

# Linking supply and demand for dairy products in Comesa

by Moses Nyabila, dairy trade specialist, Rates

**Kenya is said to be home to a dairy herd more than three million strong. This is probably 70% of the total dairy herd in Africa and equal to that of New Zealand. Kenya produces approximately three billion litres of milk per year, compared to New Zealand's 15 billion litres. Kenya controls less than 1% of the total African cross-border trade in dairy products, whereas New Zealand supplies 30% of the world market.**

Africa accounts for less than 2% of world trade. New Zealand and Australia directly – or indirectly – account for over 80% of dairy volumes traded in Africa.

Many factors may account for the huge disparity in performance. Among the most notable are chain efficiencies, market access, and the ability to take advantage of what the market has to offer. However, few people fail to notice the potential of the current situation in Kenya. The most widely debated aspect about Africa, is the continent's potential.

## Background

Between 1997 and 2002, Comesa member countries are said to have imported over US\$550 million worth of dairy products. Less than 5% came from other member countries. Rates and Ecapapa conducted a study in the eight Comesa member countries of Kenya, Uganda, Tanzania, Malawi, Mauritius, Zambia, Rwanda and Ethiopia. The study revealed huge potential for increased trade in an assortment of dairy products. The opportunities included the unutilised capacity of more than 50% of cyclical, seasonal surpluses and deficits, emerging regional retail chain networks, and a Comesa free trade area. What also emerged from this and other surveys is how the dairy trade is fragmented to a point of being dysfunctional.

Without any organised cross-border supply networks, the dairy industry has proved unresponsive to seasonal changes in supply and demand situations. Comesa, and by extension Africa, consists largely of tiny, inefficient country enclaves that are guarded by a combination of high tariffs and often unpublished revenue of non-tariff barriers. The result is persistent systematic shortages that put to question the private sector, national government and development partners' multi-million dollar investments to develop and grow the sector.

At almost no additional costs, but by rationalisation of capacity, dairy processors in Comesa have the opportunity to expand their business beyond the realm of their current projections. This expansion will result from employing a new approach to marketing and collaboration among stakeholders. In my view, roleplayers in different climate zones with a certain amount of excess capacity need to look at ways of collaborating. This can happen by forming supply networks to fill seasonal supply gaps that can also develop common export brands to form synergies. An example of this is when processors from Uganda, Zambia, and Zimbabwe, who currently supply their neighbouring sectors of the DRC, can develop a common single brand of UHT milk, as well as a market-specific marketing campaign.

## Processors with regional ambitions face three key choices:

- ▶ Substantially increase their processing capacity to meet year-round demands in multiple markets
- ▶ Buy into companies with similar product lines in a number of countries
- ▶ Form strategic supply alliances with processors in strategic countries.

To reclaim a fair trade share, Comesa processors have to find ways to link milk producers with diverse consumers all over the continent and beyond, via a responsive value-chain grid that includes the region's geography. This grid will deliver better returns to farmers, processors, traders, as well as provide consumers with value for money.

Governments and businesses must realise how small our markets are. They should also realise the irony of giving away 95% of our regional trade opportunities to New Zealand and Australia.

### **Trade opportunities**

Comesa countries imported dairy products worth US\$500 million in five years. This translates to an annual cross-border trade of US\$100 million. Only 5% came from Comesa countries. Assuming an import duty of 25%, this trade translates to US\$125 million in market terms. A retail audit in a majority of Comesa markets reveal gaping opportunities in the form of limited pack variations, missing product lines, 50-100% higher retail prices, seasonal out-of-stock situations, to mention only a few. Moving the availability score from an average of 20% to 30%, could easily increase intra-Comesa trade volumes by 50%. This raises the new value to over US\$190 million.

The following factors represent underlying opportunities for increased trade dairy businesses in Comesa can use to expand trade and enhance their long-term returns on investment goals.

### **Surplus and deficit countries**

Comesa has a mixed bag of milk surplus and deficit countries that resulted from long periods of investment differentials and comparative advantages. With some level of marketing effort and improved access, there should be a visible increase in trade between the milk deficit and surplus countries.

### **Seasonal supply cycles**

Like all things agricultural, the weather determines milk production levels. In most African countries, milk yields fall by more than 50% during drier periods that last up to six months per year. Due to the limited capacity to process long-life dairy products, many countries experience predictable periods of scarcity and

surplus. Countries to the north, south and east experience different weather patterns. This enables possible periods of imports and exports in almost the entire Comesa.

