OVERVIEW OF THE DAIRY INDUSTRY IN SWAZILAND

SWAZILAND DAIRY BOARD

Manzini
MAY 2010

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1. Introduction

As a country, Swaziland, aspires to have a viable, sustainable and competitive dairy industry to meet the demand of her population (estimated at 1,018,449 in 2008) adequately with milk and dairy products and possibly export to other countries. Milk especially in its sour form, is a traditional source of protein for virtually all Swazi households in the country. However milk production has not increased significantly in recent years due to numerous constraints mostly of economic nature whilst the human population has continued to grow at an unprecedented rate. This portrays severe milk shortages in the near future unless comprehensive programmes in production, processing and marketing are designed and implemented soon.

The dairy industry in Swaziland is made of a number of role-players that include milk producers (small, medium and large scale), processors, distributors, retailers, as well as consumers. In addition, there are importers and transiters of dairy products. All these role players are regulated by the Swaziland Government mainly through the Swaziland Dairy Board which is a regulatory and statutory agent of government.

Any development in the dairy industry in the country shall be in full support of the Government's policy of food security, poverty alleviation, job creation, investment promotion, export promotion, reduction in urbanisation, development and sustainance of skilled labour for her nationals, value addition, HIV/AIDS prevention and economic growth and development.

2. Historical Background of the Dairy Industry

Organised dairying in the country started in the late 1930's. It was originally centred on a private dairy in Manzini buying cream from a network of depots collecting milk from smallholder beef herds along the Manzini-Siteki road mainly. Progress was steady and by 1960 around 5.7 million litres of liquid milk equivalents (LME's) were being collected from some 4,300 smallholder farmers and a few larger farms. The butter factory in Manzini closed down in 1970 due to various reasons. Towards the end of the 1960's, Swaziland Dairies, a private dairy in Mbabane started marketing pasteurized

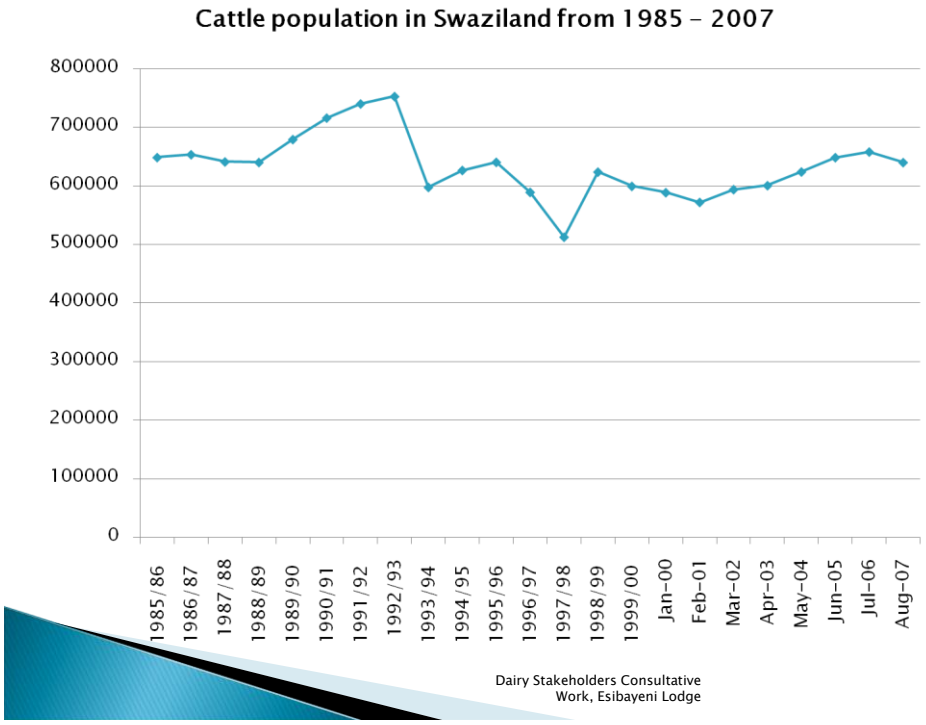
milk purchased locally and from the Republic of South Africa (RSA). Imported raw milk from RSA accounted for 75% of total milk processed by the plant and the rest was supplied by local Title Deed farmers. For instance in 1972 the company imported about 1.3 million litres of milk from the Republic of South Africa to top up about half a million litres produced locally by Title Deed Farmers. The company could not collect milk from the Lowveld since that milk was produced for cream production only.

In 1968 the Dairy Act no.28 of 1968 was proclaimed and soon afterwards the Swaziland Dairy Board was established in 1971 to develop and regulate the dairy industry. By the early 1970's the Board launched a project to change cream production to milk production which was collected and delivered to the ailing dairy plant in Mbabane. The change was successful and the milk was of fair quality for processing purposes. However, in 1974 Swaziland Dairies was liquidated for various reasons and the Swaziland Dairy Board quickly jumped to the rescue of the dairy industry by purchasing it so that milk producers would continue to have a market where they would sell their milk. Thus the Board incidentally became involved in commercial operations and continued to collect milk from the Lowveld in the seventies and early eighties until January 1984 when the collection was discontinued due to economic reasons.

