processing

HS No.	Tariff No	Commodity Description	Policy/Act/Statute/
04011: Milk and cream not concentrated nor containing sugar or other sweetening matter			
040110 – 04130	04011000 – 0401300	of a fat content by weight not exceeding 1 – 6%	D, E, F, G
0402: Milk and cream concentrated or containing sugar or other sweetening matter			
040210 – 040291	04021000 – 0402910	In powder-granules or other solid forms	D, E, F, G
0403: Buttermilk, curdled milk cream, yoghurt, Kephir and other fermented or acidified milk			
040310 – 040390	04031000 – 04039000	Yoghurt	D, E, F, G
0404: Whey, whether or not concentrated			
040410 – 040490	0404100 – 0404900	Whey and modified	D, E, F, G
0405: Butter and other fats and oils derived from milk; dairy spreads.			
040510 – 040590	04051000 - 0405900	Butter/ Dairy Spread, Other	D, E, F, G
0406: Cheese and curd			
040610 – 040620	04061000 – 04062000	All Cheese and curd	D, E, F, G
Animal Genetics			
010210 – 010310	01021000 - 01031000	Live Animals	A, B, D, E, F, G
051110	05111000	Bovine Semen	A, B, D, E, F, G

Key

- A - Stock Diseases Act – Cap 252
- B - The Cattle Cleansing Act – Cap 248
- C - The Cattle Slaughter (Control Act) Cap 250
- D - The Control of Goods Act – Cap 421
- E - The Food and Drugs Regulations 1976
- F - The Public Health Act 2000 – Cap 295
- G - Revised Text of the Food and Drugs Regulations – Final Draft 2002

State of Policy and Regulations in the Dairy Industry

Policy/Act/Statute/	Present	Remarks
Dairy Produce Marketing and Levy Act – Cap 348	Yes	Needs to be revised to take into account the private sector's role in the industry and redress the lack of a regulating body after the privatisation of the DPB.
Zambia Bureau of Standards Act	Yes	Needs to be revised to take into account the international standards of dairy products.
Public Health Act – Cap 295	Yes	Adequate
Food, and Drugs Regulations (1976)	Yes	Revised in 2000. However, they need to be further revised to take into account the international standards for dairy products and not local standards which are in some cases lower than international standards (e.g. raw milk does not have proper standards)
Stock Diseases Act – Cap 252	Yes	Needs revision to conform to OIE Standards
The Cattle Cleansing Act – Cap 248	Yes	Needs revision to conform to OIE Standards
The Cattle Slaughter (Control) Act- Cap 250	Yes	Needs revision to conform to OIE Standards
The Control of Goods Act – Cap 421	Yes	Adequate
The Factories Act	Yes	Needs revision
The Companies Act	Yes	Adequate
Trade and Licensing Regulations	Yes	Adequate
Revised Text of the Food and Drugs Regulations – Final Draft	Yes	Needs revision to take into account international dairy standards
Standards for milk & milk products	Yes	Standards not updated

Issues for National Rationalization

ISSUE	ISSUE FOR RATIONALIZATION	CURRENT SITUATION	REQUIRED ACTION	IMPLEMENTATION BY
High Taxes	VAT Changes for Agricultural Sector Products from Zero Rated to VAT Exempt	Intermediate agricultural inputs that were Zero Rated have now been VAT Exempt. This will increase the production costs by at least 12%.	Ministry of finance to re-examine the effect of this on the price of agricultural products.	Ministry of Finance
Low milk consumption	Increase consumption to expand market	The consumption of milk and dairy products is low in comparison to neighbouring countries	Start sensitization programs to increase milk consumption. Initiate milk programs for vulnerable groups, e.g. school children, hospitals	ZDPC, Ministry of Health, Ministry of Education, Dairy Processors, Ministry of Agriculture, Ministry of Commerce, NGOs
Bureaucracy in the Issuance of Import Permits	Improve turnaround period for Import Permit Applications	It takes more that seven (7) days to obtain an Import Permit. This increases the cost of importing agricultural foodstuffs.	Streamline the operations of the Marketing Department of the Ministry of Agriculture and Cooperatives and the Ministry of Commerce Trade and Industry.	Ministry of Agriculture and Cooperatives, Ministry of Commerce Trade and Industry
Standards and labels	Harmonise all dairy standards and labelling requirements	Each processor uses different standards and labels on their products. The information on the labels differs from processor to processor	Harmonisation of standards and labelling	Ministry of Commerce Trade and Industry, Zambia Bureau of Standards

Issues for Regional Harmonization

ISSUE	ISSUE FOR HARMONIZATION	CURRENT SITUATION	REQUIRED ACTION	IMPLEMENTATION BY
Milk Standards and packaging	Milk standards	Standards vary from country to country. Issue of packaging and labelling is a problem.	Harmonize standards and standardize labelling of products so as to make it easier to understand	Zambian Dairy Processors, Bureau of Standards, COMESA, SADC, Ministry of Health
Trade agreements and procedures	Tariff Barriers Non-tariff barriers	Trade in dairy products limited by both tariff and non-tariff barriers	Solve the issues on a bilateral and multilateral bases and through Regional Integration bodies (COMESA, SADC)	Ministry of Agriculture and Cooperatives, Ministry of Commerce Trade and Industry, Ministry of Finance, Zambian Government
Periodic bans	Adherence to WTO Agreements by all parties	Selective enforcement of bans which gives an undue advantage to local industries	Free movement of dairy products across borders as long as sanitary regulations are adhered to	Governments, COMESA, SADC



Figure 1 - Map of Zambia

1 INTRODUCTION

1.1 Background

One of the key objectives of trade integration program which Zambia has been pursuing under the aegis of COMESA and SADC, and at multilateral level under the WTO and ACP/EU arrangements is to provide market export and import. Evidence has shown that while implementation of the trade integration programs has been at top gear, with the launch of the COMESA FTA in 2000 and imminent Launch of the Customs Union in 2004, this is not a panacea to increased trade. Beyond the macro provisions of the regional integration programs, there are pertinent provisions at commodity level, which are crucial to enhancing commodity trade. This poses as a challenge that requires urgent attention, at least for commodities deemed to have a potential to be traded regionally. These include dairy products.

Regional Agricultural Trade Expansion Support (RATES) Program, in collaboration with Eastern and Central Africa Program for Agricultural Policy Analysis (ECAPAPA)³ Program COMESA, SADC, and EAC carried out targeted baseline studies addressing issues relevant to regional and extra regional trade in dairy products. Zambia is among eight countries, which were sampled for the study because it met the criteria of being a principal importing country, with potential for exporting in the regional market. Other countries, which were covered in the study, include Ethiopia, Kenya, Tanzania, Rwanda, Uganda, Malawi, and Mauritius. The thrust of the studies was identification of national and regional policies and regulatory requirements in the dairy sector that may impede intra and extra regional exports of dairy products as well as inventorize key dairy sector players in the region. The analysis is expected to provide in a concise manner issues that will need to be addressed by national public and private fora for purposes of increasing efficiency and effectiveness within countries and also for increasing trade of dairy products across national boundaries.

The overall goal of the baseline studies is to facilitate harmonization of regional and national dairy sector policies and regulations in the region, and to identify the dairy sector network of traders and stakeholders whom RATES can work with in promoting regional trade in the dairy produce. The specific objectives of the study are to -

1. Briefly describe the structure of the dairy sector in terms of the size of the dairy farming industry and production of raw milk, types of processed dairy products and installed capacities of the processing industries, source of primary raw material for the processing industries (distinguishing between regional and extra regional sources), production in volume and value of the processed products for the period 1997-2003, number of processing historical trends of dairy production and development;
2. Review and document current marketing structure and develop a Value Chain (showing linkage of national and intra/extra-regional markets) for the dairy sub-sector, highlighting volume and prices along the chain. Create an inventory of processors, distributors, and producers of dairy products, showing the following details: types of dairy products being handled, their capacity for each of the products, their markets, and their contact details (physical address and telephone etc.);

³ ECAPAPA is a program of the Association for Strengthening Agricultural Research in Eastern and Central Africa

3. Review and quantify formal imports and exports of dairy products by type (as defined in the tariff book), sources, and destinations for the period 1998-2003;
4. Review and quantify formal imports and exports of animal genetics (Bovine Semen and Live Bovine-Pure bred breeding animals) sources and destinations for the period 1997-2003;
5. Through interviews with exporters/importers of dairy products, animal genetics, determine constraints faced in accessing regional market. Categorize these constraints into two i.e. (i) policy and regulatory provisions in destination or source country (ii) other forms of constraints;
6. Review and document the evolution of dairy sector policies, with particular emphasis on trade (exports and imports);
7. Document and analyze (showing underlying rationale) of the current dairy sector trade policy and regulatory environment, covering production, collection, processing and marketing (domestic trade and export and imports of dairy products). This should include all legislations touching on traded dairy products and the effectiveness of their implementation or enforcement, licensing requirements and procedures;
8. Identify key stakeholders and key players⁴ and their respective roles within the policy and regulatory environment;
9. Review and document standards for traded dairy products, including sanitary⁵ standards and critically examine how the enforcement procedures may be impeding or facilitating trade in dairy products;
10. Review and document a) how the standards are derived, whether based on international standards or local/regional analyses, and or science based that can met by the implementation of GMP, GHP, HACCP, etc;
11. Identify specific policies, procedures, regulations, rules, standards and grades for national rationalization;
12. Identify specific policies, procedures, regulations, rules, standards and grades for regional harmonization; and
13. Organize a National Consultative Meeting, where findings of the study will be discussed.

⁴ Identify stakeholders key players in production, marketing, regulation (market, health), standards setting, export trade etc

⁵ Animal and human/public health

The study was carried out over the period starting 9th February to 19th March 2004. The Consultant held preliminary consultations with the Trade Policy Specialist based at the COMESA Secretariat in Lusaka, Mr. Shem Simuyemba.

During the consultations, the study objectives were clarified as well as the expected deliverables. Relevant background information on the RATES objectives and interface with COMESA were outlined. A preliminary analysis of relevant background documents along with assignment planning began in Lusaka on 10th February 2004. Thereafter, a meeting was held with the Land O' Lakes Project Officials. This enabled the Consultant to collect additional documents, as well as detailed background information collected.

The Consultant then held meetings with the various stakeholders drawn from the Government and quasi Government institutions, Dairy Processors, Retail shops, and several dairy development organizations and farmers' groups. The Consultant then undertook field trips to consult with the Dairy Processors and Producers in Eastern Province, Central Province (Kabwe), Copperbelt Province, and Southern Province from 5th March to 14th March 2004.

2 THE DAIRY INDUSTRY IN ZAMBIA

2.1 Overview

Zambia's dairy sector is presently characterized by three categories of milk producers, commercial farmers, traditional/smallholder dairy farmers and emergent dairy farmers. Smallholder dairy farmers' contribution is about 40% of the all marketed milk (190 million litres per annum) and by large-scale commercial and emergent farmers supply of 70%. In total, all these farmers produce approximately 190 million litres of milk per year compared to the country's total milk requirement of 253 million litres of milk per year. This yields a milk deficit, which renders Zambia to about 25% of its milk requirement. It is important to note that out of the 190 million litres of raw milk produced approximately 22% (41 million litres) is processed by the dairy processing industry. The balance is marketed through informal channels directly to the consumers.

The Dairy industry in Zambia is also characterized by processing industries which presently number 20, producing the following products liquid milk products (pasteurized, UHT, and flavoured milk), fermented milk products (yoghurt, lacto – Mabisi), butter, cheese, ice cream and diary blend fruit juices.

2.2 Evolution of the Dairy Sector

After independence, the existing dairy organizations and creameries were put under the control of a parastatal institution, the Dairy Produce Board (DPB). DPB was empowered under the Dairy Produce and Marketing Act Cap 348 to regulate the dairy industry and market all dairy products in Zambia. The functions of DPB were to:

- a) Buy at the appropriate prescribed prices, any butterfat, cream, or milk;
- b) Manufacture and prepare milk products; and
- c) Market milk and milk products within and outside Zambia.

The price of milk and milk products was controlled thereby making it unattractive to most dairy producers. A number of dairy producers diversified to other farming activities, as they could not run their dairy herds on the prescribed producer price. Those that continued dairy production opted to sell their raw milk direct to the consumers in bulk.

In the mid 1980s, price controls were relaxed and DPB started paying better prices for milk. DPB paid a premium price for milk based on quality and butterfat content above 3.2%. The resultant producer price was now attractive and more dairy producers started delivering raw milk to the DPB processing plants.

Although the numbers of farmers going into dairy farming was rising, their major constraint was the high cost of transportation from the farm to the processing plants. A number of dairy producers still continued or opted to sell their raw milk at the farm gate at a higher price. This trend continues up to the present times. The dairy producers who sell raw milk direct to the market include emergent and commercial farmers. Estimates of the volume of milk sold directly are between 20 – 30% of the total market milk.

In the years leading up to the 1991 multi party elections, which ushered in the MMD Government, price controls on the dairy industry were relaxed and the monopoly enjoyed by DPB was broken. New dairy processing companies that formerly supplied their raw milk to DPB were established.

Notable among these were Kaposhi Dairy Products (cheese, butter), Diamondale Dairy (pasteurized liquid milk), and Cedrics Farms (pasteurized liquid milk). DPB was privatized in 1996 and the Bonita Group from South Africa purchased Lusaka, Mazabuka, and Kitwe processing plants.

The other DPB processing plants were also sold to the private sector; local businessmen took up the Chipata plant, Ndola depot, and Chingola depot. Prior to the commencement of the liberalization process, price controls favouring the urban consumers and monopolistic parastatal processing and marketing institutions were a feature of the agricultural sector, and the dairy sub-sector was no exception.

Under the old order domestic milk production declined steadily and when foreign exchange difficulties precluded the importation of the ingredients for recombined milk, the urban markets became increasingly under supplied.

The under supply situation in certain urban areas persists to this day despite a rapidly increasing dairy herd and a steady decline in real incomes which has negatively affected demand. Market liberalization has also been a feature in all the countries of the Southern African region where the Republic of South Africa (RSA), Zimbabwe, and Kenya all have significant dairy industries. During the most recent years, exports have taken place from Zimbabwe and the Republic of South African (RSA) to Zambia for UHT, sterilized milk, ice cream, yoghurt, and butter. Malawi also has an undersupplied dairy market.

2.3 Milk Production

2.3.1 Volume of milk production

The dairy sector has also seen an increase in milk production from small holders due to projects sponsored by ZATAC, FAO, Plan Zambia, and GTZ. Among other thematic issues, some of these projects aim at helping small-scale farmers acquire animals from GART.

There are no accurate and complete records of milk production in Zambia due to the inability by the Ministry of Agriculture and Cooperatives to obtain production data from the mainly private sector processors. Table 1 below gives the production trend of milk, cheese, and butter as captured by the National Livestock Epidemiology and Information Service of the Ministry of Agriculture and Cooperatives.

Table 1: Raw Milk Production Figures⁶

Year	Volume Produced (litres)
1998	138,000,000
1999	141,000,000
2000	135,000,000
2001	139,000,000
2002	147,000,000
2003	190,000,000

⁶ Source – Ministry of Agriculture and Cooperatives

It is worth noting that only 40% of milk produced by the traditional sector is marketed through formal marketing channels. Imports of powdered milk have also increased due to the lack of a powdered milk processing plant in Zambia. Due to the inadequate supply of liquid raw milk, some dairy processing companies make up the deficit by recombining powdered milk for further processing into UHT milk, yoghurt and other products that would otherwise not be produced in the desired quantities. The processors would switch to liquid raw milk as more becomes available on the market.

2.3.2 Dairy Production

2.3.2.1 Cattle

The Cattle population increased modestly by approximately 1.5% to 2,522,896 head in 2003 as compared to a 2002 population of 2,485,612. This increase is partly attributed to the reduction in the spread of disease due to the vigorous vaccination and treatment program conducted by the Ministry of Agriculture and Cooperatives. The dairy sector also saw an increase in the production of milk. This is partly on account of the increase in donor funded projects in the sector that aim at assisting small scale farmers access dairy animals as well as markets for their produce. Raw milk production for 2002 stood at 80 million litres from Commercial farmers and 67 million litres from the traditional sector.

Milk production increased in 2003 to 120 million litres from the commercial sector, whilst output from the traditional sector increased to 70 million litres.

2.3.2.2 Large-scale commercial milk production

At independence in 1964, there were approximately 120 commercial dairy producers who were located along the rail line and around major urban centres. Despite their small number, they produced a total of 17 million litres of milk per annum. This sector has mainly exotic breeds such as Friesians and Jerseys with an average yield per cow ranging from 3,000 – 4,000 litres per year, with an average lactating period of 280 – 305 days

Milk production declined during the period 1964 - 1980s; by 1973, the number of commercial farmers reduced to 86 a combined herd size of 8,000. Presently the number of commercial farmers is approximately 130 and produce 70 % of the milk marketed with 30% coming from emergent, smallholder and traditional dairy producers.