### **Transnational retail chains**

Shoprite Checkers, Metro Cash and Carry, Uchumi and Imalaseko are examples of retail chains that have ventured out of their home countries by opening one or more outlets in other countries. Shoprite Checkers is emerging as dominant retailer in five out of the eight countries, where the Rates/Ecapapa studies were conducted.

It is the practice of most retail chains that a listing of one of their outlets earns a product almost a guaranteed entry into all other markets. By supplying Shoprite in all countries, it operates in Comesa, from Mauritius to Angola, and Bulawayo to Cairo. Kaposhi Cheese Zambia, for example, has an opportunity to become a continental brand. It is therefore evident that this single development greatly enhances market access.

### **Free Trade Area (FTA)**

Tariff is the single largest contributor to depressed trade in dairy products in the East Africa Community (EAC) countries – 25% for Tanzania, an effective rate of 18% for Kenya, and 17% for Uganda. Compared to 2000-2001, when dairy was zero-rated, Uganda's dairy exports have shrunk from US\$3 million to US\$300 000 in 2003. By reducing entry prices, increasing trade margins and protecting the regional market from international dairy giants, the FTA offers a real prospect for increased dairy trade. The combined impact of high tariffs and high freight charges is detrimental to trade initiatives. Comesa countries will begin to register growth in dairy trade – only when the FTA is expanded.

### **Idle capacity**

Most dairy plants in Comesa are operating at a capacity of less than 40% utilisation. Excess capacity, where accompanied by abundant low-priced milk during the long rain season in Kenya and Uganda, is the "low-hanging fruit" for increased cross-border trade in Comesa. A combination of marginal process costing and low-priced raw milk is a big incentive for importers to order in bulk and stock up for the low season.

## Transnational dairy processors

Dairy processors with subsidiaries in one or more countries are contributing towards lowering the barriers for trade among affected countries. The emerging transnational operations include Parmalat SA and Zimbabwe's DairiBord. Lately, Brookside Kenya has also been involved. Transnational companies usually lobby for more favourable trade systems among the countries they operate in. This often leads to reduced tariffs and non-tariff barriers.

Transnationals also enjoy better access to two or more markets, due to commonality of brands and readily available distribution structures. Since DairiBord's acquisition of a Malawian subsidiary, Zimbabwean dairy exports to Malawi have increased drastically – at the expense of Zimbabwean processors. As more companies build partnerships across national borders, governments will increasingly find it difficult to maintain steep trade barriers.

## Privatisation

Privatisation results in a number of trade-friendly outcomes. Privatised establishments tend to be more efficient. These establishments also tend to market their products more aggressively, which leads to a probable increase in export. In many instances, privatised companies end up as subsidiaries of companies from neighbouring countries, which leads to increased trade (as demonstrated above).

## Transnational suppliers

Transnational suppliers of packaging, ingredients and equipment tend to create uniformity in taste, packaging and product quality. Some suppliers encourage trade among their customers, by providing reference, guarantees and other networking arrangements. Tetrapack is an example of a transnational supplier that continues to influence regional trade in dairy and other packaged food.

## Other trade

Initially, dairy can piggyback on the expanding efforts of other food exports. Cross-border traders of juices, cooking oils and bread spreads, to name only a few, can easily take up distributorship of UHT milk, milk powder and cheese.

## Benefits

When ignoring the usual benefits of a regional trade grid, the single biggest item worth mentioning, is that it makes dairy companies' operations more viable through improving efficiency.

***“Africa accounts for less than 2% of world trade. New Zealand and Australia directly – or indirectly – account for over 80% of dairy volumes traded in Africa”***

## Avenues for increased regional trade

There are various trading arrangements that are certain to contribute immensely to an evolving continental trade grid. This positive move will eventually bridge the gap between dairy producers and consumers in Africa and beyond. By continuously challenging their role in the value chain, seeking new ways of maximising efficiency and future returns, processors in the Comesa region may be setting themselves up for business levels way beyond their most optimistic projections.

## Conclusion

Dairy businesses in Comesa, as well as the wider African sphere, need to step back and reassess the costs and returns associated with their present operations. Are there opportunities for increased efficiency, better customer delivery, or increased volumes by expanding to other markets?