The involvement of the Swaziland Dairy Board culminated in the establishment of a new central dairy plant at Matsapha which dominated the formal market until 1999 when the facility was leased to Parmalat Swaziland. At the time of hand over to Parmalat the plant was handling some 10.5 million litres of liquid milk equivalent per annum out of which 60% was imported mainly from the Republic of South Africa.

3. Milk Production

The sources of milk production in the country consist of the traditional and commercial sectors. The traditional sector is derived from the seasonal production of milk from the indigenous herd in particular the local Nguni breed. The cows are milked during the summer months mainly when they have just calved and the grass is abundant and nutritious. The commercial sector refers to the national dairy herd.
Estimate for the total population of cattle in Swaziland is around 531000 including 5750 dairy animals for year 2008


Cattle population in Swaziland from 1985 – 2007
800000
700000
600000
500000
400000
300000
200000
100000
0
1985/86
1986/87
1987/88
1988/89
1989/90
1990/91
1991/92
1992/93
1993/94
1994/95
1995/96
1996/97
1997/98
1998/99
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Apr-03
May-04
Jun-05
Jul-06
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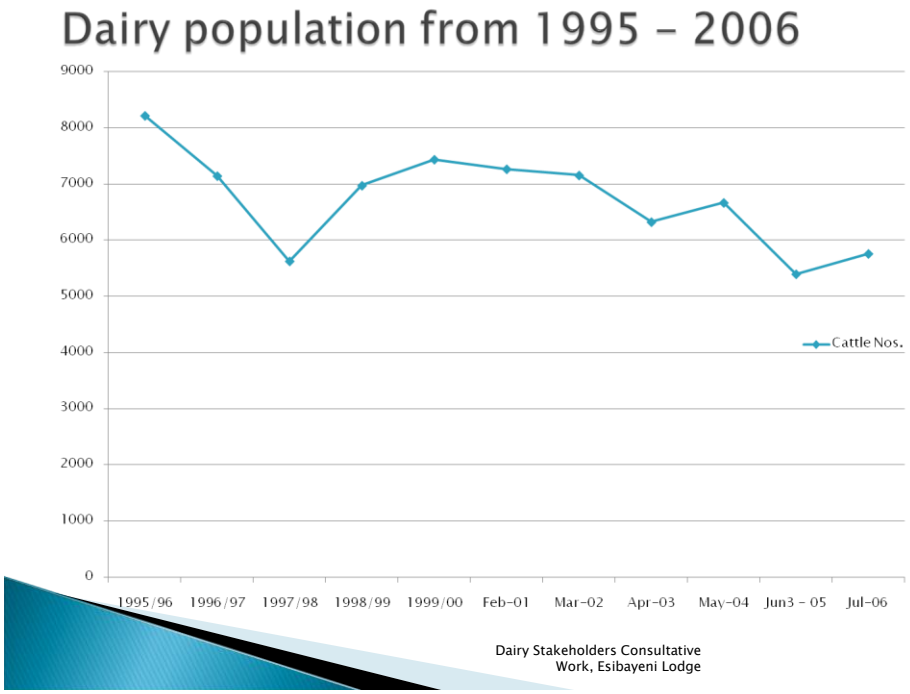
Dairy Stakeholders Consultative
Work, Esibayeni Lodge


Dairy population from 1995 – 2006
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
1995/96
1996/97
1997/98
1998/99
1999/00
Feb-01
Mar-02
Apr-03
May-04
Jun3 – 05
Jul-06
Cattle Nos.
Dairy Stakeholders Consultative
Work, Esibayeni Lodge

Estimate of the number of dairy farmers in Swaziland (2009

Classification	Number
Small scale farmers(1-10 animals)	460
Medium scale farmers (11-50 animals	20
Large scale farmers (51- above animals	8
Total	488

Currently the demand for dairy products is estimated at 52 million litres per annum in terms of Liquid Milk Equivalents (LME's) whilst commercial milk production from the national dairy herd is estimated at 7.52 million litres. The deficit of 44.5 million litres of LME's is met through imports of dairy products and milk produced by the indigenous herd in the traditional sector.