There was a sharp decline in milk production between 1974 and 1979 where the milk intake at the DPB processing plants fell from 12 million litres to 9 million litres per annum. The main reason attributed to this trend was the reduction in numbers of commercial dairy farmers as a result of low producer prices. In addition, there were uncertainties by most commercial farmers (who were mainly white expatriates) on the land tenure issues in the new Government. The Government policy of nationalisation of the major industries also contributed to the uncertainty. This led to the emigration of the mainly expatriate commercial dairy farmers to Southern Rhodesia and South Africa.

Some of the expatriate commercial dairy farmers who had emigrated to Southern Rhodesia (Zimbabwe) and South Africa returned to Zambia in the advent of political reforms in South Africa and the Land Redistribution program in Zimbabwe. However, the effect of this movement has yet to be gauged.

The major constraints faced by the sector include the following:

- a) High cost of imported cattle;
- b) High cost of farm machinery and equipment;
- c) High level of management is required for an optimal level of production;
- d) High cost of stockfeeds;
- e) High transport costs;
- f) High electricity tariffs (though this has been mitigated by concessional tariffs for agricultural enterprises);

The Traditional Sector

The traditional sector in Zambia had about 2,275,000 cattle as at 1980. However, only 1% constitutes milking cattle. Estimates of milk production in this sector are very difficult as there are no records kept by the traditional farmers. The average milk production per cow is, however estimated between 2 – 5 litres per day with an average lactation period of 200 days. The traditional farmers attribute this state to the following reasons:

- a) Poor quality feeds used if at all;
- b) The extensive system (free range) used in opposition to the efficient intensive system where the production parameters (humidity, feed, water, good quality management system) are provided to the animals;
- c) Poor temperament of the cows;
- d) Poor yields are not worth the trouble to increase milk production;
- e) Milking a cow has an adverse effect on the calf's health and growth;
- f) Lack of demand for additional milk in the respective traditional groupings; and
- g) Milk production is not traditional in certain parts of the cattle rearing areas.

The Emergent Farmers

These are neither commercial nor traditional farmers and are found mainly in the urban and peri urban areas in smallholdings and resettlement schemes. Most emergent farmers use crossbred animals supplied by the Batoka Cross Breeding Ranch and produce on average 10 litres a day. The emergent farmers are found in the following areas:

- a) Lusaka Province
 - Palabana Dairy Scheme (in Lusaka East);
 - Lusaka West farming block;
 - Kanakantapa Resettlement Scheme;
- b) Central Province
 - Mpima Dairy Scheme;
- c) Southern Province
 - Magoye Area;
 - Monze District;
 - Choma District;
 - Zimba Area;
 - Kalomo Area; and
 - Kazungula Area.

- d) Copperbelt Province
 - Misundu Farming Block (Ndola).

2.3.3 Future challenges to dairy farming in Zambia

The buoyant state of the market for milk and milk products now has resulted in commercial producers ignoring incipient problems and possible constraints to future development. Apart from the possibility that the market may become saturated in the near future, a number of technical problems will become more pressing. Among those are the following:

- f) Pressure on feed supply, already considerable after periodic droughts may begin to affect profitability;
- g) The increasing density of dairy units around the urban areas may create risks of the spread of disease between herds;
- h) Further advances in the spread of tsetse fly could confront dairy producers with a trypanosomiasis threat which would make milk production difficult or even impossible in some areas;
- i) Zoonotic disease in the form of brucellosis and tuberculosis, currently a minor problem in the commercial herd but present at high rates in the surrounding traditional cattle population, could cause serious production losses if it becomes established and may result in those producers selling raw milk to lose their market; and
- j) The establishment of a relatively free market for milk has led to producers facing an increasing threat from more efficient producers particularly from Zimbabwe and South Africa.

Table 2: Cattle Census by Province 1997 - 2001⁷

Year	Province	Bulls	Cows and Heifers	Oxens and steers	Calves	Total Cattle
1997	Central	22,880	353,171	164,464	135,129	675,644
	Copperbelt	3,140	56,275	14,669	19,846	93,930
	Eastern	16,872	139,825	77,774	43,834	278,305
	Luapula	454	5,159	3,876	2,373	11,862
	Lusaka	5,969	106,331	38,178	37,619	188,097
	Northern	5,139	34,998	7,491	15,661	63,289
	North-western	1,989	20,202	17,799	9,997	49,987
	Southern	28,140	327,104	237,843	149,610	742,697
	Western	18,080	180,800	167,717	230,108	596,705
National Totals		102,663	1,223,865	729,811	644,177	2,700,516
1998	Central	22,880	353,171	164,464	135,129	675,644
	Copperbelt	3,140	56,275	14,669	19,846	93,930
	Eastern	16,872	139,825	77,774	43,834	278,305
	Luapula	454	5,159	3,876	2,373	11,862
	Lusaka	5,969	106,331	38,178	37,619	188,097
	Northern	8,177	74,698	9,483	15,685	108,043
	North-western	1,989	20,202	17,799	9,997	49,987
	Southern	28,372	327,104	238,482	150,644	744,602
	Western	18,080	180,800	167,717	230,108	596,705
National Totals		105,933	1,263,565	732,442	645,235	2,747,175
1999	Central	27,971	279,716	174,823	160,837	643,347
	Copperbelt	3,889	38,887	24,304	22,360	89,440
	Eastern	11,522	15,218	72,011	66,250	165,001
	Luapula	508	5,082	3,176	2,922	11,688
	Lusaka	8,060	80,598	50,373	46,344	185,375
	Northern	4,630	46,296	28,935	26,620	106,481
	North-western	2,142	21,419	13,387	12,316	49,264
	Southern	31,905	319,054	199,409	183,456	733,824
	Western	25,568	255,682	159,801	147,017	588,068
National Totals		116,195	1,061,952	726,219	668,122	2,572,488
2000	Central	27,551	272,723	170,452	155,207	625,933
	Copperbelt	3,830	37,914	23,939	31,577	97,260
	Eastern	21,349	114,837	70,930	63,931	271,047
	Luapula	327	3,277	3,048	1,884	8,536
	Lusaka	6,045	80,448	37,779	54,758	179,030
	Northern	3,727	47,268	23,292	25,429	99,716
	North-western	2,109	20,883	13,186	11,884	48,062
	Southern	39,500	253,647	258,530	190,847	742,524
	Western	23,568	216,051	135,031	174,229	548,879
National Totals		128,006	1,047,048	736,187	709,746	2,620,987
2001	Central	4,276	59,639	32,509	23,169	119,593
	Copperbelt	459	10,690	2,268	5,304	18,721
	Eastern	-	-	-	-	52,907
	Luapula	248	1,415	159	310	2,132
	Lusaka	-	-	-	-	42,391
	Northern	653	8,547	1,967	4,573	15,740
	North-western	3,977	34,762	6,616	9,633	54,988
	Southern	12,994	165,493	112,756	75,027	366,270
	Western	23,568	216,051	135,031	548,879	923,529
National Totals		46,175	496,597	291,306	666,895	1,596,271

⁷ Source – Ministry of Agriculture and Cooperatives

2.4 Dairy Processing

2.4.1 Overview

Table 3: Summary of Processors

#	Processor	Installed Capacity (l/ day)	Present Capacity Utilization l/ day)	Percent Utilization (%)	Products
1	Parmalat	120,000	50,000	41.6	A, B, C, D, E, F, H, I, J, K
2	Finta	120,000	20,000	41.6	B, F, J
3	Zammilk	20,000	15,000	75.0	A, C, J
4	Diamondale	15,000	8,000	66.7	A, C, J, E, I, M, G
5	Kaposhi	6,000	4,500	75.0	G, H, A, I
6	Kalwa	2,500	1,000	40.0	A
7	Cedrics Farm	3,000	1,700	56.7	A
8	Ndola Dairy Farm	5,000	3,500	70.0	A, J, H, I
9	Maplehurst Farm	2,500	1,000	40.0	G, E
10	Mosi O Tunya Dairy	8,000	1,000	12.5	A, C, H
11	Eastern Dairies Ltd	16,000	1,000	6.25	A, J, C, E, L
12	Greenveld Farm	6,000	4,000	66.7	A
13	Sayyah Enterprises	800	800	100.0	A, E, C
14	Dairy King	1,800	1,000	55.6	C, E, J,
15	Kabwe Farmers' Dairy Cooperative	20,000	0	(100.0)	A
16	Manyana Farms	300	270	90.0	A
	Daily Total	346,900	112,770	33%	
	Annual Total	126,618,500	41,161,050		

Key

A – Pasteurized milk	G – Cheese
B – UHT milk	H – Butter
C – Cultured sour milk (Lacto Mabisi)	I – Cream
D – Milk shake	J – Flavoured milk
E – Yoghurt	K – Maheu
F – Mineral Water	L – Juice
M – Ghee	

2.4.2 Processing - Firm level details

2.4.2.1 Parmalat (Zambia) Limited - Lusaka

Parmalat (Zambia) Limited is the largest dairy processor in Zambia with processing plants in Lusaka and Kitwe, as well as a milk collection centre in Mazabuka. The company produces the following products:

- a) Pasteurized fresh milk;
- b) UHT Milk;
- c) Cultured sour milk (lacto Mabis);
- d) Yoghurts;
- e) Fresh Cream;
- f) Butter;
- g) Maheu;
- h) Milk Shakes (Cabana); and
- i) Mineral water
- j) Cheese (imported from South Africa).

The company has an installed capacity of 120,000 litres per day but utilizes only 50% of its capacity utilization of approximately 50%. The raw milk received daily is to the order of 2 million litres per month and is mainly obtained from commercial dairy farmers in Mazabuka, Kitwe and Lusaka as well as small scale dairy farmers located in the environs of Lusaka. The following table gives a summary of the production capacity of the company.

Table 4: Parmalat Production capacity

Product	Installed Monthly Capacity
Pasteurized Milk	1.5 million litres
UHT Milk and Juices	2.0 million litres
Yoghurt	100,000 litres
Lacto	300,000 litres
Butter	10 tons
Dairy Fruit Drink	Part of UHT Milk & Juices
Maheu	Part of UHT Milk & Juices

The partial sales figures are as follows:

Table 5: Partial Sales Figures

Year	Sales Volume (Kg/Litres)
2002	20 million
2003	24 million

Presently the commercial dairy farmers are not increasing their output but Parmalat would have no use for the additional milk due to lack of success in opening export markets. If opportunities for export avail them, then the dairy farmers could be asked to increase their production. The potential export markets as identified by Parmalat include the following:

- a) Zimbabwe;
- b) Malawi;

- c) DRC (Katanga);
- d) Tanzania; and
- e) Angola

However, several issues have come up that require additional investigation. For example, the DRC market is fraught with infrastructure problems (roads), lawlessness, corruption, and lack of an established banking sector that makes it risky to attempt.

Parmalat has set up standards based on the minimum requirements of the Dairy Regulations Act. As there is no oversight body on dairy, the company uses internal mechanisms to control the standards of its products.

Constraints

The major constraints that will be faced by the company are changes in the VAT Regime, which are projected to increase on farm production costs by at least 4%. Therefore, processing costs will increase by 12 – 14% as the company can no longer claim VAT on non – milk ingredients.

The final projected increase will be around 18%. This will make Parmalat's products uncompetitive. As a direct result of this, the firm is poised to increase its prices by about 25 -28% with effect from April 2004.

The most tradable product is UHT milk but in Parmalat's case, 80% of its UHT production is sold within Zambia. The product is the most expensive due to the nature of the production process. COMESA Certification has not yet been obtained so the company plans to begin the process shortly. However, Government and COMESA support to the export drive is lukewarm.

2.4.2.2 Finta Danish Dairies Limited - Livingstone

Finta Danish Dairies Limited is located in Livingstone and produces the following:

- a) UHT Milk;
- b) Flavoured milk;
- c) Juice; and
- d) Mineral water.

The processing plant has an installed capacity of 120,000 litres per day. However, the present capacity utilization is 50,000 litres per day. The plant recombines 70% of its raw milk requirements and receives the balance from small-scale farmers.

The company has been undergoing restructuring and was not producing any products for an extended period of time. The company has entered into a partnership agreement with one of the leading dairy processing companies in South Africa, Clover Dairies. The agreement has enabled Finta commence operations with the financial and technical support from Clover. The company will continue to market its products under the FINTA brand.

2.4.2.3 Zammilk Products Limited - Chisamba

Zammilk Products Limited is one of the new entrants into the dairy processing industry. The dairy processing plant is located in Chisamba, approximately 78 kilometres north of Lusaka. Zammilk produces the following dairy products:

- a) Pasteurized milk;
- b) Flavoured milk; and
- c) Cultured sour milk (lacto Mabis).

The processing plant has its own dairy herd on the farm plus one other adjoining farm. The plant has an installed capacity of 20,000 litres a day but is only utilizing 15,000 litres a day. It utilizes the butcheries operated by the sister company, ZAMBEEF, to market its products throughout the country.

2.4.2.4 Diamondale Dairy - Chisamba

Diamondale Dairy is part of the Galuan Farming Group of companies with vast interests in the agricultural sector. The dairy has been in operation for over 20 years and produces 12,000 litres of pasteurized milk per day. The plant produces the following:

- a) Full cream milk - 3.5% butterfat;
- b) Skimmed Milk - 0.5% butterfat;
- c) Low-fat Milk - 2% butterfat content;
- d) Choco Milk;
- e) Strawberry drinkable yoghurt;
- f) Lacto;
- g) Fresh cream;
- h) Ghee; and
- i) Mozzarella Cheese, about 100 kg per month.

The dairy faces the following constraints:

- a) Agricultural products have been zero – rated in the new budget; a lot of farmers will be forced out of business as all the inputs on which VAT is charged cannot be claimed, thereby increasing the cost of producing milk;
- b) There is no export restrictions on intermediate products required for manufacture of stockfeed such as cottonseed cake. This leads to shortages of stockfeed; and
- c) There is stiff competition posed by imported Zimbabwe UHT milk, which still comes in despite import restrictions. The level of enforcement at the borders is low;

2.4.2.5 Kaposhi Dairy Products Limited - Chisamba

Kaposhi Dairy Products Limited is the largest producer of cheese in Zambia. The cheese factory is located in Chisamba area, approximately 40 kilometres from Lusaka. The cheese factory produces the following varieties of cheese:

- a) Cheddar;
- b) Gouda;

- c) Cheshire;
- d) Edam;
- e) Mozzarella;
- f) Feta;
- g) Gruyere;
- h) Emmenthale;
- i) Haloumi;
- j) Boursin; and
- k) Cottage.

Other products include butter, fresh cream, and pasteurized milk. The factory has an installed capacity of 6,000 litres a day. The present capacity utilization is 4,500 litres a day. The raw milk received (approximately 4,500 litres) is procured from commercial dairy farms within Chisamba.

2.4.2.6 Kalwa Dairies – Lusaka East

Kalwa Dairy is a small dairy processing facility located along Leopards Hill Road, east of Lusaka. It produces 1,000 litres of pasteurized milk per day of which 500 litres is from its own herd and the balance is obtained from smallholder dairy farmers from Palabana Dairy Training Institute in Lusaka East and others who are located in the environs. These farmers deliver their milk a central location where the dairy set up a cooling tank. In this manner, an assured market is provided for the smallholder dairy farmers. In addition, the farmers are provided with stockfeed. Forty one (41) farmers are involved in this arrangement but only 15 actually supply milk to the dairy. Kalwa has a dairy herd of 55 out of which 30 are in milk. The dairy has the following equipment:

- a) 1,250 - 2 000 litre Cooling Tank
- b) 550 litre Cooling Tank
- c) 140 litre Cooling Tank
- d) 800 batch litre Pasteurizer
- e) 60 litre Domestic Pasteurizer

The company supplies milk to supermarkets like Melissa and Twikatane, in the following packaging:

- a) 2 litre Container at US\$ 0.77; and
- b) 1litre at US\$ 0.39.