By choosing to collaborate with other roleplayers, within and outside national boundaries, dairy traders will have set themselves on a journey towards a continental value chain grid. The grid is set to deliver unprecedented efficiency-related benefits to Africa. These benefits will come in the form of fair return to producers, value for money, consumer choice, as well as real return on investment to businesses along the value chain. *DMA*

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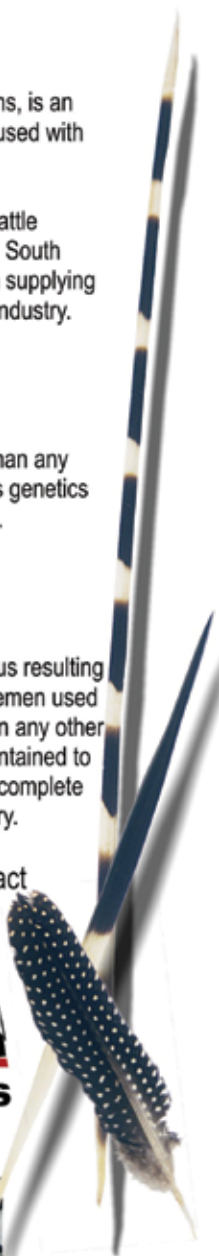
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# School milk – a global overview

*The importance of milk and dairy products in schools, says Dr Michael Griffin, commodity specialist (dairy products) with the Food and Agriculture Organisation (FAO) of the United Nations, lies not just in the size of the market itself, but also in its consumers – children.*

“Children represent an important market, not only because they drink more milk per head than adults, but, also because dietary habits established in childhood persist into adult life. Thus, children who drink milk and consume dairy products, regularly continue to do so as adults. While the home environment is important in determining preferences regarding food consumption, so is that of the school.”

While in some countries the principle of support to school milk from the public purse is still alive and well, he observes, in others such subsidies have either been abolished or reduced, often with a consequent negative effect on the quantity of milk distributed through schools. In some instances, school milk programmes have re-emerged with support from the dairy industry (farmers, processors and dairy associations) rather than governments. In such cases, support may not always take the form of subsidising the milk itself, but rather focus on the promotion of milk drinking in schools, leaving the milk to be supplied by commercial distributors. In instances where the government does not subsidise the distribution of milk in schools, legislation may favour school milk programmes; for example, by specifying the quantity of milk that should be made available to children in school lunches, or prohibiting the sale of competing products, such as carbonated drinks, in schools.

## Measuring results

Some twenty years after the government-funded school milk programme was abolished in Australia, a survey showed that milk accounted for only 4% of beverages consumed by children in schools. The importance of school milk within the liquid milk market of other countries surveyed varied markedly. In Thailand, for example, school milk accounts for 25% of the national milk consumption.

“In many countries,” says Griffin, “the development of school milk programmes has been associated with the growth in the national dairy industry. In some, for example Thailand, China, Brazil and Peru, the provision of milk to schools is specifically linked to national production. In other countries, Indonesia, Lesotho, the Philippines, Saudi Arabia and Swaziland, part of the milk served in schools comes from reconstituted imported milk powder. However, in most cases, there are efforts to replace imported milk with domestic products.”

In many people’s minds, Griffin points out, school milk is synonymous with milk being subsidised, or even handed out free. An FAO survey shows that in the majority of countries this is indeed the case. However, within the three categories of milk distribution – free, subsidised and full-cost – the scope and operation of school milk systems are extremely varied. While most countries either provide milk free or subsidise its distribution in schools, the issue of whether or not milk in schools should or needs to be subsidised, is increasingly a focal point for discussion. Except in the richest countries, school milk programmes can be an excessive strain on finances and, as a result, activities may decline because of a lack of funds.

In some cases, political decisions to end school milk subsidies, for example the ending of the free distribution of milk in schools in the UK, Australia and New Zealand in the 1970’s, resulted in a substantial drop in the consumption of milk in schools.

“In the past, in many instances where milk was supplied free in schools, the distribution system was inflexible and the product itself – typically unrefrigerated white milk – was unappetising. Indeed, some adults disliked drinking milk because of the way it was presented to them during their school years. Increasingly, however, milk in schools is being tailored to meet the demands of the consumers – children – rather than simply being presented as a bulk commodity.”