YEAR	**DEMAND IN (Million) (LME)-(liquid milk equivalence)**
1998	**57.6**
1999	**60.7**
2000	**63.9**
2001	**61.5**
2002	**61.5**
2003	**61**
2004	**61**
2005	**54.14**
2006	**56.6**
2007	**50**
2008	**50**
2009	**51.79**

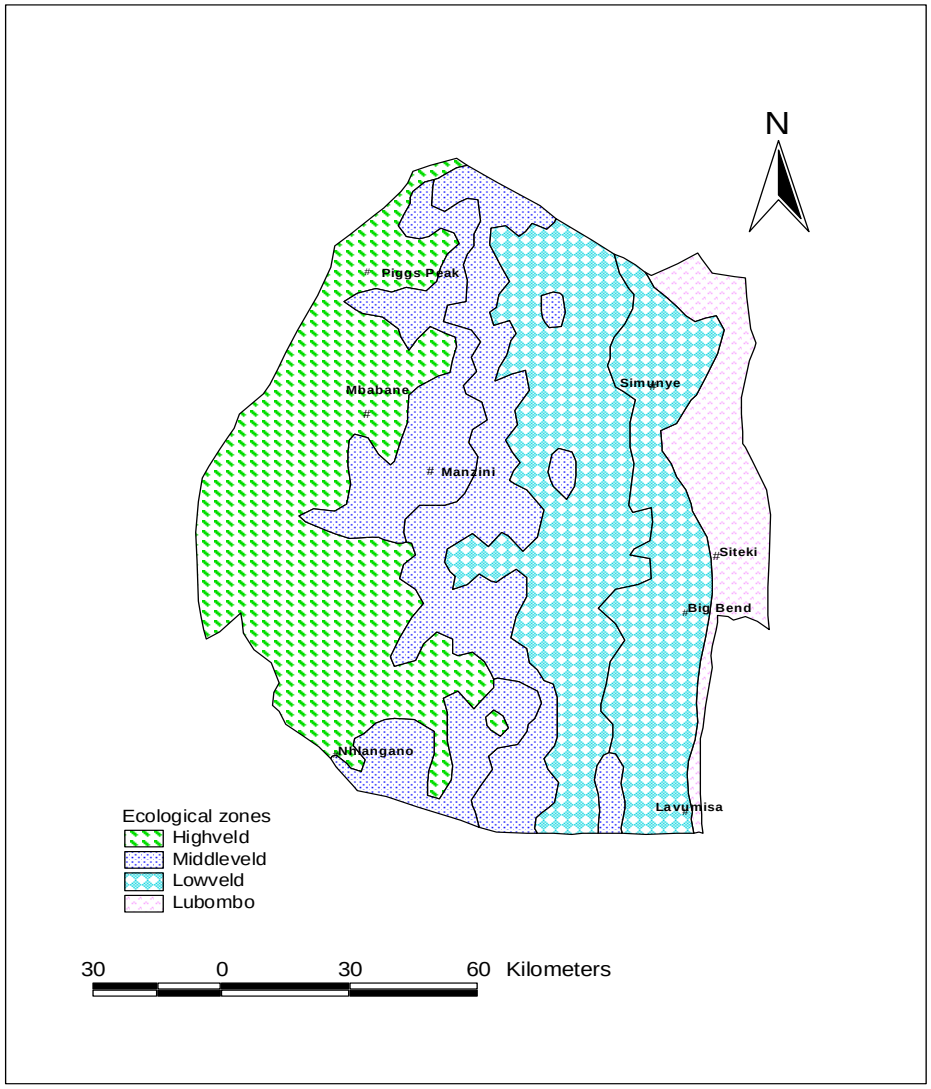
The total milk production from the national dairy herd for the past four (4) years is indicated in Table 1.

Table 1. Local Milk Production for the Past Four (4) Years

Year	Title Deed Farms	Swazi Nation Land Farms	Total Litres
2006	5,313,090	2,497,980	7,811,070
2007	4,981,083	2,341,885	7,322,968
2008	4,997,794	2,349,742	7,347,536
2009	5,117,493	2,406,019	7,523,512

Local milk production has increased steadily during the last three years. This can be attributed to the improvement in management of dairy herds and favourable weather conditions experienced in 2008.

Ecological Zones


N
Piggs Peak
Mbabane
Simunye
Manzini
Siteki
Big Bend
Nhlangano
Lavumisa
Ecological zones
Highveld
Middleveld
Lowveld
Lubombo
30 0 30 60 Kilometers

Geographic Description

Region	Altitude (m)	Temperature (°C)	Precipitation (mm)
High veld	1300	10 – 23	1016 – 2285
Midle veld	700	14 – 26	762 – 1192
Low veld	200	15 – 29	508 – 890
Lubombo	700	14 – 26	635 – 1016

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Comfort temperature zones for dairy breeds (*Bos taurus*) and beef breeds (*Bos indicus*)

Species	Comfort temperature zone (°C)	Temperature above which production decline (°C)
Bos taurus	5 – 25	25
Bos indicus	15 – 25	35

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4. Marketing of Dairy Products

The main strength of the country's dairy industry lies in the reasonably well developed marketing and distribution side of the milk chain. This is largely due to the combined effect of high import levels and the fact that the market is dominated by only few processors with good processing facilities and nation wide distribution network. The main products sold in shops, supermarkets and other outlets are indicated in tables 3 and 4 below. However, it should be noted that the setting of prices for dairy products sold in the market is determined by market forces and agreement between the buyer and seller.