2.4.2.7 Maplehurst Farm Dairy Products - Kabwe

This dairy plant is located in Kabwe and produces cheese (soft and hard), and yoghurt. The plant has an installed capacity of 2,500 litres a day. However, the capacity utilization presently stands at 1,000 litres a day. The raw milk is obtained from its own dairy herd and two other neighbouring farms. Transport bags, and salt, cultures and finer herbs are procured from Denmark. South Africa provides colouring and flavours as well as vacuum bags. It was established in 1990 and manufactured yoghurt, and graduated to cheese. The production of cheese varieties increased at the expense of yoghurt. Presently, the farm produces the following varieties:

- a) Farmhouse: traditional Cheddar cheese, in both white and yellow varieties;
- b) Boerenkaas Gouda: this is made from a special Dutch recipe;
- c) Maplehurst Swiss Cheese;

- d) Chevin: Fresh cream goat's cheese made from its own herd of top quality Saanen goats.
- e) Feta;
- f) Fromage Frais:
- g) Maplehurst Mozzarella:
- h) Mediterranean Roll: A cream cheese mixed with olives and garlic, then rolled in a special blend of Italian herbs;
- i) Boursin/Fromage Blanc; and
- j) Scottish Caboc: Cream cheese rolled in oats.

The company supplies to all the major hotels like, Holiday Inn, Pamodzi, Intercontinental, Livingstone Sun, and Edinburgh. They also supply to all the major supermarkets like, Melissa, Shoprite, Spar, Game, and a lot of restaurants, lodges, and eating-places like Subway. Currently the plant produces 50 tons of cheese per month. This has been increasing at an average of approximately 5 tons per year from 1998. The current weekly production capacity of 2.5 tons will be upgraded to 3.5 tons in 2005. The company exports to Democratic Republic of Congo (DRC), Tanzania, Zimbabwe, and South Africa.

Currently, Maplehurst cannot meet the growing demand for its product due to milk volume constraints. Distribution of products is done by delivery vans, which go to Lusaka twice a week. For exports, the customers organize their own transport. However, Maplehurst has a no middleman policy. Marketing for Maplehurst is not very strong, as they would not be able to satisfy the needs of new customers. Excess milk not converted into cheese is sold locally (in Kabwe). However, this is not a major part of the business as it is only done when there is excess milk for cheese ordered. Yoghurt production was reduced due to its low profitability; in order to make a good profit, large volumes have to be sold to the major supermarkets. The supermarkets usually put a huge mark-up on it, causing it not to move from shelves leading to spoilage and these bad products have to be returned to the dairy.

2.4.2.8 Eastern Dairies Limited - Chipata

This processing plant is located in Chipata in the Eastern province and produces pasteurized milk, flavoured milk (Dairy Choc), cultured sour milk (Lacto and Yogi sips), and fruit juices. The plant has an installed capacity of 16,000 litres per day and a capacity utilization of 800 litres per day. The plant gets its raw milk (500 litres) from its own dairy herd with the balance coming from other suppliers (300 litres). All the ingredients and other raw materials are procured locally and these are used to produce the products mentioned above.

Due to the firm's reluctance to furnish complete information on the production and sales figures for the period 1998 – 2003, only data for October 2003 was provided and are presented in table 6.

Table 6: Eastern Dairies Limited - Sales Figures October 2003

Product	Packaging	Volume (Litre/ Kg)
Pasteurized milk	500 mls	14,338
Lacto (Sour milk)	Bulk	338.8
Dairy Choc	250 mls	6,580.9
Yogi sip	500 mls, 250 mls	4,307.3
Butter	-	10.5
Fruit Juices	-	447.0
Total		25,575.5

2.4.2.9 Greenveld Farm - Chipata

Greenveld Farm is also located in Chipata and produces Pasteurized milk only. It has an installed capacity of 4,000 litres and utilizes 2,000 litres per day. The milk packaging is manual (plastic sachets are filled with milk and sealed using a foot operated sealing machine). The raw milk is supplied from its own herd as well what is bought from small-scale farmers. The company exports raw milk and cattle to Malawi (on a Land O' Lakes project).

The Farm actually consists of two separate farms which are on opposite side of Chipata, namely Greenveld Farm and Dunelm Estates. Dunelm Estates was procured in 2003 after the previous owner Dick Donkin lost the farm to a financial institution.

The farms have 600 dairy cows but are only milking 150 due to lack of demand. Production can be stepped up once demand and production capacity increases. The farms have the following:

- a) 16 point milking parlour; and
- b) 2 x 5,000 litre milk storage tank.

The milk is sold at the following price:

Table 7: Greenveld Farm - Price List March 2004

Product	Packaging	Wholesale (US\$)	Retail (US\$)
Pasteurized milk	½ litre	0.21	0.25

The farm markets its own products without recourse to outsourcing and used to export 6,000 litres a week to Malawi. This has been curtailed due to Malawi's reluctance to give the farm import permits. However, they continue to import from Zimbabwe and South Africa.

The farm has been facing constraints in its export drive to Malawi mainly in terms of tariff and non-tariff barriers. Obtaining an import permit from the Malawi Government has been extremely difficult to such an extent that only raw milk is exported for processing in Malawi by the Malawi Dairy Corporation.

The farm is expanding its processing capacity and has procured a mini UHT Plant, Ice Cream Plant, Stockfeed Manufacturing Plant, and a Homogenizer. This equipment is expected shortly. Once this is received, the two farms will be streamlined to enhance production and processing efficiencies. Presently operations on the two farms are separately managed by the same people.

2.4.2.10 Manyana Farms (formerly Senegalia) - Chipata

This used to be one of the larger dairy farms in Chipata. It produces between 250,270 litres a day and delivers some to Eastern Dairies and packages the balance. The farm produces from its own herd. The farm packages its milk in plastic sachets and sells through its retail outlet in town at the prices shown overleaf. Sadly, in the course of other interviews it was discovered that the milk is packed raw, which is against the regulations.

Table 8: Manyana Farm - Price List March 2004

Product	Packaging	Retail (US\$)
Liquid Milk	2.5 litre	0.33
Liquid Milk	1 litre	0.41
Liquid Milk – Eastern Dairies	Bulk (litres)	0.33

2.4.2.11 Chipata Farm Shop - Chipata

This company has not started dairy processing though it has plans to venture into the production of pasteurized milk, cheese, butter, and yoghurt. Although the company has not commenced production, it has very useful insights into the way forward in the dairy industry in Eastern Province.

- a) There is need to build capacity for the commercial farmers to work with small scale farmers feeding their milk into cooling centres who in turn supply the dairy processors with raw for value addition;
- b) There is potential to produce between 16,000 – 20,000 litres of raw milk a day;
- c) Eastern Province has no coordinated approach to trade; dairy processors try to access the Malawi market on individual basis. Even when they face difficulties, they try and sort out the problems on an individual basis;
- d) Malawi has not adhered to the tenets of the COMESA Free Trade Area; COMESA Secretariat has not seriously looked into the processors' complaints. The WTO SPS Regulations are not being observed;
- e) The subdividing of parcels of land into smaller units should be discouraged as it has a negative effect on the production capacity of the Province; and
- f) There are no controls on the spread of animal disease due to lack of resources by the Government Veterinary Department.

2.4.2.12 Sayyah Enterprises Limited - Lusaka

The company produces the following products:

- a) Pasteurized and raw milk;
- b) Lacto Mabisi (sour milk);
- c) Yoghurts in natural, drinking and fruit variety;

The company intends to expand and produce dairy choc, butter, and cream. The dairy processing plant receives between 800 – 1,000 litres of raw milk from one commercial farmer. This is usually adequate for its production. The dairy has a batch pasteurizer with a capacity of 800 litres for a 7 – 8 hr shift. Therefore, the installed capacity is 800 litres per 8 hr shift. All the milk is sold as pasteurized milk. However, 100litres/ day is sold as raw milk.

In Jan 2004, the dairy received and processed the following volumes:

Table 9: Sayyah Enterprises - Product Lines

Product	Packaging	Volume (litres)
Liquid milk (raw & processed)	Bulk	5,000
Natural yoghurt	500 ml	1,000
Drinking Yoghurt	250 ml	1,000
Fruit yoghurt	bulk	1,000
Lacto	500 ml	24,000
Total		32,000

A major constraint faced by the processor is the lack of adequate volumes of raw milk. If the amount increases, lacto production can be increased by 30 – 40%.

2.4.2.13 Trade Kings - Lusaka

Milk Powder and/or Ghee (buttermilk) are used in the manufacture of Super milk maheu and Super sweets range mainly for export. The company exports its products directly to Botswana, D.R. Congo, Malawi, Mozambique, Tanzania, and Zimbabwe as well as indirectly exporting to Angola, Namibia, and South Africa (the products are being re-exported by companies in the primary export markets).

The company is unable to meet the rapidly growing demand for its products because of an erratic supply of the main ingredient - Milk Powder. In an effort to improve supply of milk powder, Trade kings is prepared to sponsor GRZ teams to travel to Ireland and Australia/New Zealand in order to establish protocols with these countries.

Competitors from South Africa and within the sub – region buy milk powder from South Africa, Ireland, New Zealand, Australia, and Argentina. Milk Powder is bought on the spot market. Sources do not keep mountains of stocks waiting to be bought.

The supply and demand situation is very fluid since it is bought on the world market, and decisions to buy are made on the basis of availability and price competitiveness. Currently the company imports an average of 30 metric tones of milk powder/ghee per month.

2.4.2.14 Dairy King - Lusaka

Dairy king produces;

- a) Drinkable yoghurt (packed in sachets and bottles);
- b) Lacto, which is the company's flagship product
- c) Chocolate milk
- d) Fresh milk

Current production levels are 1,000 litres per day for all products broken down as follows:

Table 10: Dairy King Production Capacity

Product	Production (l/ day)
Lacto	500
Yoghurt	300
Choc Milk	150
Fresh Milk	50
Total	1,000

The company plans to invest more into its fresh milk section. This requires a mini lab to check quality of milk, replacement of the batch pasteurizer system with a more suitable flow Pasteurizer. The company also has to increase the Current space of the cold room and to purchase a refrigerated delivery van.

Things take long to develop because the company never gets loans; they finance everything from within the company.

Equipment

- a) The pasteurizer is a 900 litre Batch Pasteurizer;
- b) The plant has a maximum production capacity of 2, 500 litres per day;
- c) The big problem is the capacity of the cooler, it is very low;
- d) And all packing is done manually; and
- e) Currently employs 12 workers of which only one is skilled.

Marketing Arrangements

Dairy king used to sell quite a lot of yoghurt using tricycle vendors who by regulation from the council are supposed to sell dairy products only. Now many products are considered dairy products like milk maheu and certain fruit Juices, which are all milk blends. Therefore, the range of dairy products have increased and reduced the yoghurt sales significantly. Further, the vendors have started to include Non-milk drink products in their cold boxes against regulation. Dairy kings do not use any agents to distribute or sell its products. They have a Canter, a driver and an assistant who deliver to known delivery outlets. Dairy king does not intend to export as all their products have a very short Shelf life. Until the company increases the range of products to cheeses and long life Milk, no exporting can be done.

Source of Inputs

As company policy all raw materials is obtained locally except the cultures, which come From South Africa.

2.4.2.15 Kabwe Farmers' Dairy Cooperative - Kabwe

Following the privatization of the state owned DPB; some of the assets, which were not sold to the new owners, were sold to co-operatives. The Kabwe Farmers Co-operative bought the Kabwe DPB milk-processing plant in 1993. The plant produced pasteurized milk, milk biscuits, and high protein biscuits.

The factory has the following plant machinery and equipment:

Milk Processing Equipment

- a) Milk tank with a capacity of 500 litres;
- b) Milk packing machine;
- c) Milk tank with a capacity of 1,000 litres
- d) Pasteurizer with a capacity of 1,500 litres;
- e) Milk homogenizer
- f) Milk cooling tank with a capacity of 2,500 litres;
- g) Milk separator;
- h) 15-litre butter churn;
- i) Cooling tank (1,500 litres);
- j) Cold room facilities; and
- k) Boiler equipment and water pump

Dairy plant production capacity

1. Raw milk

- Intake 300 litres/day
- Intake (dry season) 1000 litres / day
- Intake (rain season) 2,000 litres /day

2. Plant capacity

- Pasteurizer (2,500 litres);
- Cooler (3,000 litres);
- Packaging machine (1,000 litres /hour); and
- Storage (5,000 litres)

The dairy plant has storage capacity of 2,500 litres per day and 8-hour shift can fill 2,000 litres of milk sachets. The plant is able to process and package pasteurized milk in ½ litre and ¼ litre sachets.

Baking Equipment

- a) Bakery parking oven;
- b) Dough mixer;
- c) Biscuit cutting and forming machine;
- d) 5 piece biscuit machine complete with compressor; and
- e) Industrial fans

2.4.2.16 Zahreen Farms - Lusaka

The company, which is a family business, commenced operations in 1993 making ice cream using reconstituted milk powder as the main raw material. Today, Zahreen Farms produces ice cream, ice-lollies, and milk ice-lollies. The ice cream comes in five (5) flavours namely, Chocolate, Vanilla, Strawberry, Banana, and Mint.

Equipment

The processing plant has the following equipment:

- a) Chiller, 400 litres capacity;
- b) Pasteurizer, 300 litres;
- c) Agitator (2), 200 litres;
- d) Homogenizer;
- e) Cooling Towers; and
- f) Lolly Making Machine producing 1000 Lollies per day.

The plant has an installed capacity of 1,000 lollies a day and 200 litres of ice cream per day. In terms of production inputs, the farm uses 200 litres of raw milk from its own dairy herd and other ingredients such as stabilizer, flavour etc are imported from within the region (RSA and Zimbabwe) and locally. The farm has a manufacturer's license and all the regular company license and permits. The Council Health Department carries out inspections of the plant at least once a month. The workers are also subjected to medical examinations as per the Food and Drugs Act.

The company sends samples of its products to the University Teaching Hospital - Food and Drugs Laboratory and University of Zambia Food Science and Technology Department for analysis. The company sells its ice cream products at the following prices:

Table 11: Wholesale Price List - Ice Cream

Product	Packaging	Price (US\$)
Ice Cream	2 – litre tub	2.50
Ice Cream	1 – litre tub	1.24
Ice Cream	Half litre tub	0.72
Ice Cream	150 ml cup	0.23
Ice Cream	250 ml cup	0.31

2.4.2.17 Livestock Services Co-Operatives Society - Lusaka

The society's main objective is to serve its members and therefore, works on very small profit margins. The society is sustained by the high volume sales of its cheap Veterinary products. The products sold include antibiotics for dairy farms, mammary tubes. The society identified mastitis as one of the major problems in the dairy farms, leading to low milk production and zoonoses. The Veterinary doctor does not deal with issues pertaining to quality of milk but rather to prevent common diseases among milking cows.

The Nutritional Department normally deals with issues related to the quality of milk produced. The department is usually busy during the wet season when nutritional problems and fungal diseases abound. Semen from Holland is also provided to the farmers and the society ensures that the Semen is acquired from the most reputable companies around the world. So farmers are assured of good quality semen all the time.

2.4.2.18 Tiger Animal Feeds - Lusaka

Tiger Animal Feeds Zambia is part of the largest feed producers in Africa, Astraal South Africa. It has a technical support agreement with the largest stock feed producers in the world, Provimi - Holland. Provimi provides laboratory testing and development. Therefore, Tiger feed formulas are backed by good solid scientific research coupled with 58 years of the sister company, Meadow, experience. Tiger produces the following products:

- a) Dairy 19 Meal, with and without urea;
- b) Calf starter pullet; and
- c) Dairy budget, 15% protein, cotton cake, and urea based for energy and Grazing supplement.

Tiger provides consultancy services to livestock farmers even if they do not buy Tiger products. They have a Help Line, which is open to all. In addition, the company provides advice on Financial Management, and Sound Financial Planning. Table 5 below gives a summary of the various dairy processors, products, capacities and sources of raw milk. In recent years, the company has faced many complaints from farmers regarding the quality and the safety of produced animal feed

2.5 Dairy Development Initiatives

The National Dairy Workshop, held in 1992, recommended that in order to increase milk production and quality, strategies for implementing dairy policy be improved as follows:

- a) Collection, quality control, marketing and distribution centres be set-up in tradition sector;
- b) Breeding units be set in priority areas;
- c) Credit facilities to farmers be provided at an affordable interest rates;
- d) Specialized dairy extension staff be trained;
- e) More staff, facilities and funds be committed to dairy farming research; and
- f) Strict and strong measures for disease prevention and control be instituted.

It was further suggested that, for sustainability, government should only facilitate the establishment of breeding centres by individuals. With respect to setting-up collection points, it was suggested that a survey of the market be conducted in the tradition sector, where it is felt the production potential can be further exploited. These recommendations are in line with the present atmosphere of liberalised economy, where greater participation by the producers is sought.

2.5.1 Land O' Lakes International Development (Zambia Dairy Enterprise Initiative)⁸

This is a five – year project funded by the USAID Dairy Directive Program in Washington DC and its objectives are:

- e) To increase rural incomes of smallholder dairy farmers;
- f) To improve and ensure the quality of processed milk sold within formal market channels;
- g) To increase the consumption of liquid milk and dairy products within the country through promotion and education initiatives; and
- h) To develop export markets for Zambian products.