*continued on page 31*



# Milk communication pays

by Frank Maina, TanTrum Media

***Milk is a universally recognised food source, yet it is hardly regarded as a sexy beverage, such as a slinky soda pop. The task of selling nutritious products has always been a demanding one. For starters, the marketing world has often had a difficult time communicating natural products. Secondly, people often take milk's usefulness and importance for granted.***

Thirdly, milk producers – especially those in my home country, Kenya – have always experienced product shortages several times a year. This reduced the incentive to spend money on convincing consumers to use more milk.

However, investing in advertising does pay. Studies on generic milk marketing campaigns in the United States (USA) and the United Kingdom (UK) have shown that advertising increases milk consumption. In some cases, the positive effect extends to other milk derivatives. As a result of image problems, milk consumption was on the wane in these two countries. Consumers viewed milk as a dull product, compared to glitzy soft drinks. In the UK, which is famous for its tea drinking, consumer habit changes led to

reduced milk consumption. Consequently, the dairy industry was forced re-examine how its product was perceived.

This self-reflection gave rise to the “white stuff” campaign. The campaign aimed to expand consumption by creating a generation of milk snacking kids, who would influence the rest of the household. The campaign resulted in a dramatic change of fortune for the UK dairy industry. It reversed 25 years of declining volume sales, which drastically improved milk prices.

The returns extended to more than just an increase in milk consumption. It also included incremental profits. The new perception of milk among UK consumers allowed for product price increases. This, in turn, led to better prices at a farm level. Therefore, milk-advertising money is not just an expense, but a credible investment.

In Kenya (and possibly many parts of Africa) up to 60% of milk remains unprocessed, because of various reasons, such as processing capacity. Within this paradigm, advertising may not sound like a solution. Nonetheless, it is possible to curb milk wastage by motivating consumers to drink more during high season. In Kenya, a campaign that convinced consumers to drink processed milk, achieved success by ultimately providing consumers with a safety guarantee.

In most cases, generic milk industry groups and associations have been responsible for marketing campaigns. In the USA, a law governs milk marketing. Milk advertising funding allocates a part of levies collected from milk farmers for this very purpose. This guarantees funding continuity and aims to ensure even the smallest farmers benefit from the total industry efforts. Some farmers have complained about 'forced' advertising taxation. Nonetheless, the benefit seems to outweigh the cost. Some countries seem to have addressed these objections.

Most importantly, milk communication needs to go beyond clever advertising strategies to provide consumers with fresh reasons and opportunities to drink milk. Take, for instance, the case of the Chinese – a country whose people have a passion for green tea and a high incidence of lactose intolerance. (In a recent study, 10% of Chinese Americans tested lactose intolerant.) The Chinese population therefore makes up over 100 million non-consumers. Besides advertising, Chinese companies have taken to creating milk derivatives, acceptable as a post-dinner alcohol alternative. Toll free lines were established to receive complaints about milk. This created consumer confidence. The same companies have also created a home delivery system that makes it convenient for consumers to access the product. This eventually resulted in a delivery of 14 million tonnes of milk by 2002 – a 20% increase from 2001.

In Africa, the opportunity exists to address some of the seasonal capacity challenges through communication. When one considers the nutritional problems of our continent, consumer education is of great benefit. Milk remains one of the few food products that will continue to provide consumers, who are struggling financially, with a balanced diet. Educating consumers on milk's wholesomeness may more than just sell a few extra cases. Most importantly, it may save lives.

(With thanks to the *Wall Street Journal*, Rates Centre, USDA, ITV (UK) and Land O'Lakes. Contact Frank Maina at 254 722 531033 or e-mail Frank@tantrum.co.ke) DMA

## Supply and distribution

The supply of milk to schools can range from a nationally centralised programme, for example in the case of Denmark and Portugal, to a dairy having an arrangement with a single school to supply milk. In a number of countries, apart from the physical delivery of milk to schools, an umbrella body responsible for promotion may facilitate delivery and distribution.

One reason often attributed to the lack of development of milk in schools is that schools are unwilling to take on the administrative burden associated with its distribution. For example, teachers may be reluctant to supervise the distribution of milk in classrooms, perhaps having to collect and account for money, in addition to their other duties. Many programmes recognise that the administration of school milk places an extra burden on the school and seek to reduce this. For example, the dairy or distributor who delivers milk to the school may have the responsibility for stocking a refrigerated display cabinet with milk. Alternatively, payment may be made by parents to a central organisation, so the school is not directly involved in this aspect of the programme. In a number of instances, the school children themselves take on the responsibility for distributing the milk and collecting empty cartons within the classroom. In other cases, the school receives a commission on sales of milk, which can be used for financing activities or purchasing equipment.