4. 1 Raw Milk Marketing

There are two marketing channels for raw milk in the country namely informal and formal. The informal system is conducted in both the rural and urban areas where milk is sold fresh and in the form sour milk (traditionally fermented emasi). The formal system consists of processing plants who mainly add value to the raw milk sold to them thus produce dairy products such as yoghurt, ice cream, pasteurized milk and Emasi.

The price range for milk sold direct to customers (informal market) by milk producers is estimated at E4.00 to E8.00 per litre whilst the formal market offers up to E4.00 maximum attainable price per litre inclusive of milk quality.
Milk sold to the major dairy plants in the past four (4) years is indicated in Table 2.

Table 2. Milk Sold to Major Dairy Plants in the Past Four Years.

Year	Total Production (Litres)	Formal sales (Litres)	Informal sales & other Uses (Litres)
2006	7,811,070	1,584,717	6,226,353
2007	7,322,968	1,463,509	5,859,459

2008	7,347,536	2,170,447	5,177,089
2009	7,523,512	2,429,256	5,094,256

Table 2 shows that the informal market consumes about 75% of the total milk produced per annum. The reason for selling milk direct to the consumer and retail outlets by milk producers is to get better returns than what the major dairy plants pay per litre.

5. Milk Processing

Currently there are four milk processors in the country namely Parmalat Swaziland, Valley farm, Saligna and Dalcrue. The first two are large and saligna and Dalcrue are slightly smaller. Both Parmalat and Valley farm operate below capacity due to shortage of milk and other reasons. During the last four years the performance of the country's processors is indicated in Table 3. (2009 figures are tentative, one processor hasn't submitted quantities processed in 2009).
There is a huge potential for dairy farming and processing in the country.

Table 3. Locally Produced Dairy Products.

Product Name	Quantity (kg/L)			
	2006	2007	2008	2009
Dairy Juice	908,732	930,190	936,251	941,991
Emasi	2,627,782	3,482,959	4,056,094	3,795,163
Fresh Milk	597,330	882,950	898,917	292,286
Ice Cream	342,500	396,032	337,472	340,801
Yoghurt	164,620	184,365	206,536	233,860
TOTAL	**4,640,964**	**5,876,496**	**6,435,270**	**5,604,101**

Table 3 indicates that the quantity of locally produced dairy products is increasing annually which is a good indication of their competitiveness in the market. There is no UHT processing plant in the country.

6. Imports of Dairy Products

Swaziland is dependent on imported dairy products to satisfy consumer demand that is not met by local supply. The country sources over 90 % of her imports in the Republic of South Africa. Imports of dairy products for the domestic market are significant both as ingredients destined for some of the locally processed dairy products and as finished products that are ready for consumption. The value of imported dairy products is estimated between E103 million to E160 million per annum. In the past four years the following quantities of dairy products were imported into the country:

Table 4. Quantities of Imported Dairy Products

Product Name	Quantity (kg/L)			
	2006	2007	2008	2009
Baby Formula	476,66.11	89,924.61	186,086.10	131,835.62
Butter	60,379.00	39,404.01	32,617.98	53,197.59
Buttermilk	1,790.20	1,319.23	96.00	0.00
Buttermilk Powder	1,822.00	30,000.00	87,471.00	119,885.00
Cheese	535,422.25	386,622.01	387,452.03	398,283.41
Condensed Milk	12,949.92	48,187.51	43,310.66	8,830.74
Cream	103,650.23	68,139.19	66,756.00	61,657.41
Custard	48,853.19	53,483.63	73,269.69	71,401.80
Dairy juices	240,826.91	227,733.78	333,726.71	502,544.38
Dairy Powder Blends	2,656.80	27,635.40	3,932.00	3,590.28
Emasi	282,077.59	267,255.47	265,225.64	270,954.11
Flavoured milk	105,488.79	31,947.58	30,052.99	16,957.72
Fresh milk	24,289.84	337,756.67	380,392.66	321,644.80
Full cream milk powder	237,946.47	376,378.21	309,652.37	273,159.04
Ice Cream	416,837.45	506,031.41	226,894.19	178,969.87
Skim milk powder	81.70	15,000.00	13,225.00	8,032.00
UHT	3,090,099.95	3,626,542.03	4,785,263.07	5,431,205.31
Whey powder	341,597.00	179,111.00	530,365.00	579,930.00
Yoghurt	1,617,171.08	1,085,939.91	1,298,910.19	972,245.36
TOTAL	**7,171,606.50**	**7,398,411.65**	**9,054,699.27**	**9,404,241.44**

Table 4 reveals that there is a strong demand for dairy products as the quantities of dairy products imported over the past four years increases annually. Among the imported dairy products that go direct to the dairy market UHT commands higher quantities than the rest.