⁸ This is based on interviews and literature review of Land O' Lakes

Their approach in meeting the above objectives includes the following:

- a) Training of small holder producers, developing producer associations and cooperatives, and establishing producer owned milk collection centres;
- b) Providing technical assistance, training and technology to dairy processors;
- c) assisting the industry in leading strategic promotional and educational campaigns that effectively articulate the nutritional benefits of consuming dairy products; and
- d) Linking with local partners and organizations that enhance the achievement of program results related to dairy production, processing, promotion, and education.

Activities Undertaken

Raw Product Supply Improvement – Smallholder Dairy Development

Working with its local partners, Zambia Agricultural Technical Assistance Centre (ZATAC), and Heifer Project International, Land O' Lakes offers training to small-scale farmers in the principles of dairy production including animal husbandry, nutrition, forage production, milk handling, and marketing. The activities objectives are:

- a) To increase smallholder milk production within regions of high potential;
- b) To increase the output of milk per animal;
- c) To improve the quality of milk originating from small scale producers; and
- d) To increase the volume of cooled milk received by the processors.

The specific activities for smallholder dairy development are as follows:

- a) Establishing business linkages between producers and processors to facilitate smallholder raw milk collection and sales;
- b) Developing cooperatives and producer organizations that have mutual need for developing cold chain procurement routes through the establishment of milk collection centres (depots) with bulk cooling units;
- c) Provision of technical advice through design and delivery of dairy production related training programs to individual farmers, producers cooperatives, industry associations, milk collection centres and input suppliers;
- d) Development of supply and service linkages to producers;
- e) Sensitizing producers on improved management techniques and quality control measures;
- f) Facilitation of technology transfer to small scale producers, including improved cattle breeding practices; and
- g) Assistance for improving the handling and logistics of marketing milk in rural areas.

ZDEI also enables producer groups and small-scale processors access financing from the ZATAC Investment Fund (ZIF), which is administered by ZATAC. It offers short term and medium term credit facilities for business expansion and equipment purchases.

Processing Development and Improvement, Quality Assurance Systems

Land O' Lakes provides support for the dairy processors to improve their output, efficiency, and quality, and Research and Development for the development of higher value products. This is done with the aid of technical consultants in quality control and product development.

The following activities are carried out:

- a) Comprehensive assessment of Zambian dairy processors related to product line capacity, technology, quality control systems, packaging systems and package quality;
- b) Technical advice on product and process improvement, packaging improvement, accessing new technology, and product development;
- c) Introduction of fortified dairy products on the market through technical recommendations;
- d) Assisting the processors in launching a voluntary seal of Quality program, which will improve the overall quality and safety of dairy products in Zambia; and
- e) Providing business and financial planning services, which ultimately will contribute to increasing processors profitability.

Industry led Education and Promotional Campaigns

Land O' Lakes provides support by conducting promotional activities designed to increase the awareness of the nutritional benefits of consuming milk and other dairy products. It also assists in the establishment of new regional markets for Zambian Dairy Products.

The activities undertaken include the following:

- a) Assisted in the establishment of the Zambia Dairy Processors Committee (ZDPC), which promotes Zambian – produced products in domestic and export markets. The association assists in identifying and establishing new industry – led product standards that better meet consumer demands for quality and food safety;
- b) Conducting targeted promotional and educational campaigns with local NGOs targeting youth, mothers and HIV/ AIDS afflicted consumers;
- c) Sponsoring commercial road shows countrywide using music and entertainment to promote educational messages on the benefits of dairy products. All shows are conducted in local languages;
- d) Sponsoring urban and peri – urban schools programs targeting teachers and the youth;
- e) Implementing strategic media campaigns which include TV, radio, and poster adverts that will augment all other promotional and educational campaigns; and
- f) Establishing new regional markets to promote Zambian dairy products.

3 VALUE CHAIN ANALYSIS

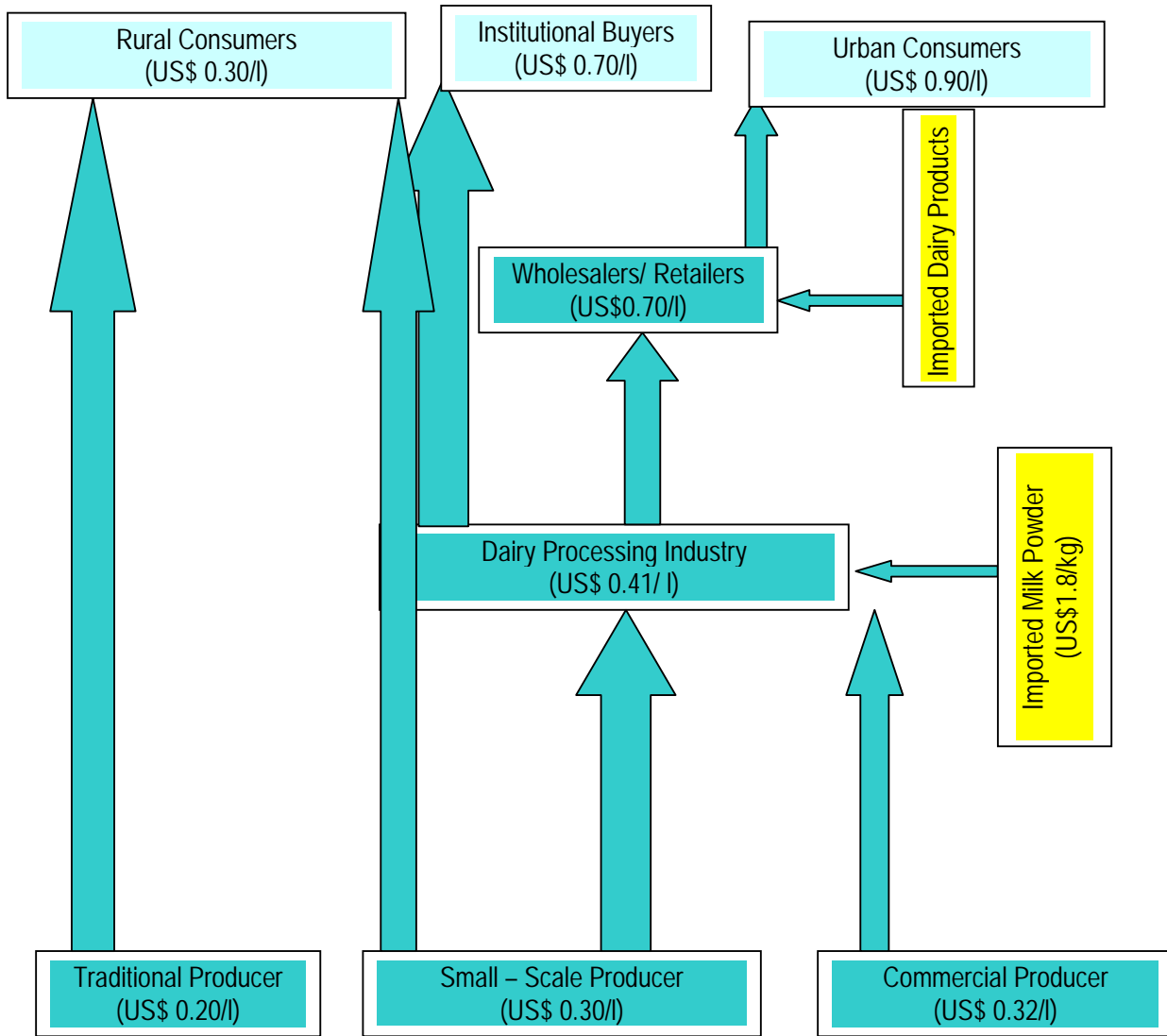


Figure 2: Value Chain Analysis

3.1 The Milk Value Chain Flow

3.1.1 Primary Milk Production

This is the initial link in the value chain for liquid milk. As stated in other parts of this report, there are three (3) main categories of milk producers and these are the traditional (informal), small scale, and commercial dairy farmers. The base price for the value chain was US\$ 0.25 per litre. This is the producer price that the processing industry pays for the raw milk. The informal producers usually sell their milk directly to the public due to the financial pressures that they face. Table 12 overleaf gives a summary of the major dairy processors and their market share of the various products.

As can be seen from the table, the biggest dairy processors are Parmalat and Finta Danish Dairies. They have the installed capacity and have the distribution network the spans the whole country.

Table 12: Market shares of Principal Dairy Processors per Product Category

Products	Company	Market Share
Pasteurized Fresh milk	Parmalat	52.0
	Zammilk	13.0
	Diamondale	8.0
	Cedric=s	3.0
	Others	24.0
UHT Milk	Finta Danish Dairy	46.0
	Parmalat	48.0
	Imports – RSA, Zimbabwe	6.0
Fermented Milk	Parmalat	53.0
	Diamondale	12.0
	Zammilk	9.0
	Others	25.0
Flavoured milk	Parmalat	30.0
	Diamondale	17.0
	Zammilk	9.0
	Imports	23.0
	Others	21.0
Yoghurt and Yogi drink	Parmalat	62.0
	Imports	30.0
	Others	8.0
Butter /Margarine	Imports	75.0
	Parmalat	5.0
	Others	20.0
Ice cream	Zahreens	18.5
	N'Ice Products	20.0
	Imports	61.5
Cheese and Cheese spread	Kaposhi	43.0
	Maplehurst	30.0
	Imports	27.0

They usually cannot afford to sell their milk on the normal 30-day credit period that the other producers are giving the processing plants.

The Traditional Producer

The traditional producer usually markets their excess milk to the community as and when they have it. This category does not actively work to improve the milk yield or quality of their milk as this aspect of their livelihood is not considered paramount. Accordingly, they sell their milk at low prices, usually around US\$ 0.20 per litre.

The Small – Scale Producer

The small-scale producer also prefers to sell their milk directly to the consumers and in some instances, to vendors. The rural based small-scale producers sell within their communities at prices, which range from US\$ 0.30 – US\$ 0.41 per litre.

The Commercial Producer

The commercial dairy producer usually has a supply contract with the dairy processing industry and institutional buyers. This category of milk producer rarely sells their raw milk direct to the consumer.

When they make such marketing arrangements, they would rather establish a mini – processing plant, which pasteurizes and packs the liquid milk.

For example, Manyana Farms in Chipata processes and packs liquid milk on the farm and sell their milk at US\$ 0.41 per litre to the consumers. When these producers supply their milk to the processing plant, they obtain a producer price of US\$ 0.32 per litre.

3.1.2 The Processing Industry

The processing industry procures its primary raw material (milk) from all available sources, which mainly includes the small – scale and commercial producers. This milk is then converted into the various dairy products that are ultimately sold to the consumers. The industry produces the following products:

- a) Pasteurized milk;
- b) Cheese;
- c) Butter;
- d) Yoghurt;
- e) Lacto;
- f) Cream;
- g) Soft Serve Ice Cream;
- h) Ice Cream;

The processing industries are divided into large and small processing plants. The large processing plants usually have a throughput of above 100,000 litres a day and small processing plants process volumes of less than 100,000 litres a day. The cost of processed milk at the processing plant level is on average US\$ 0.41 per litre. The proportion of dairy products of dairy products in the processing plant is given in table 13 below:

Table 13: Dairy Products

Product	Volume (l/kg)	Proportion %	Indicative Price (US\$)
Pasteurized Milk	31,645,500 litres	60.00	0.45/ half litre
Cheese	174 tons	4.00	11.13/ kg
Butter	15. 20 tons	3.00	6.59/ kg
Yoghurt	1,661,389 litres	3.15	1.23/ l
Lacto	5,537,963 litres	10.5	0.59/ l
Cream	158,228 litres	0.3	0.51/ l
Soft Serve Ice Cream	158,228 litres	0.3	1.85/ l
Dairy Blends	26,371 litres	0.05	0.20/ l
Total	52,742,500 l/ kg	100	

Comparison of the Price of reconstituted milk, pasteurized milk and farm gate milk

1. The retail price of pasteurized milk is around US\$ 0.45 per half litre;
2. The farm gate price of milk is about US\$ 0.30 per litre;
3. The landed price of powdered milk is approximately US\$ 2,500 per ton;

The price of liquid milk reconstituted from milk powder per kg = price per kg of imported milk powder x 1/8

1. Price per kg of imported milk powder = US\$ 2,500/ 1,000 = US\$ 2.5 per kg
2. Price per kg in Zambian Kwacha = US\$ 2.5 x 4,750 = K 11,875 per kg

Price of reconstituted milk = US\$ 2.44 x 1/8 = US\$ 0.30 per kg

Table 14: Price Comparison; Pasteurized Milk, Farm Gate, and Reconstituted Milk

Item	Price (US\$)
Pasteurized Milk	0.45/ l
Farm Gate Milk	0.30/ l
Reconstituted Milk	0.30/ l

From the above, it can be seen that reconstituted milk is cheaper than pasteurized milk and equal to farm gate milk.

3.2 Milk Marketing

An increasing number of commercial dairy farmers near urban centres have purchased their own pasteurization equipment with capacities of 500-1000 litres per hour. The milk is in some instances standardized and is packed in printed plastic sachets manually sealed. Milk sales from the commercial dairy farmers was approximately 35 million litres in 1993/94 of which 15 million litres was sold to Parmalat (formerly DPB) (43%) for processing, 8 million litres (23%) was processed and sold by the private sector and nearly 12 million litres (34%) was sold as raw milk. The main product made out of the 23 million litres milk available for processing is fresh milk mainly marketed as pasteurized whole milk in half-litre plastic sachets. Other popular products are chocolate milk (Dairy Choc), fermented skim milk (Lacto), flavoured yoghurts, and ice cream products.

The high rate of urban population in Lusaka Province has the highest average consumption of milk in the country followed by the Southern Province, which has a large traditional cattle herd. The Copperbelt Province also ranks high followed by the Central and Western Province. The population of Luapula has no tradition of cattle keeping and average milk consumption is the lowest in the country. On average, the highest income groups spent some five times more on milk than the lower income groups. As is the case in Zimbabwe, milk is primarily used as a whitener for tea and coffee.

The most important players in the formal milk market in Zambia are Parmalat (Zambia) Limited and Finta Danish Dairies Limited. Apart from imported and local long life milk in the rural areas, the informal sector is the only source of supply of milk, which is sold either by the cattle owners or through vendors.

Over the last fifteen years, commercial farmers near Lusaka and other major towns have commenced direct sales of raw milk to consumers. Recently, there has been a significant and increasing volume of direct sales in the major towns from peri-urban part time farmers with dairy cows. Pasteurized fresh milk sales dominate – currently just over 80 percent of total business. Production and sales of other products, however, have been increasing over the same period in response to the competition and resultant decline in FM sales but total milk equivalent sales (i.e. converting milk products into liquid milk equivalent) have declined. In the regional context, the Republic of South Africa is unlikely ever to pose a threat to the Zambian dairy industry because of its lack of price advantage and the prevailing under supply situation in its domestic markets, which is expected to persist.

On the other hand, it is unlikely that Zimbabwean domestic market will remain under supplied for some considerable time in the future and this will tend to curtail exports. Malawi, a milk deficit country, offers an export opportunity for the Zambian dairy industry as well as the Democratic Republic of Congo – north of Zambia.

4 SUPPLY AND DEMAND SITUATION AND TRADE FLOW ANALYSIS

4.1 Production Vs Estimated consumption of milk and milk products

There are no accurate records of the total production and consumption of dairy products. This is attributed to the lack of willingness of the dairy processors to divulge what they term "*Confidential Information*," to third parties. This is compounded by the fear that such information may end up in hands of the tax authorities. As a result, all the dairy processors were unwilling to provide production data to the consultant. Due to the absence of a Regulating body in the dairy sector, no records exist for consumption levels of dairy products.

Table 15: Milk Production and Consumption Figures 1998 - 2003

Year	Volume Produced (litres)	Estimated milk consumption (litres)	Deficit/Surplus (litres)
1998	138,000,000	169,700,000	31,700,000
1999	141,000,000	174,000,000	33,000,000
2000	135,000,000	166,900,000	31,900,00
2001	139,000,000	171,000,000	32,000,000
2002	147,000,000	181,800,000	34,800,000
2003	190,000,000	235,000,000	45,000,000

4.2 Trade Flow Analysis

Zambia imports a wide variety of dairy products from South Africa, and Zimbabwe. These imports include the following products:

- j) Long Life Milk Products;
- k) Liquid Milk Products;
- l) Dried Milk Products;
- m) Sweetened Milk;
- n) Buttermilk;
- o) Yoghurt;
- p) Butter;
- q) Cheese; and
- r) Other Products such as animal genetic material.