"Experience shows that the fact that milk is more nutritious than competing beverages is not enough for it to maintain, let alone expand, its role in children's diets," concludes Griffin. "School milk programmes, therefore, represent an important vehicle for the promotion of milk. Such programmes are currently seeing a resurgence of interest and are enjoying a renaissance as more imaginative and appealing ways to presenting milk to children are sought. Children, and the food they eat, are influenced by an environment much wider than that of the school. However, school-based programmes provide an excellent opportunity to promote milk consumption among children and in so doing establish a life-time habit." TDM



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# Milk quality in Africa – managing safety issues

by Dr Antoine K Nguz



**Milk and dairy products are ‘complete foods’, and are therefore one of the best commodities for healthy nutrition. Regular consumption – particularly by children, pregnant women, the elderly and the sick – prevents anaemia, osteoporosis and vitamin deficiencies.**

Bacteriological testing that was conducted in several African countries show that a large number of milk and dairy product samples are contaminated with various bacteria, including *Brucella*, *Escherichia coli*, *Clostridia*, *Mycobacterium tuberculosis* and *paratuberculosis*, *Listeria*, *Staphylococcus* and *Salmonella*. All these can cause serious illness in people.

One can attribute the presence of the majority of bacterial pathogens to a combination of unhygienic milk and dairy product handling along the milk value chain. In addition, inappropriate processing operations and methods, as well as dysfunctional regulating, monitoring and enforcement systems compound the problem. The ultimate solution for managing this public health hazard is by implementing appropriate control measures, such as the ‘farm to table’ approach. These control measures are applied from production up to the point of consumption.

## Managing safety and quality

African countries’ milk value chain is very complex and involves many roleplayers. This makes it very difficult to control milk and dairy products’ safety. A practical solution is to collaborate with the main stakeholders, farmers, extension officers, milk collection centres, processors, retailers, consumers, Ministry of Health, Ministry of Agriculture, Bureau of Standards, and other interested parties.

This system implements and monitors specific activities related to assuring milk and dairy product safety at each stage of the value chain. Competent staff members agree upon, and technically implement, these voluntary product and process standards. The system is supported by chemical and microbiological tests conducted at each level in the chain. Processors who buy raw milk are also allowed to conduct inspections at the milk collection centres or farms.

***“African countries’ milk value chain is very complex and involves many roleplayers. This makes it very difficult to control milk and dairy products’ safety”***

A key aspect of assuring milk safety is the technical knowledge that flows through a dedicated community and competently trained extension services.

## Farm and processor suppliers

Different processes may apply on a case basis. A competent authority should certify these products as food grade or authorise products as food ingredients.

## Farm level

The quality of raw milk (and final products) starts at the farm. Farmers, who deliver milk to the milk collection centre or the processor, should fulfil a set of specifications related to the implementation of Good Agricultural Practices. Control measures implemented at farm level include



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herd certification, animal identification, water treatment, stainless steel cans, hygienic milking, mastitis testing and management, withholding period, as well as timely delivery of raw milk to the milk collection centres. The control measures aim to manage various risks that include pH value, aflatoxins, antibiotic and veterinary residues, zoonotic and bacteria in raw and fermented (sour) milk. These measures easily identify contamination sources and pathways.

### **Milk collection centre**

Within the rural communities, milk collection centres store milk from peasant farmers in a cooling facility. This is a critical step to incorporate peasant farmers' milk into the formal market. At this stage, control measures include platform tests, timely delivery, storage temperatures, cleaning and disinfecting cans and utensils, as well as training. The aim is to ensure that only raw milk, produced through hygienic procedures and transported in time, is collected for further delivery to the processor. The processors, the extension officers and the technical team carry out random inspections.

### **Processor level**

At the processor level, one needs to ensure that milk and dairy products are processed in an establishment that has implemented GMP (Good Manufacturing Practices), GHP (Good Hygienic Practices), HACCP (Hazard Analysis Critical Control Point) and a good management system. At this point, milk and milk products are tested for quality conformity, microbiological and veterinary drugs, antibiotic residues and chemical contaminants. This ensures traceability and credibility tools for processed dairy products. It also provides consumers with adequate information with regard to the storage, nutritional quality and shelf life.