7. Export of Dairy Products

The country's dairy industry does not contribute much on the export front and has only afforded to export from 168,000 to over 384, 000 Kg dairy juice concentrates to Malawi between 2006 to 2009, yet there is a huge dairy export potential in the country because of its position in the region.

8. Dairy Products on Transit

Dairy products from the Republic of South Africa pass through the country on transit to Mozambique. This shows that there is a potential for the country to produce dairy products and sell to our neighbours. For instance the quantity of UHT milk on transit to Mozambique has increased from 30,000 litres per annum in past years to over 500,000 litres in 2009.

9. The Role of the Swaziland Dairy Board

The Swaziland Dairy Board is a public enterprise wholly owned by the Swaziland Government. It was established in 1971 under the Dairy Act No. 28 of 1968. As provided in the Act, the Board's primary function is to develop and regulate the industry. The Board's role is to complement the Government's efforts through the provision of a supportive socio-economic environment for the development of the dairy industry aimed at achieving food security, poverty reduction, investment promotion, job creation and export promotion.

The Board is expected to coordinate, harmonize and, where necessary, regulate the activities of all stakeholders in a cost effective manner, and ensure efficiency in milk production, processing and distribution of dairy products in the local market. It also enforces the statutory activities of producers, processors and distributors.

In an effort to revitalize the dairy industry, the Board has established the Dairy Industry Stakeholders Coordinating Committee (DISCC), which is aimed at discussing and resolving any issues involving the dairy industry stakeholders for the benefit of increasing milk production. It is through this committee that the Board successfully negotiate for improvement in price of milk purchased from local dairy farmers.

In addition to the above the Board is involved but not limited to the following activities:

- To ensure that processors are discouraged to use a lot of imported milk substitutes instead of purchasing locally produced milk from dairy farmers. This involves putting an incentive to processors through the use of the rebate facility against compulsory quantity of raw milk to be purchased from local farmers.

- To speed up the development of the dairy industry by offering the needed support and or technical assistance geared towards the stimulation of large scale investments in milk production. The Board will no longer concentrate on small scale milk producers only but offer services that include medium scale milk producers and the whole chain of the dairy industry.

- Prepare and advise the government on appropriate production standards with a view of ensuring quality and holistic approach towards the development of the dairy industry.

- Build up a team of specialists with the capacity to provide market driven dairy development programmes.

- To assist smallholder farmers to get dairy farming inputs and equipment that is readily available locally and in the Republic of South Africa in order to boost local milk production.

- On another note the Board has been able to successfully implement the market price deregulation strategy and will continue to do so sometime in future. The implementation of the deregulation strategy has been meant to stimulate production and investment in all the phases of the milk chain. The uncontrolled milk prices tend to encourage competition through improvement in production and marketing efficiency of dairy products for the benefit of consumers.

- To provide a leveled playing field for all the key role players involved in the development of the industry and remove all forms of monopoly to encourage competition and efficiency in production, marketing and distribution of dairy products for the benefit of consumers in the country. The major emphasis is on fair play, competitiveness, efficiency and sustainability of the dairy industry without any form of

monopoly or preferential treatment to role players involved in the development of the dairy industry.

- To institute and allow strategic importation of raw milk for processors when local milk supply is exhausted or inadequate.

- To monitor the quantities of certain imported dairy products versus quantities produced locally. Where necessary the Board should raise the levy charge on imported dairy products that start to negatively affect local production.

- The Board is also looking at the promotion of goat milk production and is currently working with the Ministry of Agriculture to find a source for the goats. Goat milk has been found to have a number of advantages over cow milk and has a potential in Swaziland.

- Notwithstanding all the threats and unpredictable adverse economic and environmental changes in the future, the Board is committed to face all the challenges of the dairy industry and remains optimistic about its future as it has done so in the past.

10. CONCLUSION

The Board's main priority in the development of the dairy industry is to ensure that domestic milk production is promoted and developed faster than the other milk phases. This approach is necessitated by the fact that the main strength of the country's dairy industry lies in the reasonably well-developed marketing and distribution network whilst its underlying weakness is its very narrow milk production base. This means that at the moment any investor interested in establishing a processing plant would do so on locally produced and imported raw milk as well as other finished products that serve as input material for processing purposes such as milk powders.

APPENDIX I: SWOT ANALYSIS FOR THE DAIRY INDUSTRY

1. **Strengths**

- The country has favourable agro-ecological base for profitable dairy production.It has good fertile soils; favourable climatic conditions ranging from the cool moist Highveld to hot and dry grassland. Many rivers and adequate rainfall, which allows good fodder production under both irrigation and rainfed.
- Swaziland has good basic infrastructure comprising of adequate roads, telecommunication, dams and electrification. This allows accessibility of potential areas: smooth running of dairy business as well as easy collection and distribution of milk and milk products.
- Swaziland has relatively high milk consumption rate (estimated at 49L/Head) which is guaranteed market for dairy products.
- The market price deregulation allows a competitive market within the dairy industry
- Availability of the levy revenue, which is used in development issues within the dairy industry
- Ability of the Board to remain competent in the development of the dairy industry
- Swaziland is politically stable
- The country is boasting of advanced and efficient transport and telecommunication systems
- Active political support for the development of the dairy industry and a conducive climate for business growth in the country