Zambia imports a substantial amount of dairy products from within the sub – region and overseas. Most importers prefer to import products from these areas due to the superior product quality, short lead-time in receiving the products (sub – region). More importantly, the nearest source for dairy products for Zambia, Zimbabwe, has been undergoing sever economic problems, which have affected its ability to produce the various dairy products for the Zambian market. The other alternative, Kenya is more costly in terms of freight charges.

Table 16: Summary of Total Imports and Exports of Dairy Products

Year	1998	1999	2000	2001	2002	2003
Total Imports (US\$)	3,362,001	4,147,024	4,237,172	5,602,062	5,434,403	5,956,409
Total Exports (US\$)	88,743	89,490	2,315,452	201,463	211,492	610,194

There was a dramatic increase of exports in 2000 attributed to re-exports of UHT milk from Zimbabwe through Zambia to Malawi and Democratic Republic of Congo. At this time, the Zimbabwe Dollar was at its lowest against the United States Dollar, and this made it cheaper to import UHT milk from Zimbabwe.

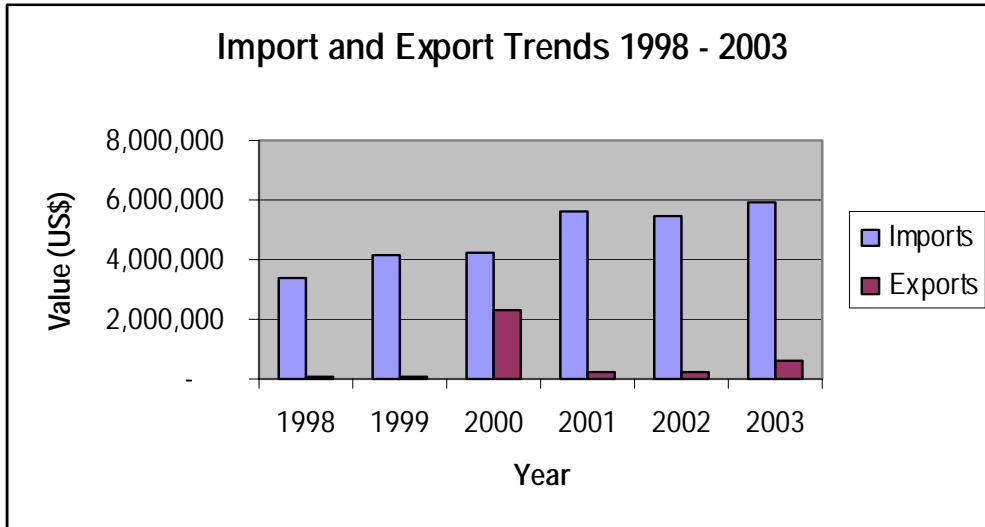


Figure 3: Import and Export Trends

4.2.1 Imports

4.2.1.1 Long Life Milk

Skimmed (1%) Long Life Milk (UHT) imports have been reducing over the period 1998 – 2000. In 1998, UHT milk valued at US\$ 154,992 was imported and by 2003, this reduced to US\$10,931. On the other hand, standardized (1% - 6% fat) UHT milk imports increased from US\$ 201,800 in 1998 and peaked at US\$ 452,002 in 1998 and dropped to US\$ 22,441 in 2002 only to increase to US\$ 219,112 in 2003. Full cream UHT milk imports ranged from US\$ 84,000 in 1998 to US\$ 112,000 in 2003. This trend is attributed to the establishment of UHT milk processing facilities initially by Finta Danish Dairies in Livingstone, Parmalat in Lusaka, and the countervailing import ban on Zimbabwe UHT milk between 2000 and 2003.

4.2.1.2 Sweetened Milk

Imports of sweetened milk ranged from US\$ 1,034,257 in 1998 to US\$ 2,120,806 in 2003. The trend is set to continue, as there are no plans by any of the dairy processors to set up a sweetened milk production line.

4.2.1.3 Buttermilk, Yoghurt and Other Products

Yoghurt imports ranged from US\$ 25,273 in 1998 and peaked in 2003 where US\$ 76,588 worth was imported. Other products were imported as follows: 1998 US\$ 17,641 and dropped to US\$ 6,727 in 2003. Yoghurt imports will continue to increase as the local capacity to produce high quality yoghurt is still lacking.

4.2.1.4 *Whey*

Whey imports ranged from US\$ 19,656 in 1998 to US\$ 23, 810 in 2003. These will continue as the cheese manufacturing plants do not process whey but rather, use it as a direct feed into the piggery where one exists and just thrown away where there is no piggery.

4.2.1.5 *Butter and Dairy Spreads*

Imports of butter and dairy spreads have been increasing over the period 1998 – 2003. Import values for 1998 were US\$ 92,708 and increased to US\$ 275,036 in 2003.

4.2.1.6 *Cheese and Curd*

Imports of cheese and curd have ranged from US\$ 138,234 in 1998 and increased to US\$ 368,857 in 2003.

4.2.1.7 *Animal Genetic Material*

Live Bovine Purebred

Imports of live bovine animals amounted to US\$ 18,440 in 1998, peaked at US\$ 50,692 in 2000, and dropped drastically to US\$ 153 in 2003.

4.2.2 *Exports*

4.2.2.1 *Long Life Milk*

Long Life Milk exports have been rising. In 1998, long life milk worth US\$ 8,400 was exported and culminated in milk valued at US\$ 47,771 exported in 2003. In 2000, there was a dramatic increase in UHT milk exports (US\$ 1 million). This is attributed to re-exports of UHT milk from Zimbabwe to Malawi and the Democratic Republic of Congo.

4.2.2.2 *Sweetened Milk*

In 1998, sweetened milk worth US\$ 26,540 was exported and in 2003, US\$ 38,917 was exported. However, it is vital to note that Zambia does not produce sweetened milk and these figures probably reflect re-exports of imports.

4.2.2.3 *Buttermilk, Yoghurt and Other Products*

There have been no exports of yoghurt save for US\$ 856 in 1999. Exports of other products were valued at US\$ 92 in 1998 and rose to US\$ 5,939 in 2003.

4.2.2.4 *Whey*

There were no exports of whey save for 1999 where whey worth US\$ 245 was exported. This appears to have been a one – off sale, as it has not been repeated since.

4.2.2.5 Butter and Dairy Spreads

Exports of butter and dairy spreads ranged from US\$ 3,877 in 1998 and increased to US\$ 33,821 in 2003.

4.2.2.6 Cheese and Curd

Cheese exports were US\$ 39 in 1998, US\$ 3,825 in 1999, US\$ 196 in 2000, US\$ 7,029 in 2001, US\$ 356 in 2002, and US\$ 175 in 2003.

4.2.2.7 Animal Genetic Material

Live Bovine Purebred

Exports of live bovine animals amounted to US\$ 6,334 in 1998 and rose to US\$ 49,357 in 2003.

4.3 Major Trading Partners in Dairy Products

Zambia trades in dairy products with several countries within COMESA, SADC and the rest of the world. Table 16 below gives a summary of the source of imports and destinations for exports.

Table 17: Zambia's Trading Partners in Dairy Products

HS Code	Description	Source of Imports	Export Destinations
04011	Milk and Cream not concentrated nor containing sugar or other sweetening matter	COMESA, SADC, Europe, Americas, Middle East, Asia	COMESA, SADC, Rest of the World
0402	Milk and Cream concentrated or containing sugar or other sweetener	COMESA, SADC, Middle East, Asia	COMESA, SADC, Asia
0403	Buttermilk, curdled milk cream, yoghurt, Kephir, and other fermented or acidified milk	COMESA, SADC, Middle East	SADC
0404	Whey, whether or not concentrated	Europe, SADC	SADC
0405	Butter and other fats and oils derived from milk, dairy spreads	COMESA, SADC, Middle East, Europe	COMESA
0406	Cheese and curd	Europe, COMESA, Asia, SADC, USA	COMESA
010210	Live Bovine Purebred	Europe, SADC, COMESA	COMESA
051110	Bovine Semen	Europe, SADC, COMESA	-

Table 18: Imports of Dairy Products (1998 - 2003)

HS No.	Tariff No	DESCRIPTION	SOURCE	1998	1999	2000	2001	2002	2003
010210		Live Bovine Purebred							
	01021000	Live Bovine Purebred	COMESA		31,026	15,216	20,454	338	0
			SADC		4,389	34,333	3,502	24,692	0
			Rest of the World		77	-	0	0	0
			Total	18,063	35,492	49,549	23,956	25,030	-
04011		Milk and cream not concentrated nor containing sugar or other sweetening matter							
	04011000	of a fat content by weight not exceeding 1% (UHT)	COMESA		28,222	22,750	63,775	306	
			SADC		38,549	4,826	82	7,399	10,706
			Rest of the World		32		26	243	
			Total	151,796	66,803	27,576	63,883	7,948	10,706
	04012000	of a fat content by weight exceeding 1% but not exceeding 6% (UHT)	COMESA		414,318	116,935	191,522	18,571	154,429
			SADC		28,365	7,840	712	3,407	60,166
			Rest of the World						
			Total	197,691	442,683	124,775	192,234	21,978	214,595
	04013000	of a fat content by weight exceeding 6%	COMESA		788	0	4,189		
			SADC		15,613	29,765	1,994	14,362	109,726
			Rest of the World		24,842			2	
			Total	82,872	41,244	29,765	6,183	14,364	109,726

*Chemonics International Inc – Regional Agricultural Trade Expansion Program (RATES)
Contract: 623-C-00-00089-00*

Prepared by: Alexandre A. Valeta – July 2004

HS No.	Tariff No	DESCRIPTION	SOURCE	1998	1999	2000	2001	2002	2003
0402		Milk and cream concentrated or containing sugar or other sweetening matter							
	04021000	In powder - granules or other solid forms, of a fat content by weight not exceeding 1.5%	COMESA		34,960	39,765	29,680	2,388	20,934
			SADC		555,971	489,191	501,883	891,225	1,265,971
			Rest of the World		418,281	965,677	1,522,467	1,132,298	565,809
			Total	762,709	1,009,212	1,494,633	2,054,031	2,025,911	1,852,714
	04029100	Not containing added sugar or sweetening matter	COMESA		3,554	40,111	82,735	10,971	54,955
			SADC		102,945	53,594	69,840	21,3780	153,201
			Rest of the World		83,644	70,482	123,623	121,979	16,208
			Total	250,216	190,143	164,187	276,198	346,730	224,365
0403		Buttermilk, curdled milk cream, yoghurt, kephir and other fermented or acidified milk							
	04031000	Yoghurt	COMESA		8	442	0		
			SADC		52,259	25,887	22,804	11,050	17,628
			Rest of the World		18				
			Total	24,752	52,285	26,329	22,804	11,050	17,628
	04039000	Other	COMESA		178	934			
			SADC		12,689	10,979	15,870	3,422	17,628
			Rest of the World		104		405	33	
			Total	17,278	12,971	11,913	16,275	3,454	17,628
0404		Whey, whether or not concentrated							
	0404100	Whey and modified	COMESA		0	0			
			SADC		6,680	9,416	22,732	8,318	10,193
			Rest of the World		2,989	164			6,538
			Total	1,973	9,669	9,580	22,732	8,318	16,731

HS No.	Tariff No	DESCRIPTION	SOURCE	1998	1999	2000	2001	2002	2003
	0404900	Other	COMESA			0	2,300		
			SADC		25,759	9,999	7,199	4,789	6,589
			Rest of the World		254	0		72	
			Total	17,278	26,013	9,999	9,499	4,861	6,589
0405		Butter and other fats and oils derived from milk, dairy spreads							
	04051000	Butter	COMESA		12,294	18,199	2,300		22,391
			SADC		100,782	78,012	57,023	171,944	236,768
			Rest of the World		26	0	27		
			Total	87,492	113,102	96,211	59,350	171,944	259,159
	04052000	Dairy Spreads	COMESA						
			SADC						2,079
			Rest of the World						
			Total	0	0	0	0	0	2,079
	0405900	Other	COMESA		1,299	0	1,540	3,047	7,380
			SADC		93	1,460	1,382	9,119	595
			Rest of the World		1,299	236	256	1,414	152
			Total	3,305	2,691	1,696	3,179	13,580	8,127
0406		Cheese and curd							
	04061000	Fresh (unripened or uncured) cheese, including whey cheese, and curd	COMESA			0	14,139		
			SADC		853	4,393	893	3,022	2,312
			Rest of the World					749	
			Total	4,234	853	4,393	15,032	3,771	2,312

ZAMBIA DAIRY SECTOR POLICY STUDY

HS No.	Tariff No	DESCRIPTION	SOURCE	1998	1999	2000	2001	2002	2003
04062000		Grated or powdered cheese of all kinds	COMESA				7,797		
			SADC		8,410	1,371	797		459
			Rest of the World						
			Total	1,044	8,410	1,371	8,593	-	459
04063000		Processed cheese, not grated or powdered	COMESA		2,450			190	
			SADC		39,643	9,205	4,720	18,351	36,520
			Rest of the World				26	3,059	
			Total	13,788	42,093	9,205	4,747	21,599	36,520
04064000		Blue veined cheese	COMESA						
			SADC						118
			Rest of the World						
			Total	22	0	0	0	0	118
04069000		Other Cheese	COMESA		22,458	9,871	2,818		4,846
			SADC		78,631	127,506	65,115	86,969	310,199
			Rest of the World		4,507	3,839	3,391	11,725	6,798
			Total	116,296	105,595	141,216	71,324	98,693	321,844

Table 19: Exports of Dairy Products (1998 - 2003)

HS No.	Tariff No	DESCRIPTION	SOURCE	1998	1999	2000	2001	2002	2003
10210		Live Bovine Purebred							
	01021000	Live Bovine Purebred	COMESA		110			2,415	514
			SADC				7,572	17,459	18,978
			Rest of the World						
			Total	6,204	110	-	7,572	19,874	19,492
4011		Milk and cream not concentrated nor containing sugar or other sweetening matter							
	04011000	of a fat content by weight not exceeding 1% (UHT)	COMESA		196	435		65	136
			SADC		10,784	33,439		4,138	20,023
			Rest of the World		0				
			Total	3,068	10,980	33,874	0	4,203	20,160
	04012000	of a fat content by weight exceeding 1% but not exceeding 6% (UHT)	COMESA			3,982	13,576	527	
			SADC		66	1,077,825	1,350	7,921	12,859
			Rest of the World					4,945	1
			Total	5,046	66	1,081,807	14,926	13,394	12,860
	04013000	of a fat content by weight exceeding 6%	COMESA				1,952		
			SADC		7,263			7,239	13,767
			Rest of the World						
			Total	172	7,263	-	1,952	7,239	13,767

HS No.	Tariff No	DESCRIPTION	SOURCE	1998	1999	2000	2001	2002	2003
402		Milk and cream concentrated or containing sugar or other sweetening matter							
	04021000	In powder - granules or other solid forms, of a fat content by weight not exceeding 1.5%	COMESA		12,153	1,856	58,099	27,014	169,421
			SADC		8,723	33,481	7,849	32,304	
			Rest of the World		2,444				
			Total	21,551	23,319	35,336	65,949	59,318	169,421
	04029100	Not containing added sugar or sweetening matter	COMESA		1,856			922	42
			SADC			3,009			1,481
			Rest of the World					10	
			Total	4,443	1,856	0	3,009	932	1,523
403		Buttermilk, curdled milk cream, yoghurt, kephir and other fermented or acidified milk							
	04031000	Yoghurt	COMESA						
			SADC		838	242			
			Rest of the World						
			Total	0	838	242	0	0	0
	04039000	Other	COMESA					113	5,816
			SADC						
404		Whey, whether or not concentrated							
	0404100	Whey and modified	COMESA						
			SADC		240				
			Rest of the World						
			Total	0	240	0	0	0	0

ZAMBIA DAIRY SECTOR POLICY STUDY

HS No.	Tariff No	DESCRIPTION	SOURCE	1998	1999	2000	2001	2002	2003
	0404900	Other	COMESA SADC Rest of the World Total	0	0	0	0	0	0
405		Butter and other fats and oils derived from milk, dairy spreads							
	04051000	Butter	COMESA SADC Rest of the World Total	0	0	4,515	31	500	32,168
	0405900	Other	COMESA SADC Rest of the World Total	3,798	0	0	408	123	956
406		Cheese and curd							
	04061000	Fresh (unripened or uncured) cheese, including whey cheese, and curd	COMESA SADC Rest of the World Total	0	10	0	0	0	0
	4062000	Grated or powdered cheese of all kinds	COMESA SADC Rest of the World Total	0	0	0	0	0	0

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HS No.	Tariff No	DESCRIPTION	SOURCE	1998	1999	2000	2001	2002	2003
	04063000	Processed cheese, not grated or powdered	COMESA SADC Rest of the World						
			Total	0	0	0	0	0	0
	4064000	Blue veined cheese	COMESA SADC Rest of the World						
			Total	0	0	0	0	0	0
	4069000	Other Cheese	COMESA SADC Rest of the World		50	192	6,885	350	172
			Total	38	3,746	192	6,885	350	172

5. DAIRY TRADE POLICIES AND REGULATIONS

5.1 Overview

Dairy products trade policies and regulations in Zambia are enshrined in Dairies and Dairy Produce Act Cap. 342, the Stock Diseases Act CAP 252, of 1964 (Sanitary regulations); the Food Safety statutes, which include the Public Health Act and the Food and Drugs Act,; and Customs and Excise Act through which import duties and customs documentation procedures and practices are provided, for all commodities, including dairy products.