### **Hawkers and retailers**

Peasant farmers can also fulfil the role of hawkers, when they sell raw or fermented milk directly to consumers. Most countries

normally prohibit the selling of raw or fermented milk produced from raw milk. Nonetheless, due to consumer preferences and tradition, this is practically impossible to enforce. The risks are similar to those found at the farm level. An efficient way to guarantee the safety at this level is by education and promotional campaigns, as well as by providing economic incentives and creating market linkages.

Formal retailers do not pose similar problems, as they only sell processed milk or dairy products. However, storage and display conditions of products need to be monitored for conformity.

### **Transportation**

Transportation plays an important role in the milk value chain. The microbial levels may increase – especially with the relatively high temperature ranges that support rapid growth. Raw milk in clean, stainless steel cans must be transported to the milk collection centre immediately after milking.

The transportation of the cooled milk from the milk collection centre to the processor can be done in cleaned and disinfected stainless steel cans or in an insulated tank. The temperature will not increase enough to jeopardise the quality, as long as the time restriction is respected. Transportation of all dairy products is also critical. This includes products with a short shelf life, as well as products with high added value. Cross-contamination, as well as temperature abuse, may occur over longer distances.

### **Consumers**

Educational and promotional campaigns primarily address food safety, as well as storage conditions and respecting shelf life.

One should never compromise the safety of milk and dairy products. Achieving the required quality promotes good health, and good nutrition. It is also a prerequisite for expanding milk and dairy product trade. This will ensure economic growth within the Esada region. A good step in the right direction is to convince all stakeholders to share responsibility. *DMA*



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# Milk quality in Africa – reviewing policy aspects

by Dr Antoine K Nguz

**Developing countries, including sub-Saharan Africa, are becoming more involved in international and regional food trade. There is a shift from traditional cash crop and raw material production to producing processed or semi-processed food products.**

The introduction of new foods into non-producing areas has caused the international food trade industry to grow substantially. As production, manufacturing, and marketing takes place in different countries, infectious agents can be spread from original processing and packaging points to places thousands of kilometres away. With the above in mind, the milk supply chain could potentially reintroduce new food safety risks in previously controlled, safe countries.

Milk is a well-known vehicle for food-borne diseases. Data on food-borne diseases in relation to milk in sub-Saharan Africa is scarce. A few, if any, technical papers have reported on this issue. In sub-Saharan Africa and other developing regions, most diseases caused by milk contamination, such as diarrhoea, will be recorded and treated for the problem and not the cause. This makes it difficult to document milk-related disease outbreaks.

## Country policy and regulations

Sub-Saharan countries are eager to trade at a regional or international level. Nonetheless, most countries without working quality control systems, find it difficult to cope with new international trends in food regulation and standard setting, as well as an efficient food control system, based on the *Codex* (*Codex Alimentarius* Commission Food and Agricultural Organisation/World Health Organisation).

Many Esada member countries have started to review their policies. The key question is how

to compile a uniform, consistent and comprehensive approach to safety and quality standards in the milk continuum.

Dairy is used as a means of poverty alleviation. As more people will have access to milk, there is a strong need for quality assurance systems to work. At the administrative level, there is a review of different institutions' overlapping responsibilities with regard to food legislation. The institutions involved should be better co-ordinated and the industry managed more efficiently. This will ensure that high-quality dairy products are produced. There is a shift of emphasis from end-product analysis to process control. This shift, in collaboration with a safety management system, such as HACCP, is needed to meet the expected outcome.

The comprehensive food policy identifies measures to control a range of biological agents, as well as to reduce the risk associated with physical and chemical hazards in the food continuum. One needs to ensure milk and dairy product quality and safety at each stage of the milk value chain, namely:

- ▶ Farm production
- ▶ Storage at the milk collection centre and processor
- ▶ Sale and resale by hawkers
- ▶ Processing
- ▶ Retail/food service
- ▶ Consumers
- ▶ Import controls.

The policy also defines training activities and makes necessary provision for educational information for consumers.

## Regional Harmonisation Standards development

During the first Esada Dairy Conference in October 2004, the following aspects were

defined to help harmonise food quality and safety standards:

#### **Standards development and harmonisation**

- ▶ Voluntary and mandatory
- ▶ Standards based on risk assessment
- ▶ Identifying responsible organisations in each country.