2. **Weaknesses**

- High dependence on imported dairy products, which negatively affects the country's economic growth
- The domestic production growth rate of dairy products is lower than the population growth rate

3. **Opportunities**

- Strong domestic demand for dairy product, which exceed supply
- Strong regional demand for dairy product, which exceed supply that is in Mozambique and South Africa
- Adequately trained personnel on principles of dairy production and management.
- The trained personnel forms a pool of good business partners and workers for investors

- Declaration of the industry as an infant industry, so it will remain protected from importation of dairy products that are produced locally using the DairyAct,1968 and regional support systems
- Formation of the Dairy Industry Stakeholders Coordinating Committee (DISCC), which is a good communication platform for matters negatively affecting the development of the dairy industry
- Availability of the land resource, which is only meant for dairy production investments
- Efforts by SDB to encourage milk processors to buy raw milk from local farmers through the rebate facility
- Assistance by SDB in helping farmers get the dairy farming inputs and equipment that is readily available locally and in the Republic of South Africa
- Campaigns on agricultural diversification, which could result in some farmers opting to grow animal feed raw materials thus reducing feed costs in milk production
- Efforts by SDB to ensure sustainable local fodder production, which guarantees constant animal feed supply
- The dairy industry has relatively low disease risk due to efficient/effective veterinary services
- The two major processors available in the country currently operate below 50% of their capacity because of short supply in milk
- Prospects by SDB to facilitate establishment of a UHT processing plant, will provide a long term market for locally produced milk

4. **Threats**

- The prevailing HIV/AIDS pandemic, which has a negative impact on the whole agro-based industry
- The prevailing drought situation and climate change that adversely affect production in agricultural enterprises

APPENDIX 2: ACHIEVEMENTS

The Swaziland Dairy Board through its Dairy Development department is responsible for provision of support and advisory services to farmers. Services delivered to farmers include, among other things, resource assessment for starting dairy farmers, citing and construction of dairy structures, forage production and conservation, perennial and winter pasture establishment and management, procurement of hay and dairy cattle from the Republic of South Africa, artificial insemination coupled with heat detection, dairy cattle feeds and feeding, proper milking and clean milk handling, calf rearing, record keeping, dairy herd health and its application, milk marketing, general farm management, formation of farmer groups; coordination of activities for dairy farmer groups and management of communal milk collection centres.

2.1 Artificial Insemination

There has been an increase in the demand for the service due to the increasing number of dairy animals. A number of dairy farmers have emerged and existing ones have expanded.

The Board through its Dairy Development department continued to provide artificial insemination (A.I) services to dairy cattle for milk producers in all the regions of the country. The A.I services included synchronization of oestrus, breeding of cows/heifers and general dairy farm management to improve the dairy herds.

During the past financial year 220 dairy cows/heifers were bred using Artificial Insemination. Amongst the total of cows/heifers bred, 35 were synchronized at cost in all the regions of the country.

2.2 Dairy Cattle Purchase

The Board continued to scout for dairy cattle from the Republic of South Africa and they also assisted dairy farmers procure the animals. A total of 105 dairy cattle were purchased and imported into the country during the past financial year. The unavailability of dairy cattle in the country has posed a problem as there is always a number of farmers on the waiting list. There is a need to establish local sources for the dairy animals.

2.3 Training and Extension

(a) Farm Visits Technical Advice to farmers

Technical advice and dairy husbandry practical services were offered to dairy farmers during specific farm visits to address their problems and equip them with certain skills required to improve performance on their farms. A total of 1015 farm visits were carried out covering the four regions of the country in the past financial year.

(b) Workshops

(i) Intensive Dairy Course

A total of four courses (for dairy cattle) were conducted in the past year. Total attendance was 105 farmers. The training program covers a number of topics including:

- Requirements and Preparations for Starting a Dairy Enterprise
- Dairy Cattle Feeding
- Dairy Cattle Breeding and Selection
- Clean Milk Production
- Disease Prevention and Control in Dairy Cattle
- Milk Collection and Storage
- Business Plan Preparation
- Business Management of a Dairy Enterprise

(ii) Day Time Training

These training workshops are in different levels and include those conducted at Tinkhundla and community centres.

A total of 9 workshops with a total attendance of 150 were carried out in the regions.

2.4 Degree Programme in Animal Science (Dairy Option)

The proposal for a degree programme (Dairy Option) at UNISWA was approved and started in August 2009 with 7 students forming the first group. This programme will help provide the much needed pool of experts for the dairy industry.