The livestock sector is currently governed by the Stock Diseases Act No.13 of 1994 Cap. 252, the Prevention of Cruelty to Animals Act No. 13 of 1994, the Veterinary Surgeons Act No. 13 of 1994, the Brands Act No. 13 of 1994 Cap. 244, the Public Health Act, Tsetse Control Act Cap 249, the Dairies and Dairy Produce Act No. 13 of 1994 Cap. 230, Cold Storage Board of Zambia Act, the Pig Industry Act No.13 of 1994 Cap. 251, the Zambia Bureau of Standards Act No. 20 of 1994 Cap. 416 and the Science and Technology Act. These pieces of legislation will continue to be updated from time to time in accordance with the policy changes and production trends.

5.2 Sanitary regulations on trade in dairy products

5.2.1 Sanitary requirements and procedures for obtaining import and export permits

The sanitary requirements for all dairy products coming into Zambia and being exported from Zambia are mainly concerned with the threat of diseases for both humans and animals. As a consequence, the Department of Veterinary Services checks for risks associated with diseases which could be present in the dairy products.

Of particular interest are the following diseases:

- a) Tuberculosis;
- b) Brucellosis; and
- c) Foot and mouth disease.

Apart from the compositional standards, all the dairy products to be imported must meet the following requirements:

1. the dairy products originates from milk from herds which are not subject to any restrictions due to any infectious disease including Foot and Mouth Disease, brucellosis, and tuberculosis;
2. the herds from which the milk was obtained were negative to 3 consecutive Brucellosis tests;
3. the dairy products were processed in a factory or processing plant that is approved by the exporting country's Government Veterinary Authorities for export;
4. the dairy product has been processed to ensure the destruction of infectious micro organisms;

5. the necessary precautions were taken after processing to avoid contact of the products with any potential source of infection agents;
6. the dairy products must be wholesome and fit for human consumption;
7. an official Government Veterinary Officer of the country of origin must seal the consignment of the vehicle in which the dairy product is contained and the seals must only be broken by Zambian Government Veterinary Officer in Lusaka;
8. before the dairy product is disposed in any way, laboratory tests will be carried out to certify that the dairy product is fit for human consumption in Zambia;

In addition, under the Food and Drugs Act Cap 303, Part II (General Provisions), the following general provisions for food apply:

a) Prohibition against sale of poisonous, unwholesome or adulterated food

No person shall sell food that:

- i. has in or upon it any poisonous or harmful substance; or
- ii. consists in whole or in part of any filthy, putrid, rotten, decomposed or diseased substance or foreign matter, or is otherwise unfit for human consumption; or
- iii. is adulterated.

b) Deception

No person shall label, package, treat, process, sell or advertise any food in a manner that is false, misleading or deceptive as regards its character, nature, value, substance, quality, composition, merit or safety, or in contravention of any regulations made under the Food and Drugs Act Cap 303.

c) Standards of Foods

Where standards have been prescribed for any food, no person shall label, package, sell, or advertise any food which does not comply with that standard, in such a manner that is likely to be mistaken for food of the prescribed standard.

d) Prohibition against Sale of Food not of the nature, substance or quality demanded

No person shall sell to the prejudice of the purchaser any food which is not of the nature, or is not of the substance, or is not of the quality, of the article demanded by the purchaser.

e) Sale and Preparation of Food under unsanitary conditions

No person shall sell, prepare, package or store for sale any food under unsanitary conditions.

The Act further states under Part III (Importation and Warranty) that:

Importation

- i. subject to the provisions of Part II of the Act, the importation of any article which does not comply with the provisions of the Act are prohibited;
- ii. where an article sought to be imported into Zambia would, if sold in Zambia, constitute a contravention of the Act, the article may be imported into Zambia for the purpose of satisfactorily re-labelling or reconditioning the same so that the provisions of the Act are complied with and, where such re-labelling or reconditioning is not carried out within three (3) months of the importation, such article shall be exported by the importer within a further period of one (1) month or such other period as the Minister may determine and, where it is not so exported, it shall be forfeited and disposed of as the Minister may direct.

Warranty

- i. no manufacturer or distributor of, or dealer in, any article shall sell such article to any vendor unless he gives warranty in writing in the prescribed form about the nature and quality of such article to the vendor.

Sanitary requirements

Table 20: Import and Export Sanitary Requirements

Dairy Product	Sanitary requirement/declaration condition	Procedure for satisfying the requirement
Raw (whole) Milk	<p>Composition - Milk obtained from cows, free from colostrum, min 3.2% fat & 8.5 milk solids- not- fat.</p> <p>Microbiological – Shall not contain more than 2,000,000 bacteria per millilitre or 2 milligrams of sediment for 450 millilitres of milk.</p>	<ul style="list-style-type: none"> ➤ Certification – Foot and Mouth Disease, Tuberculosis, Brucellosis free; ➤ Government Veterinary Officer sealed in exporting country – seals must be intact when examined by Zambian Government Veterinary Officer; ➤ Laboratory Tests before disposal
Pasteurized Milk	<p>Heat treatment – not less than 63°C for 30 minutes & cooled to below 4°C or not less than 71.5°C for at least 15 seconds & cooled to below 4°C</p> <p>Microbiological – Standard Plate Count of not more than 50,000 per millilitre, Coliform Count of not more than 5 per millilitre</p> <p>Chemical – Methylene Blue Keeping Quality Test of not less than 2 hours & Phosphatase Test reading of not more than 10 micrograms of p-nitrophenol for 1 millilitre of milk</p>	<ul style="list-style-type: none"> ➤ Certification – Foot and Mouth Disease, Tuberculosis, Brucellosis free; ➤ Government Veterinary Officer sealed in exporting country – seals must be intact when examined by Zambian Government Veterinary Officer; Laboratory Tests before disposal

Dairy Product	Sanitary requirement/declaration condition	Procedure for satisfying the requirement
UHT Milk	Heat Treatment – subjected to a continuous flow heating process at a high temperature for a short time and which afterwards has been aseptically packaged.	<ul style="list-style-type: none"> ➤ Certification – Foot and Mouth Disease, Tuberculosis, Brucellosis free; ➤ Government Veterinary Officer sealed in exporting country – seals must be intact when examined by Zambian Government Veterinary Officer; ➤ Laboratory Tests before disposal
Whole Milk Powder	<p>Composition – Shall have not less than 26% and not more than 40% milk fat, and not more than 5% water. May contain permitted stabilisers, emulsifiers and added vitamins.</p> <p>Other - When milk other than cow's milk is used for manufacture of the product or any part thereof, it shall be so designated along with such origin.</p>	<ul style="list-style-type: none"> ➤ Certification – Foot and Mouth Disease, Tuberculosis, Brucellosis free; ➤ Government Veterinary Officer sealed in exporting country – seals must be intact when examined by Zambian Government Veterinary Officer; ➤ Laboratory Tests before disposal
Partially Skimmed Milk Powder	<p>Composition – Shall have not less than 1.5% and not more than 26% milk fat and not more than 5% water. May contain permitted stabilisers, emulsifiers and added vitamins.</p> <p>Other - When milk other than cow's milk is used for manufacture of the product or any part thereof, it shall be so designated along with such origin.</p>	<ul style="list-style-type: none"> ➤ Certification – Foot and Mouth Disease, Tuberculosis, Brucellosis free; ➤ Government Veterinary Officer sealed in exporting country – seals must be intact when examined by Zambian Government Veterinary Officer; ➤ Laboratory Tests before disposal
Skimmed Milk Powder	<p>Composition – Shall have not more than 1.5% and not more than 5% water. May contain permitted stabilisers, emulsifiers and added vitamins.</p> <p>Other - When milk other than cow's milk is used for manufacture of the product or any part thereof, it shall be so designated along with such origin.</p>	<ul style="list-style-type: none"> ➤ Certification – Foot and Mouth Disease, Tuberculosis, Brucellosis free; ➤ Government Veterinary Officer sealed in exporting country – seals must be intact when examined by Zambian Government Veterinary Officer; ➤ Laboratory Tests before disposal

Dairy Product	Sanitary requirement/declaration condition	Procedure for satisfying the requirement
Cheese	<p>Composition – may contain salt, seasoning, special favouring materials, food colour, a firming agent, and a Class III preservative. Cheese milk may be treated with hydrogen peroxide not exceeding 500 parts per million (ppm) and a catalase not exceeding 20 parts per million, if this treatment does not alter the characteristics of the cheese.</p> <p>Cheddar Cheese – made from matted and milled curd of milk, and shall contain not less than 50% milk fat.</p>	<ul style="list-style-type: none"> ➤ Certification – Foot and Mouth Disease, Tuberculosis, Brucellosis free; ➤ Government Veterinary Officer sealed in exporting country – seals must be intact when examined by Zambian Government Veterinary Officer; ➤ Laboratory Tests before disposal
	<p>Skim Milk Cheese – Other than Cottage Cheese that contains, on a dry basis, not more than 15% milk fat.</p> <p>Hard Grating Cheese – shall contain not more than 34% moisture.</p> <p>Cream Cheese – shall contain not more than 0.5% stabilising agent, and not more than 55% moisture, on a dry basis, not less than 65% milk fat.</p> <p>Process Cheese – May contain water, milk solids, food colour, seasoning, fruit, vegetable, relish, condiment. pH adjusting agent. Such cheese shall have not more than 55% moisture, on a dry basis, not less than 65% milk fat,</p> <p>Skim Milk Process Cheese – shall have not more than 55% moisture and not more than 15% milk fat</p>	<ul style="list-style-type: none"> ➤ Certification – Foot and Mouth Disease, Tuberculosis, Brucellosis free; ➤ Government Veterinary Officer sealed in exporting country – seals must be intact when examined by Zambian Government Veterinary Officer; ➤ Laboratory Tests before disposal
Yogurt	<p>Composition – shall contain not less than 8.5% milk-solids-not fat and not less than 2% milk fat.</p> <p>Non-Fat Yoghurt – Shall contain not less than 8.5% milk-solids-not-fat and not more than 0.5% milk fat</p>	<ul style="list-style-type: none"> ➤ Certification – Foot and Mouth Disease, Tuberculosis, Brucellosis free; ➤ Government Veterinary Officer sealed in exporting country – seals must be intact when examined by Zambian Government Veterinary Officer; ➤ Laboratory Tests before disposal

Dairy Product	Sanitary requirement/declaration condition	Procedure for satisfying the requirement
Butter	Composition – may contain permitted food colours, permitted neutralising salts for pH adjustment or harmless lactic acid producing bacterial cultures. It shall have not less than 80% milk fat, not more than 2% milk solids-not-fat, 3% salt and 16% water.	<ul style="list-style-type: none"> ➤ Certification – Foot and Mouth Disease, Tuberculosis, Brucellosis free; ➤ Government Veterinary Officer sealed in exporting country – seals must be intact when examined by Zambian Government Veterinary Officer; ➤ Laboratory Tests before disposal
Butter oil (ghee)	Composition – obtained exclusively from butter or cream, resulting from the removal of practically the entire water and solids-not-fat content, shall have not less than 99.3% milk fat and not more than 0.5% water.	<ul style="list-style-type: none"> ➤ Certification – Foot and Mouth Disease, Tuberculosis, Brucellosis free; ➤ Government Veterinary Officer sealed in exporting country – seals must be intact when examined by Zambian Government Veterinary Officer; ➤ Laboratory Tests before disposal

It is worth noting that as far as the Department of Veterinary Services is concerned, all dairy products emanate from Milk. As long as the compositional and microbiological requirements for the milk have met the Zambian standards, all subsequent processing into value added products such as cheese, butter, UHT milk are secondary. If the milk used for processing is of the required standard, there is no additional requirement save for disease control standards.

The procedure for obtaining an import or export permit for animal and animal products is as follows:

The importer or exporter must avail samples of the product to be imported or exported. Failing the sample, the product has to have been tested in an accredited laboratory in the country of origin and should confirm that the product meets the minimum standards under the Zambia Food Safety Laws.

Imports

1. The importer collects and completes a prescribed application form from NALEIC;
2. The duly completed application form is submitted to NALEIC for Risk Analysis (Identification). NALEIC uses the OIE International Animal Health Code to carry out the Risk Analysis. It is worth noting that NALEIC is mainly interested in potential disease risks. If no disease risk is foreseen, approval is granted;
3. The importer then pays the prescribed fee and an Import Permit is then issued;

4. The Import Permit is then submitted to the Ministry of Commerce Trade and Industry for record purposes;
5. After the record has been entered at the Ministry of Commerce Trade and Industry, the Ministry of Agriculture then endorses the Import Permit under the Controlled Goods Act.

Exports

The exporter furnishes NALEIC with the sanitary requirements for the importing country. The Government Veterinary Officers then verify that the exporter has met all the requirements. If so requested, the Government Veterinary Officers also witness the processing and packaging the dairy product to be exported.

The Government Veterinary Officers also carry out routine factory inspections to certify the factories and processing plants. Once the factories and processing plants have been certified

The import or export permit is valid for one consignment only.

Constraints Faced by Exporters and Importers

The process for obtaining import and export permits is cumbersome as the permits are issued from Lusaka. Importers and exporters from other parts of Zambia have to travel to Lusaka to process the permits and each permit is valid for one consignment at a time. Of particular interest is the lead time of between 8 – 14 days for the application to be approved.

- a) Import and export application forms can only be obtained from Marketing Department, Ministry of Agriculture and Cooperatives, NALEIC;
- b) The application forms are submitted to the NALEIC (Department of Veterinary Services) at Lusaka Province Offices for livestock and livestock products and Plant Protection Services at Mount Makulu, Chilanga;
- c) NALEIC and Mount Makulu then submit the application forms to Office of Chief Livestock Officer or Director Specialist Services at Mulungushi House for verification;
- d) Ministry of Commerce Trade and Industry only handles this routine of recording applications on Wednesdays or Thursday;
- e) Ministry of Commerce Trade and Industry then sends the application to Ministry of Agriculture and Cooperatives for final processing;
- f) The applicants then pay for their permits at Investrust Bank to the order of K35,000; the bank closes at 15:30hrs;
- g) The Ministry of Agriculture and Cooperatives will issue import permits 24 hours after payment for permit.

5.3 Quality Standards

5.3.1 Pasteurized whole milk

Definition of the product:

Raw whole milk, which has been subjected to the following heat treatments:

- a) heated to a temperature of not less than 63°C, and holding it at such a temperature for not less than 30 minutes and immediately thereafter reducing it to a temperature below 4°C; or
- b) heated to a temperature of not less than 71.5°C and retaining it for at least 15 seconds or at any other approved time-temperature combination and immediately thereafter reducing the milk to a temperature below 4°C.

Applicable to (TICK Appropriately):

Imported Milk [√]; Domestically produced milk [√]

Basis of the Standards

Zambian Standards

1. Principal composition requirements	
Chemical	Specifications
Milk fat	Not less than 3.2%
Milk solids non-fat	Not less than 8.30%
Total Solids	12%
Added water, preservatives, or other added substances	None of these should be in the milk
Natural constituents	100%
Freezing point depression of milk	Approximately -0.530°C
Bacteriological grades	
Standard Plate Count	< 50,000 per ml
Coliform Count	5 per ml
Feacal Coliform	Nil per ml
Methylene Blue Keeping Quality Test	Not less than 2 hours
Phosphatase Test	< 10 micrograms for 1 ml of milk
Pesticides and antibiotics	
i) Pesticide residue in milk	
Pesticide	Max. limit (mg/kg) on whole milk basis
a) Aldrin Dieldrin	0.01 ppm in milk fat
b) Anilzaline	0.01 ppm
c) Atrazine	0.01 ppm
d) Amitraz	0.01 ppm
e) Ametryn	0.05 ppm
f) Azinphos methyl	0.05 ppm
g) Bromophos	0.05 ppm
ii) Antibiotics	
Antibiotics in milk	NIL
3. Milk packaging	
Packaging material	Sanitized containers made of approved materials

5.3.2 Ultra High Temperature Heat Treated Milk

Definition of the product:

1. Ultra high temperature heat – treated milk (or UHT milk) is milk subjected to a continuous flow heating process at a high temperature for a short time and which afterwards is aseptically packaged.
2. The heat treatment shall be such that the milk shall:
 - a. Pass the keeping quality test by the prescribed method;
 - b. Give turbidity when subjected to the prescribed method.