#### **Food safety and quality standards, as well as codes of practice along the dairy chain**

- ▶ List all dairy products in trade/or those with trade potential
- ▶ Mutual recognition of existing standards.

#### **Rationalising of the work of Bureaus of Standards, and Ministries of Agriculture and Health**

- ▶ Standards preparation and testing
- ▶ Role of third parties
- ▶ Regulatory functions.

#### **Capacity building**

- ▶ Infrastructure and equipment
- ▶ Manpower
- ▶ Testing facilities
- ▶ Accreditation and certification
- ▶ Participation in international activities.

#### **Co-operation between veterinary services**

There is a need to share information on disease and disease control systems. There should be common disease control, especially along countries' borders.

#### **Mechanism of trade disputes**

There is also a need for a joint regional information dissemination agent that targets trade regulatory requirements. Roleplayers also need to incorporate regional mechanisms to facilitate reporting and case settlement of SPS disputes.

#### **Education**

Depending on the country, the informal sector is responsible for 40-80% of milk trade. Therefore, policy changes aimed at formalising the informal sector have also been proposed. The following can contribute to minimising the risk of raw and processed milk products:

- ▶ Developing educational materials that promote improved hygiene during transport, distribution, storage and retail
- ▶ Raising and maintaining consumer awareness on how to handle milk and dairy products
- ▶ Sharing educational material with all stakeholders.

#### **Research**

Research is of paramount importance as it contributes to a greater focus on risk management. Roleplayers need to focus on:

- ▶ Approaches that provide practical information and contribute to reducing the public health risk of contaminated milk and dairy products
- ▶ Developing risk-based approaches aimed at preventing milk and dairy product contamination, or, identifying effective control measures to minimise contamination along the milk value chain
- ▶ Assessing the relative contamination risk along the milk and dairy value chain.

This review of dairy regulations at the regional level mainly focuses on improving dairy product quality and safety to increase regional trade in future. A key question is how to facilitate a more uniform, consistent and comprehensive approach to safety and quality standards and related requirements, combined with efficient, effective and adequate compliance and enforcement mechanisms. Another important factor to consider is how to ensure that legislation is current, coherent, rational, and user-friendly to allow for responsive and flexible administration. *DMA*

# For dairy quality and safety, talk to Dairy Standard Agency

by Ina Jordaan, managing director, Dairy Standard Agency, South Africa



**The importance of milk as a food needs no emphasis. Milk is also a highly perishable product, and is therefore subject to enormous wastage. Unless milk is processed timeously and effectively, it provides an excellent growth medium for bacteria that can and does cause disease.**

For economic and health reasons, therefore, it is essential that animals are disease-free and that milk and milk products are handled, transported, processed and packaged as hygienically as possible. At every stage of milk products' journey from producer to consumer, such products must be subjected to vigilant control to prevent the entry of harmful organisms, destroy those already present, and guard against early deterioration.

Conditions vary from country to country. Milk production and distribution present an entirely different picture in lesser-developed countries, than in highly developed countries. Many lesser-developed countries' climates support rapid milk deterioration unless properly processed, where the conditions in which the animals are kept and milked may be exceedingly unhygienic, where animal diseases communicable to man are common, where dairies are few and trained staff in short supply, and where the distribution of milk may be uncontrolled, haphazard, and wasteful.

The fundamental principles of producing wholesome and clean milk in developing countries are identical to those in developed territories. However, the implementation of basic principles of public health practices in dairy routines, encounters almost

insurmountable obstacles and difficulties. Public health will not improve effectively until it is combined with higher living standards and a change from a subsistence economy to a full economy.

The African dairy industry is following the example of the European dairy farmer. However, they require help to lift their entire environment to a satisfactory nutritional, sanitary and economic level. To introduce an adequate hygiene standard is extremely challenging. Healthy cattle and the provision of a suitable dairy and equipment are not sufficient to produce safe milk or milk products.

A health education programme that explains all the aspects of milk hygiene forms the backbone of clean milk production. It must, however, be combined with a general improvement in environmental and domestic hygiene, as well as economic incentives for the production of hygienic foods. The introduction of laws and penalties imposed on African producers often has the reverse effect to that planned. If the producer does not understand the reasons for food hygiene, he considers them unnecessary nuisances that he tries to avoid by all means. This is even more the case if discriminating customers do not force him to raise his hygienic standard of milk production. One must also consider the financial aspects. Because consumers must bear the costs of milk hygiene, it should be adjusted to their means.