2.5 Farmer Groups Promotion

The SDB has continued to mobilise farmers particularly small scale dairy farmers to form groups in order to enable them to handle the marketing of their produce as well as sourcing inputs and other services. A number of farmer groups have been formed and some of them are in the process of securing milk coolers. The Board continued to promote formation of farmer groups by producers. This is meant to enable them to have better access to formal markets for their milk and to have a better bargaining platform for producer price negotiations.

List of Dairy Farmer Groups in Swaziland

FARMER GROUP NAME	REGION	LOCATION	NUMBER OF MEMBERS	STATUS
Malindza Dairy Farmers Association	Lubombo	Malindza	15	At group formation and unregistered
Lambabhi Dairy Farmers Association	Manzini	Lamgabhi (Bhunya)	21	At group formation and unregistered
Nquthu Dairy Farmers Association	Shiselweni	Somntongo	13	Registered and group seeking funds to establish new dairy unit
Vulamehlo Dairy Farmers Association	Shiselweni	Vusu	10	Registered and group seeking funds to establish new dairy unit
Phangweni Dairy Farmers Association	Shiselweni	Phangweni	11	Registered and group seeking funds to establish new dairy unit
Shewula Dairy Farmers Association	Lubombo	Shewula	15	Registered and group seeking funds to establish new dairy unit
Sengani Dairy Farmers Association	Hhohho	Mayiwane	30	Operating a milk collection center and input supply shop. Registered and group seeking funds to establish new dairy unit

Mpaka Dairy Farmers Association	Lubombo	Mpaka	14	Registered and owns a milk collection and cooling center which is not operating due to shortage of milk
Luyengo Dairy Farmers Association	Manzini	Luyengo	30	Registered and operating a milk collection center
FARMER GROUP NAME	**REGION**	**LOCATION**	**NUMBER OF MEMBERS**	**STATUS**
Siphila Ngekuseng a Dairy Farmers Association	Hhohho	Sihhoye	14	Group has a milk collection center that is not operating due to shortage of milk
Phumelela Dairy Farmers Association	Hhohho	Ntfonjeni	28	Registered and group eager to establish a milk collection center
Hhukwini Dairy Farmers Association	Hhohho	Hhukwini	13	Registered and group seeking fund to establish a milk collection centre
Lamatsaki Dairy Farmers Association	Shiselwe ni	Lulakeni	12	Registered and group seeking fund to establish a milk collection centre and expand the dairy units
Mpakeni Dairy Farmers Association	Shiselwe ni	Mpakeni	11	Registered and group seeking fund to establish a milk collection centre and expand the dairy units
Mashobeni South Dairy Farmers Association	Shiselwe ni	Mashobeni	19	Registered and group seeking fund to establish a milk collection centre and expand the dairy units
Lidwala	Hhohho	Nkhaba/Hawa	8	Registered and

Dairy Farmers Association		ne		group seeking fund to establish a milk collection centre and expand the dairy units
Sibuko Saka Lomahasha Dairy Farmers Association	Lubombo	Lomahasha	12	At group formation and seeking funds to establish dairy units and a milk collection center
FARMER GROUP NAME	**REGION**	**LOCATION**	**NUMBER OF MEMBERS**	**STATUS**
Chubekani Dairy Farmers Association	Manzini	Dwalile	7	Registered and group seeking fund to establish a milk collection centre and expand the dairy units
Mkhiweni Dairy Farmers Association	Manzini	Ngonini	30	At formation and unregistered
Velezizweni Dairy Farmers Association	Manzini	Velezizweni	9	Registered but most members are not active and group is not progressing
Mabhukwini Dairy Farmers Association	Manzini	Mangcongco	8	At group formation and unregistered
Bhadzeni Dairy Farmers Association	Manzini	Bhadzeni	13	At group formation,unregistered and seeking funds to establish dairy units
Tjendlovu Dairy Farmers Association	Shiselweni	New Heaven	10	At group formation, and unregistered
Ngudzeni No.1 Dairy Farmers Association	Shiselweni	Ngudzeni	15	At group formation, and unregistered

Ngudzeni No.2 Dairy Farmers Association	Shiselweni	Ngudzeni	15	At group formation, and unregistered

APPENDIX 3: CHALLENGES

3.1 Shortage of fodder during the dry season

The recurring drought poses a problem for dairy farmers during the dry season. A large number of small scale dairy farmers are most affected.

3.2 Limited Access to Veterinary services

Limited access to veterinary services (Vet officers in particular), by farmers continues to be a major constraint. The veterinary service provided by government is not readily available to dairy farmers due to the shortage of them in the country

3.3Lack of credit facilities for establishment of dairy project.

Financial institutions still find it risky to offer loans for agricultural enterprises such as dairy.

3.4 The unavailability of dairy cows for farmers locally

Local farmers spend a lot of money buying dairy animals from South Africa. This is a costly exercise for both the farmer and the Board.

3.5. The high costs of inputs i.e. feed

High input costs such as feed cost are a major contributor to high production costs. Animals feed though manufactured in the country most of the raw materials are imported at higher prices.