Applicable to (TICK Appropriately):

Imported Milk [√]; Domestically produced milk [√]

Basis of the Standards

Zambian Standards

1. Principal composition requirements	
Chemical	Specifications
Milk fat	Not less than 3.2%
Milk solids non-fat	Not less than 8.30%
Total Solids	12%
Added water, preservatives, or other added substances	None of these should be in the milk
Natural constituents	100%
Freezing point depression of milk	Approximately -0.530°C
Bacteriological grades	
Feacal Coliform in 0.01ml	Nil
Pathogenic micro organism	Nil
Pesticides and antibiotics	
i) Pesticide residue in milk	
Pesticide	Max. limit (mg/kg) on whole milk basis
a) Aldrin Dieldrin	0.01 ppm in milk fat
b) Anilzaline	0.01 ppm
c) Atrazine	0.01 ppm
d) Amitraz	0.01 ppm
e) Ametryn	0.05 ppm
f) Azinphos methyl	0.05 ppm
g) Bromophos	0.05 ppm
ii) Antibiotics	
Antibiotics in milk	NIL
3. Milk packaging	
Packaging material	Sterile containers made of approved materials. Aseptically packed.

5.3.3. Reconstituted Milk

Definition of the product:

Reconstituted milk, recombined milk is pasteurized homogenized product prepared from milk fat, non – fat milk solids and water, with or without whole milk, and may contain permitted stabilizer or emulsifier in accordance with Part IV of the Twenty – second Schedule and shall have not less than 2.0 % fat and not less than 8.0% milk solids-not-fat.

Applicable to (TICK Appropriately):

Imported Milk []; Domestically produced milk []

Basis of the Standards

Zambian Standards

1. Principal composition requirements	
Chemical	Specifications
Milk fat	Not less than 3. %
Milk solids non-fat	Not less than 8.30%
Total Solids	12%
Added water, preservatives, or other added substances	None of these should be in the milk
Natural constituents	100%
Freezing point depression of milk	Approximately -0.530°C
Bacteriological grades	
Feacal Coliform in 0.01ml	Nil
Pathogenic micro organism	Nil
Pesticides and antibiotics	
i) Pesticide residue in milk	
Pesticide	Max. limit (mg/kg) on whole milk basis
a) Aldrin Dieldrin	0.01 ppm in milk fat
b) Anilzaline	0.01 ppm
c) Atrazine	0.01 ppm
d) Amitraz	0.01 ppm
e) Ametryn	0.05 ppm
f) Azinphos methyl	0.05 ppm
g) Bromophos	0.05 ppm
ii) Antibiotics	
Antibiotics in milk	NIL
3. Milk packaging	
Packaging material	Sanitized containers made of approved materials

5.3.4 Evaporated Skimmed Milk

Definition of the product:

Evaporated skimmed milk, evaporated skim milk, unsweetened condensed skimmed milk shall be the product obtained by the partial removal of water only from skimmed milk, shall have no less than 20% of milk solids, and may contain permitted stabilizers set out in Part IV of the Nineteenth Schedule.

Applicable to (TICK Appropriately):

Imported Milk []; Domestically produced milk []

Basis of the Standards

Zambian Standards

1. Principal composition requirements	
Chemical	Specifications
Total Solids	20%
Added water, preservatives, or other added substances	None of these should be in the milk
Natural constituents	100%
Bacteriological grades	
Feecal Coliform in 0.01ml	Nil
Pathogenic micro organism	Nil
Pesticides and antibiotics	
i) Pesticide residue in milk	
Pesticide	Max. limit (mg/kg) on whole milk basis
a) Aldrin Dieldrin	0.01 ppm in milk fat
b) Anilzaline	0.01 ppm
c) Atrazine	0.01 ppm
d) Amitraz	0.01 ppm
e) Ametryn	0.05 ppm
f) Azinphos methyl	0.05 ppm
g) Bromophos	0.05 ppm
ii) Antibiotics	
Antibiotics in milk	NIL
3. Milk packaging	
Packaging material	Sanitized containers made of approved materials

5.3.5 Whole Milk Powder

Definition of the product:

Whole milk powder, dried full cream milk powder, full cream milk powder, dry whole milk powder, milk powder, dried milk, dry milk, powdered whole milk is the product obtained by the removal of water only from milk, after adjusting of fat and milk solids, if necessary and shall have not less than 26% and not more than 40% milk fat and not more than 5% water, and may contain permitted stabilizers set out in Part IV of the Twenty second Schedule and added vitamins.

Applicable to (TICK Appropriately):

Imported Milk []; Domestically produced milk []

Basis of the Standards

Zambian Standards

1. Principal composition requirements	
Chemical	Specifications
Milk fat	26% - 40%
Water content	Not more than 5%
Natural constituents	100%
Bacteriological grades	
Coliform in 0.01ml	Nil
Pathogenic micro organism	Nil
Pesticides and antibiotics	
i) Pesticide residue in milk	
Pesticide	Max. limit (mg/kg) on whole milk basis
a) Aldrin Dieldrin	0.01 ppm in milk fat
b) Anilzaline	0.01 ppm
c) Atrazine	0.01 ppm
d) Amitraz	0.01 ppm
e) Ametryn	0.05 ppm
f) Azinphos methyl	0.05 ppm
g) Bromophos	0.05 ppm
ii) Antibiotics	
Antibiotics in milk	NIL
3. Milk packaging	
Packaging material	Sanitized containers made of approved materials

5.3.6 Cheese

Definition of the product:

Fresh or matured non – liquid product obtained by draining after coagulation, of milk, cream, skimmed or partly skimmed milk, buttermilk or a combination of some or all of these products; and may contain salt, seasoning, special flavouring materials, food colour, a firming agent and a preservative.

Applicable to (TICK Appropriately):

Imported Milk [√]; Domestically produced milk [√]

Basis of the Standards

Zambian Standards

1. Principal composition requirements	
Milk Fat	30-50%
Chemical	Specifications
Natural constituents	100%
Bacteriological grades	
Coliform in 0.01ml	Nil
Pathogenic micro organism	Nil
Pesticides and antibiotics	
i) Pesticide residue in milk	
Pesticide	Max. limit (mg/kg) on whole milk basis
a) Aldrin Dieldrin	0.01 ppm in milk fat
b) Anilzaline	0.01 ppm
c) Atrazine	0.01 ppm
d) Amitraz	0.01 ppm
e) Ametryn	0.05 ppm
f) Azinphos methyl	0.05 ppm
g) Bromophos	0.05 ppm
ii) Antibiotics	
Antibiotics in milk	NIL
3. Milk packaging	
Packaging material	Sanitized containers made of approved materials

5.3.7 Cream

Definition of the product:

Cream or single cream – pasteurized fatty liquid prepared by separating the milk constituents in such a manner as to increase the milk fat content.

Applicable to (TICK Appropriately):

Imported Milk [√]; Domestically produced milk [√]

Basis of the Standards

Zambian Standards

1. Principal composition requirements	
Chemical	Specifications
Milk fat	Not less than 18%
Added water, preservatives, or other added substances	None of these should be in the milk
Natural constituents	100%
Bacteriological grades	
Total Bacteria Count	> 100,000 per gram
Coliform Count	>10 coliforms per gram
Feacal Coliform in 0.01ml	Nil
Pathogenic micro organism	Nil
Pesticides and antibiotics	
i) Pesticide residue in milk	
Pesticide	Max. limit (mg/kg) on whole milk basis
a) Aldrin Dieldrin	0.01 ppm in milk fat
b) Anilzaline	0.01 ppm
c) Atrazine	0.01 ppm
d) Amitraz	0.01 ppm
e) Ametryn	0.05 ppm
f) Azinphos methyl	0.05 ppm
g) Bromophos	0.05 ppm
ii) Antibiotics	
Antibiotics in milk	NIL
3. Milk packaging	
Packaging material	Sanitized containers made of approved materials

5.3.8 Yoghurt

Definition of the product:

Coagulated pasteurized milk product obtained by lactic acid fermentation through the action of *Lactobacillus Bulgaricus* or *Streptococcus Thermophilus* and if desired, other suitable lactic acid producing cultures from cream, concentrated or unconcentrated milk, partly skimmed milk or skimmed milk, with or without the addition of skimmed milk powder, concentrated whey, whey powder, cream, and sugars.

Before lactic acid producing cultures are added, the mixture of dairy products to be treated shall be pasteurized, and the micro organisms in the final product may or may not be viable.

Applicable to (TICK Appropriately):

Imported Milk []; Domestically produced milk []

Basis of the Standards

Zambian Standards

1. Principal composition requirements	
Chemical	Specifications
Milk fat	Not less than 2%
Milk solids non-fat	Not less than 8.5%
Total Solids	12%
Added water, preservatives, or other added substances	None of these should be in the milk
Natural constituents	100%
Bacteriological grades	
Feacal Coliform in 0.01ml	Nil
Pathogenic micro organism	Nil
Pesticides and antibiotics	
i) Pesticide residue in milk	
Pesticide	Max. limit (mg/kg) on whole milk basis
h) Aldrin and Dieldrin (total)	0.006
i) Heptachlor and Heptachlorepoxyde (total)	0.006
j) DDT and its analogues	0.05
k) Lindane	0.01
l) SHC + HCH	0.01
m) Endrin	0.01
ii) Antibiotics	
Antibiotics in milk	NIL
3. Milk packaging	
Packaging material	Sanitized containers made of approved materials

5.3.9 Lacto or Cream Lacto

Definition of the product:

Coagulated pasteurized milk products obtained by lactic acid formation through the action of *Lactobacillus Lactis* subspecies *cremoris*, *Lactobacillus lactis* subspecies *Lactis*, *Leuconostoc Mensenteroides* subspecies *diacetylactis* from cream, concentrated or unconcentrated milk, partly skimmed milk with or without addition of skimmed milk powder. Before lactic acid producing cultures are added, the mixture of dairy products to be so treated shall be pasteurized.

Applicable to (TICK Appropriately):

Imported Milk []; Domestically produced milk []

Basis of the Standards

Zambian Standards

1. Principal composition requirements	
Chemical	Specifications
Milk fat	Not less than 3.2%
Milk solids non-fat	Not less than 8.30%
Total Solids	12%
Added water, preservatives, or other added substances	None of these should be in the milk
Natural constituents	100%
Bacteriological grades	
Feecal Coliform in 0.01ml	Nil
Pathogenic micro organism	Nil
Pesticides and antibiotics	
i) Pesticide residue in milk	
Pesticide	Max. limit (mg/kg) on whole milk basis
a) Aldrin Dieldrin	0.01 ppm in milk fat
b) Anilzaline	0.01 ppm
c) Atrazine	0.01 ppm
d) Amitraz	0.01 ppm
e) Ametryn	0.05 ppm
f) Azinphos methyl	0.05 ppm
g) Bromophos	0.05 ppm
ii) Antibiotics	
Antibiotics in milk	NIL
3. Milk packaging	
Packaging material	Sanitized containers made of approved materials

5.3.10 Effect of Food Safety Standards on Trade in Dairy Products

Impact on Trade

The SPS/Food Safety Laws affect trade between Zambia and the other COMESA and SADC member states. Most of the key players in the export of agricultural products have adjusted their operations to take into account the SPS/Food Safety Requirements of their intended export markets. On the converse, the local Zambia consumers have also become very aware and enlightened such that they demand good quality and safe foodstuff. Whereas the traders may not be aware of all the Food Safety regulations, they are forced to follow the requirements of their customers who demand good quality and safe dairy products.

This has the effect of increasing the manufacturers' awareness of the importance of SPS/Food Safety Laws.

Sanitary Measures

Apart from the Dairy Produce Marketing and Levy Act (CAP 348), there are no specific regulations that govern the production and marketing of dairy products. Generic regulations that affect trade in dairy products include the following:

- h) Food & Drugs Regulations of 1978;
- i) Public Health (Infectious Diseases) Regulations;
- j) Public Health (Control of Habitation in factories, workplaces, and trade premises) Regulations;
- k) Public Health (Food in Airtight containers) Regulations
- l) Dairies and Dairy Produce Act Cap. 342;
- m) Stock Diseases Act Cap. 252; and
- n) Control of Goods Act Cap. 421;

Since the privatization of DPB, there have been plans to establish a Dairy Authority. However, this has yet to be realized, leaving the industry to coordinate efforts through the Zambia Dairy Processors Committee (ZDPC). ZDPC mainly works to increase the consumption of milk and milk products through advertising campaigns.

In terms of regulations that affect dairy products; the Public Health Act, Dairies and Dairy produce Act, Food and Drugs Act, and Control of Goods Act are the pertinent statutes that affect trade in dairy products. These are enforced by the National Livestock Epidemiology and Information Centre, and Animal Production and Health Sub – program Department of Research and Specialist Services. These are briefly discussed below.

National Livestock Epidemiology & Information Centre (NALEIC), Lusaka.

NALEIC is a unit in the Animal Production and Health (APH) Sub programme of the Ministry of Agriculture and Cooperatives (MACO) that deals with the export/import of animal and animal products through the issuance of permits. It also administers and enforces the laws, regulations, standards, and guidelines concerned with the export/import of animal and animal products in the country. The centre uses OIE standards to carry out risk identification of animal and animal products.

NALEIC enforces the requirements for trade in animal and animal products based on the Food and Drugs Act, Dairy and Dairy Marketing Act, and the Public Health Act. These regulations set out the standards and maximum residual levels of pesticides in the products. The labelling of processed products is also one of the critical issues that NALEIC enforces.

The District Veterinary Office, Lusaka.

This office works closely with NALEIC in regulating exports of animal and animal products. An exporter or importer is required to obtain a Veterinary Import or Export Permit whose condition stipulates the SPS requirements. Based upon these requirements, the DVO's office inspects the consignment of animal and animal products and issues an International Sanitary Certificate (ISC) if consignment conforms to the requirements under the various statutes mentioned above, the ISC is then forwarded to the National Livestock Epidemiology & Information Centre (NALEIC) for the issuance of a Zambian Veterinary Export Permit.

Ministry Of Health / Central Board of Health

Ministry of Health (MoH) is in charge of policy formulation on health delivery system of Zambia. The Central Board of Health (CBoH) is in-charge of implementation of the health delivery system of Zambia. One of the major mandates of the MoH/CBoH is promotion of public health, including food safety. The food laws, which influence food safety, animal health (zoonoses) and trade, administered by the MoH/CBoH are Food and Drugs Act and Public Health Act CAP 295 of the laws of Zambia. Although no National Dairy Policy exists *per se*, which influences food safety, animal health (Zoonoses) and trade, the existing standards have comprehensively addressed all concerns for food safety aspects.

Sanitary and Phytosanitary Inspection Service

This is a section in the Ministry of Agriculture and Cooperatives that has Quarantine Officers who are responsible for implementing and enforcing the sanitary and phytosanitary (SPS) requirements of both plant and animal products for the purposes of import or export.

The Food and Drugs Control Laboratory

The Food and Drugs Laboratory carries out chemical and microbiological analysis for food products and other materials. The analysis uses WHO and CODEX guidelines for testing. The laboratory issues a "Public Analyst's" Certificate for all the materials tested. The importing country recognizes the certificate even though the laboratory is not accredited.

Enforcement Mechanisms (Food Safety)

The Public Health Act and Food & Drugs Act and, their regulations are enforced by the Ministry of Health (MoH)/Central Board of Health (CBoH) through the Health Inspectors and Environmental Health personnel.

Ministry of Health – SPS enforcement at border points

The Ministry of Health has Environmental Health Technicians stationed most border posts. These Officers are mainly involved in ensuring that people entering or leaving the country do not have communicable diseases. Although they have a better knowledge of the food laws, they are not authorized by law to destroy condemned foodstuff at the border posts. They verify the documentation accompanying the imports and exports of food products.

Institutional Framework

Zambia has put into place the appropriate institutional framework for addressing concerns related to SPS and food safety. All matters pertaining to SPS and food safety are collectively the responsibilities of the Ministries of Agriculture and Cooperatives, Health, Science and Technology, Commerce Trade and Industry, and the Zambia Bureau of Standards day-to-day oversight and operational matters falling to the appropriate departments and agencies.

The Department of Research and Specialist Services, National Livestock and Epidemiology & Information Centre has primary responsibility for the control of animal diseases and the safety of livestock products. In terms of reporting and notification, Zambia has established all SPS enquiry points. The SPS notification authority is the Ministry of Commerce, Trade, and Industry, which is also the Codex contact point. The Plant Quarantine and Protection Services is the enquiry point for phytosanitary measures while the National Livestock Epidemiology and Information Centre is the enquiry point for sanitary measures.