Setting quality standards and regularly communicating these to consumers is essential. Combined with a monitoring programme to determine the status of products manufactured, this will give consumers confidence in the industry and its roleplayers.

## Dairy Standard Agency

The South African dairy industry took responsibility for dairy quality and dairy safety and appointed the Dairy Standard Agency (DSA). DSA is a section 21 company that was established by the dairy industry to be an expert and objective body that promotes:

- ▶ The improvement of the quality of milk and other dairy products
- ▶ The monitoring of products for compliance with the legal standards of milk and other dairy products
- ▶ Regular communication with relevant authorities as the official agency of the dairy industry with regard to food safety and quality issues.

### The work of DSA is extremely important for the:

- ▶ Primary dairy industry (dairy farmers)
- ▶ Secondary dairy industry (milk processors and manufacturers of other dairy products)
- ▶ Consumers.

Low quality milk and other dairy products will not only harm the image of and demand for dairy products, but also the South African consumer. From a nutritional and health point of view, milk and other dairy products play an important role in South Africa. Everybody should be able to share in the pleasure and benefit of consuming quality dairy products.

Milk and other dairy products compete directly and indirectly with products from other industries. Even the limited availability of sub-standard dairy products will impact negatively on the dairy industry as a whole.

The task of DSA is very challenging. To fulfil its role, DSA must always act in an objective and scientifically sound manner. Accordingly, the members of the board of directors have no business interests in the primary and secondary dairy industry. With regard to dairy technical matters, DSA uses the expertise of its technical committee that consists of experts in respect of dairy technical issues.

### DSA's role and functions are:

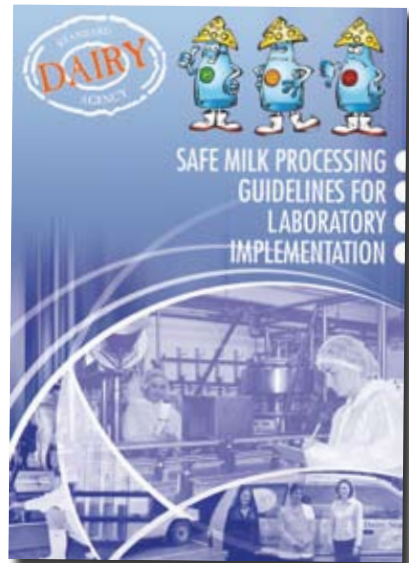
- ▶ Formally acknowledged and supported by the organised dairy industry – Milk SA, Milk Producers' Organisation (MPO) and South African Milk Processors' Organisation

(Sampro) and organised consumers (the SA National Consumers Union)

- ▶ Acknowledged by the retailing sector
- ▶ Acknowledged by the different government institutions responsible for enforcing the different legal standards and determining legal standards.

To promote the quality of dairy products and compliance with legal standards, a number of actions are necessary. As a result, DSA undertakes different projects, such as projects aimed at improving the primary and secondary dairy industry. Projects are also aimed at assisting government institutions to take action against regular offenders of the different legal standards.

Milk SA finances most of DSA's projects, from funds collected through the levies on milk and other dairy products in terms of regulations established by the Minister of Agriculture.



### Major projects of DSA include:

- ▶ The Local Authority Project
- ▶ Facilitating the prosecution of regular offenders of the legal requirements in respect of fresh milk and other dairy products
- ▶ Investigating complaints received with regard to compliance with legal requirements in respect of dairy products other than milk

- ▶ The DSA website at [www.dairystandard.co.za](http://www.dairystandard.co.za)
- ▶ The Dairy Quality Club – a voluntary group of responsible input suppliers
- ▶ The Technical Committee that consists of a group of dairy technical matters experts that serves on a voluntary basis
- ▶ The Laboratory Implementation Programme.

DSA has a standard for the industry, based on legislation and food safety principles.

**DSA are the experts trained for the industry to do food safety auditing:**

- ▶ Food safety auditing of processing plants in co-operation with local authorities
- ▶ Food safety auditing on request of processors.

**DSA has a:**

- ▶ Code of Practice for safe milk processing



DSA performs ten different tests for compliance to legal specifications. Results obtained are captured in a central database. These results are classified as green, orange and red.

**Green** indicates compliance with regulations



1

**Orange** indicates general compliance, but warning lights are starting to flash and care should be taken.



2

**Red** indicates constant non-compliance



3

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