3.6 Quarantine Facilities for Dairy Animals

There is a need to have quarantine facilities to cope with the increasing number of dairy cattle imported from outside the country. The present facilities offer limited services in this regard.

4.8. Death

The death of proprietors has a negative impact on the development of the industry.

APPENDIX 4: INITIATIVES

The dairy industry in Swaziland has without doubt opportunities in the various levels of the value chain. The Board continues to ensure that an enabling environment is created and maintained for business in the dairy sub-sector.

4.1 Local Market Share Promotion

The Board is in constant contact with the various industry role players to ensure that their operations run smoothly and that all have a fair share in the local market. SDB has to ensure that a win-win position is achieved by stakeholders in their operations.

4.2 Investment Promotion

In its development function the Board is involved in luring investors both local and foreign into the dairy industry at all levels of the value chain. In working with Swaziland Investment Promotion Authority (SIPA), SDB is able to make contacts and be connected with foreign investors wishing to invest in the country- availing information on the opportunities available in dairy.

4.3 Local Semen Collection and Processing

Some local good bulls need to be saved in the form of semen straws to ensure their use long after their death through whatever cause. This requires that semen collection centre is established to collect semen for both cattle

and pigs. Such plans are essential to provide future services to the livestock industry. Project proposals are being prepared in this respect.

4.4 Milk Collection from the Indigenous herd

To boost future milk production, the Board has started to work on the project of collecting milk from the local beef herd. Milk cooling tanks will be purchased as soon as possible and distributed in the various community centres where farmers will then sell the milk collected from their beef herds to the milk collection centres. The milk will be stored under favourable conditions and then sold in bulk to processors, neighborhood care points, Clinics, Schools or willing buyers. It is envisaged that such an initiative will stimulate milk production from the local beef herd as farmers start reaping the benefits in the form of increased income from the milk sales.
In the initial stages the project is expected to collect about 8,141,580 litres of milk (i.e. from 10% of the national total female population of cattle in Swaziland) valued at E24,424,740 over a maximum period of six months. Out of this figure, 4,956 cattle owners (i.e. from 10% of the number of cattle owners in Swaziland) and 39,650 beneficiaries (at an average of 8 beneficiaries per family) will benefit from the project and will increase in the medium to long term.

4.5 Crossbreeding the local indigenous herd with exotic dairy breeds

The Board will soon embark on crossbreeding the indigenous cows / heifers with exotic dairy breeds to produce a generation with high milk production potential per animal while being well adapted to the local environment so as to boost future milk production in the country.

4.6 Promoting the consumption of milk and dairy products

The Board will continue promoting the consumption of milk and dairy products through the dairy day in collaboration with the industry's stakeholders even this year (details will be provided in due course once the organizing committee is in place).

4.7 The incorporation of dairy products in the school feeding programme

SDB intends to sell the idea of incorporating milk and milk products as part of the school feeding food programme to the Ministry of Education for the high nutritional value of milk and its products.

4.8 The 2-point milking machine project

A 2-point milking machine is a mobile electric milking machine that milks two cows at a time.

As a result of the challenges farmers face when milking animals by hand (such as milk being retained in the udder of the animal during hand milking), the milking machines will be purchased and rented- out to farmers within the four regions of the country for use in milking their animals thus improving milk harvesting per cow.

4.9 Community Based Artificial Insemination project

The project will involve the training of individuals within communities in artificial insemination with an ultimate aim of producing proficient inseminators. These inseminators will provide services to cattle owners mainly within their communities at cost to generate income for themselves. It is expected that they will provide services to cattle owners on time and relieve the Swaziland Dairy Board from driving long distances to provide similar services that tend to be too costly to provide. The technicians will provide artificial insemination (A.I) services to individual dairy farmers and their farmer groups as well as beef cattle to generate purebred and crossbred animals.

4.10. Utilisation of Government farms

In the 2010/2011 financial year, the Board would be pleased to see most of the Government farms currently lying idle being converted into dairy farms on a large scale basis or dairy farms run by farmer groups. This approach will increase overall milk supply in the country and also improve the nutritional status of the population.

4.11. Mobile testing kits

The Board also intends introducing mobile testing kits as part of its quality control exercise. These will be used to test dairy products for quality.

4.12. In Service Training of Vet. Assistants and Animal Health Technicians

There is a dire need for veterinary services to farmers. Presently dairy farmers depend on veterinary services provided by government which is in most times not available. In order to support a growing industry the need for such services will increase. There is a need to create a pool of veterinary expertise including vet, paravets and animal health technicians through training and this can be less expensive in terms of money and time yet effective.

4.13. Zero Grazing

This is a system where the animals are not allowed to graze (the feed is taken to them.
The Board also intends encouraging dairy farmers to keep their animals under this system so as to improve milk production.

4.14 Proposed field tour to East Africa by SDB, MOA extension officers, The University, Farmers and Processors.

4.15. Promote keeping of dairy goats for commercial purposes.