Institutional Constraints

There is very little co-ordination between the various Government institutions in the enforcement of SPS/ Food Safety regulations. There is an absence of suitably qualified personnel to enforce the laws and regulations at all the border entry points of the country. The lack of proper communications with the current staff from other line departments tasked with attending to SPS/Food Safety issues at the border points. There is inadequate testing equipment at border points.

The level of enforcement of the current legal framework to deal with SPS/Food Safety issues pertaining to AAPs is very low. Several reasons are attributed for this low level of enforcement. There is limited capacity to develop standards based on science and conduct risk assessment. There has been lack of deliberate efforts to train and create awareness amongst the Health Inspectors on the regulations enshrined in the Stock Diseases and other related regulations. Secondly, there have been inadequate resources to retrain Inspectors on the application of SPS/FS measures.

The capacity to adequately enforce the law and regulations is low mainly due to the inadequate staffing levels, the lack of suitably trained personnel, and lack of logistical support to the enforcement staff. These constraints lead to the poor implementation of even clearly spelt out requirements of import and export permits for AAPs. The enforcement of SPS/Food safety controls for AAPs is particularly weak at the borders due to the non-availability of suitably qualified inspectors to man these points. The DRSS does not have any inspector at all the border entry points and relies on staff from other institutions such as the Zambia Revenue Authority (ZRA) and the Ministry of Health to inspect and enforce the stipulated requirements of the import or export permit for the AAPs.

Zambia does not maintain an appropriate database to keep track of information on important requirements and has limited electronic facilities to transmit on time information received from other countries to interested parties. There is limited infrastructure to conduct tests and carry out risk analysis of pests, diseases, and inimical organisms. Appropriate technology to adjust to and comply with SPS measures necessary to achieve the levels of SPS requirements in foreign markets is lacking.

Third parties

The Food Science and Technology Laboratory at the University of Zambia has undergone pre-accreditation process through the COMESA-EU SQMT Project in 2000. This also the only food Laboratory participating in international laboratory testing scheme under AGRILASA (Agricultural Laboratory of Southern Africa) and indirectly with Campden Chorleywood Laboratories in UK. It also certifies food products for many testing companies. The laboratory has highly qualified manpower.

Compliance with International Standards

Zambia complies with most of the core CODEX/ OIE standards but has yet to put in place information on aquatic diseases and their control, or developed an international health code for animals. Compliance has been met in the areas of minimum health guarantees required of trading partners and diagnostic methods for animal diseases and the control of biological products used for disease control.

Table 21: Conformity with OIE Requirements

Standard	Present	Not Present
Minimum Health Guarantees required of trading partners	•	
Diagnostic methods for animal diseases and the control of biological products used for disease control.	•	
Information on aquatic diseases and their control. Developed an International Health Code for aquatic animals		•

Table 22: Conformity with Core Food Safety (Codex) Requirements

Standard	Present	Not Present
Food additives, agricultural and Veterinary chemicals and contaminants, maximum permitted levels and MRLs	•	
Pesticide registration requirements: maximum residue levels (MRLs)	•	
Food Safety risk assessment – Precaution in Food Safety	•	
Harmonization of Food Safety and quality regulations	•	
Food import/export inspection and certification: equivalence	•	
Novel foods/ Foods from biotechnology		•
Animal feed and food safety	•	
General principles of food hygiene: Hazard Analysis Critical Control Point, HACCP; Good Agricultural Practices; Good Manufacturing Practices	•	
Food Allergies	•	
Food Labelling	•	

Even though most of the standards are present, their level of implementation and efficiency still requires more to be done.

5.4 Import tariffs and non-tariff charges

Zambia has the following tariffs for dairy products; the VAT levied on agricultural produce was implemented in the 2004 budget. This has increased the price of all agricultural commodities by 17.5%.

5.5 Export/Import Restrictions

5.5.1 Lack of Enforcement of Temporary Import Bans

There is an apparent lack of capacity to enforce import restrictions and bans. For example, in 2001, the Zimbabwean Dollar was in a freefall thereby making Zimbabwean products very cheap. The Ministry of Commerce Trade and Industry imposed countervailing duties on Zimbabwean dairy products to level the playing field. When this did not yield desired results, the Government banned the importation of the Zimbabwean dairy products. However, Zimbabwean UHT milk was still imported into the country. On the other hand, Zimbabwe erected Non Tariff Barriers that prevents Zambian dairy products from entering the Zimbabwe market.

5.6 Other Constraints

Other constraints faced by the dairy sector include the following:

5.6.1 Poor delivery of Veterinary services

Most dairy farmers spend between US\$ 1,200 – US\$ 1,400 per year on private Veterinary doctors. This increases their cost of production. In the words of one producer, "Government Veterinary officers often do not have transport. One has to organize transport for them. They are usually do not have drugs and they charge high fees approximately K 20,000 per day and if they have to come 3- 4 times in a week, the charge is "colossal."

5.6.2 Additional taxes on the agricultural sector

In the 2004 Budget milk and other agricultural products have been removed from the VAT Exempt list and is now zero-rated. This has an effect of increasing production costs as VAT paid on inputs cannot be claimed against outputs. The agricultural sector has been affected.

5.6.3 Lack of Export Controls for Critical Ingredients for Stockfeeds

Critical ingredients such as cottonseed cake etc are freely exported thereby creating shortages in stockfeed. There is no monitoring of Soya (soya is an important addition to stock feed. However, Government allows the export of soya creating a shortage in Zambia even when production of Soya is high.

5.6.4 High Cost of Finance

The cost of borrowing is too high and even in instances where the interest rate is low; other conditions such as tangible collateral preclude most small-scale farmers to access finance.

Government has dropped the interest on Government Bonds but the commercial banks have not yet started channelling funds to the private sector.

5.6.5 Livestock

Breeding is very expensive. For example, a Batoka f1 cross costs US\$ 500 which is usually too much for the small-scale farmers.

Table 23: Tariff and Non - tariff Charges

HS No.	Tariff No	Commodity Description	Import Duty for milk originating from			VAT
			COMESA	SADC	Other countries	
04011: Milk and cream not concentrated nor containing sugar or other sweetening matter						
040110	04011000	of a fat content by weight not exceeding 1% (Skimmed UHT)	0%	25%	25%	S ⁹
040120	04012000	of a fat content by weight exceeding 1% but not exceeding 6% (UHT)	0%	25%	25%	S
040130	04023000	of a fat content by weight exceeding 6%	0%	25%	25%	S
0402: Milk and cream concentrated or containing sugar or other sweetening matter						
040210	04021000	In powder-granules or other solid forms, of a fat content by weight not exceeding 1.5%	0%	25%	25%	S
040221	0402.10.10	Specially prepared for infants	Free	Free	Free	S
040221	04022100	Not containing added sugar	0%	25%	25%	S
040221	0402.21.30	Powdered Milk, when imported in bulk for further processing of Ultra Heat Treated (UHT) Milk	0%	5%	5%	S
040291	0402910	Not containing added sugar or other sweetening matter	0%	15%	15%	S
0403: Buttermilk, curdled milk cream, yoghurt, Kephir and other fermented or acidified milk						
040310	04031000	Yoghurt	0%	25%	25%	S
040390	04039000	Other	0%	25%	25%	S
0404: Whey, whether or not concentrated						
040410	0404100	Whey and modified	0%		25%	S
040490	0404900	Other	0%		25%	S
0405: Butter and other fats and oils derived from milk; dairy spreads.						
040510	04051000	Butter	0%	* ¹⁰	*	S
040520	04052000	Dairy spreads	0%	*	*	S
040590	0405900	Other	0%	*	*	S
4.06: Cheese and curd						
040610	04061000	Fresh (unripened or uncured) cheese, including whey cheese, and curd	0%	25%	25%	S
040620	04062000	Grated or powdered cheese of all kinds	0%	25%	25%	S
040630	04063000	Processed cheese, not grated or powdered	0%	25%	25%	S
040690	04069000	Blue veined cheese	0%	25%	25%	S
040690	04069000	Other cheese	0%	25%	25%	S
Animal Genetics						
010210	01021000	Live bovine pure bred	0%	5%	5%	S
051110	05111000	Bovine Semen	0%	5%	5%	S

⁹ Standard rate – 17.5%¹⁰ 25% or K850/ kg whichever is the greater

6 RATIONALIZATION AND HARMONIZATION OF POLICIES AND REGULATIONS

6.1 Proposed Policies for Rationalization and Harmonization

6.1.1 Summary of Issues Requiring Harmonization and or Rationalization

The following tables give a brief on the issues pertaining to policies and regulations that have an impact on production, processing, and trade of dairy products in Zambia. These are generally divided into issues that require national rationalisation, and those requiring regional harmonisation.

Table 24: Summary of Policy Issues

MAIN CONCERNS	SUGGESTED POLICY ISSUES	POSSIBLE ACTIONS
Poor delivery and high cost of veterinary services	The Government should enhance the efficiency of delivery of veterinary services, and reduce the costs of veterinary services.	Enhance and improve the existing extension system and increase the efficiency of veterinary service delivery by employing more veterinary officers to be located within each community.
Poor regulation of animal genetic resources and maintenance of genetic resource data bank	Improve the enforcement of reporting procedures and capacity to maintain data on imports and exports of animal genetic material	Increase capacity for enforcement and surveillance at ports of entry
Lack of capacity to control livestock diseases	There is need to strengthen disease control measures for diseases such as Foot and Mouth Disease (FMD)	Increased funding for disease control activities and improve the capacity of veterinary services
Lack of a dairy regulating body such as a Dairy Council	Revise the Dairy Produce and Marketing Levy Acts	This revision should take into account the prevailing situation, as the private sector is involved in production and processing of dairy products. There is need to have a controlling body that will regulate the operations of the dairy sector.
Poor quality and high cost of livestock	Improve the quality and availability of livestock for the dairy sector and possible subsidy for livestock breeding centres.	Increase the capacity of breeding centres to produce more cross bred animals at affordable costs.
High taxes	Reduce tax rates and broaden the tax net.	Tax should be lowered from 15% to 10% for dairy producers and revert to the old classification of classifying agricultural inputs and products as VAT Exempt and not Zero Rated.

MAIN CONCERNS	SUGGESTED POLICY ISSUES	POSSIBLE ACTIONS
High cost of Finance	Reduce interest rates and offer concessionary finance	Set up a special fund to assist agricultural enterprises
Bureaucracy in issuing import and export permits	Streamline the Procedure for Approving import and export permits	Create a one – stop bureau to handle all applications for import and export permits, decentralise the approving offices to provincial centres.
High cost of farm equipment and machinery	Reduce duty on farm equipment and machinery	Offer duty concessions on farm equipment and machinery
High transport costs	Reduced costs for fuel and oil for agricultural purposes	Concessional pricing of agricultural fuel and oil
Lack of enforcement capacity at ports of entry	Enhance enforcement wings of the ports of entry (employ more Environmental Health Officers)	Increase number of Environmental Health Officers at ports of entry, publicity campaign and enhanced training of Environmental Health Officers

The dairy industry is regulated by statutes and regulations as shown in tables 25 and 26 below. It is worth noting that there are some statutes and regulations that are generic and there are some which are specific to the industry.

Table 25: Policy and Regulations Governing Dairy Production and Processing

HS No.	Tariff No	Commodity Description	Policy/Act/Statute/
04011: Milk and cream not concentrated nor containing sugar or other sweetening matter			
040110 – 04130	04011000 – 0401300	of a fat content by weight not exceeding 1 – 6%	D, E, F, G
0402: Milk and cream concentrated or containing sugar or other sweetening matter			
040210 – 040291	04021000 – 0402910	In powder-granules or other solid forms	D, E, F, G
0403: Buttermilk, curdled milk cream, yoghurt, Kephir and other fermented or acidified milk			
040310 – 040390	04031000 – 04039000	Yoghurt	D, E, F, G
0404: Whey, whether or not concentrated			
040410 – 040490	0404100 – 0404900	Whey and modified	D, E, F, G
0405: Butter and other fats and oils derived from milk; dairy spreads.			
040510 – 040590	04051000 - 0405900	Butter/ Dairy Spread, Other	D, E, F, G
0406: Cheese and curd			
040610 – 040620	04061000 – 04062000	All Cheese and curd	D, E, F, G
Animal Genetics			
010210 – 010310	01021000 - 01031000	Live Animals	A, B, D, E, F, G
051110	05111000	Bovine Semen	A, B, D, E, F, G

Key

- A - Stock Diseases Act – Cap 252
- B - The Cattle Cleansing Act – Cap 248
- C - The Cattle Slaughter (Control Act) Cap 250
- D - The Control of Goods Act – Cap 421
- E - The Food and Drugs Regulations 1976
- F - The Public Health Act 2000 – Cap 295
- G - Revised Text of the Food and Drugs Regulations – Final Draft 2002

Table 26: State of Policy and Regulations in the Dairy Industry

Policy/Act/Statute/	Present	Remarks
Dairy Produce Marketing and Levy Act – Cap 348	Yes	Needs to be revised to take into account the private sector's role in the industry and redress the lack of a regulating body after the privatisation of the DPB.
Zambia Bureau of Standards Act	Yes	Needs to be revised to take into account the international standards of dairy products.
Public Health Act – Cap 295	Yes	Adequate
Food, and Drugs Regulations (1976)	Yes	Revised in 2000. However, they need to be further revised to take into account the international standards for dairy products and not local standards which are in some cases lower than international standards (e.g. raw milk does not have proper standards)
Stock Diseases Act – Cap 252	Yes	Needs revision to conform to OIE Standards
The Cattle Cleansing Act – Cap 248	Yes	Needs revision to conform to OIE Standards
The Cattle Slaughter (Control) Act- Cap 250	Yes	Needs revision to conform to OIE Standards
The Control of Goods Act – Cap 421	Yes	Adequate
The Factories Act	Yes	Needs revision
The Companies Act	Yes	Adequate
Trade and Licensing Regulations	Yes	Adequate
Revised Text of the Food and Drugs Regulations – Final Draft	Yes	Needs revision to take into account international dairy standards
Standards for milk & milk products	Yes	Standards not updated

Table 27: Issues for National Rationalization

ISSUE	ISSUE FOR RATIONALIZATION	CURRENT SITUATION	REQUIRED ACTION	IMPLEMENTATION BY
High Taxes	VAT Changes for Agricultural Sector Products from Zero Rated to VAT Exempt	Intermediate agricultural inputs that were Zero Rated have now been VAT Exempt. This will increase the production costs by at least 12%.	Ministry of finance to re-examine the effect of this on the price of agricultural products.	Ministry of Finance
Low milk consumption	Increase consumption to expand market	The consumption of milk and dairy products is low in comparison to neighbouring countries	Start sensitization programs to increase milk consumption. Initiate milk programs for vulnerable groups, e.g. school children, hospitals	ZDPC, Ministry of Health, Ministry of Education, Dairy Processors, Ministry of Agriculture, Ministry of Commerce, NGOs
Bureaucracy in the Issuance of Import Permits	Improve turnaround period for Import Permit Applications	It takes more than seven (7) days to obtain an Import Permit. This increases the cost of importing agricultural foodstuffs.	Streamline the operations of the Marketing Department of the Ministry of Agriculture and Cooperatives and the Ministry of Commerce Trade and Industry.	Ministry of Agriculture and Cooperatives, Ministry of Commerce Trade and Industry
Standards and labels	Harmonise all dairy standards and labelling requirements	Each processor uses different standards and labels on their products. The information on the labels differs from processor to processor	Harmonisation of standards and labelling	Ministry of Commerce Trade and Industry, Zambia Bureau of Standards

Table 28: Issues for Regional Harmonization

ISSUE	ISSUE FOR HARMONIZATION	CURRENT SITUATION	REQUIRED ACTION	IMPLEMENTATION BY
Milk Standards and packaging	Milk standards	Standards vary from country to country. Issue of packaging and labelling is a problem.	Harmonize standards and standardize labelling of products so as to make it easier to understand	Zambian Dairy Processors, Bureau of Standards, COMESA, SADC, Ministry of Health
Trade agreements and procedures	Tariff Barriers Non-tariff barriers	Trade in dairy products limited by both tariff and non-tariff barriers	Solve the issues on a bilateral and multilateral bases and through Regional Integration bodies (COMESA, SADC)	Ministry of Agriculture and Cooperatives, Ministry of Commerce Trade and Industry, Ministry of Finance, Zambian Government
Periodic bans	Adherence to WTO Agreements by all parties	Selective enforcement of bans which gives an undue advantage to local industries	Free movement of dairy products across borders as long as sanitary regulations are adhered to	