

Between a rock and a hard place

Hurt by the global financial crisis, Africa's agricultural sector is faced with the major difficulty of insufficient demand from the global market. The continent has been pulling all-out efforts to tap new markets, while maintaining traditional ones.

Farmers are caught up between high input costs and low farmgate prices. Governments must do something to protect the farmers, who are the economic heartbeat of many an African country.

According to small-scale processing plants in Kenya, agricultural growth depends on investment in rural infrastructure such as roads, transport and electricity. In addition, investment in rural finance and access to markets and technology, are also critical in order to revive and sustain dairy productivity. Moreover, the farmers believe that it will be critical to transform the dairy sector from disorganised and loosely structured small processors, to organised communities.

“Governments must do something to protect the farmers, who are the economic heartbeat of many an African country”

In this edition we look at the state of the dairy industry in Africa, starting with endangered Zimbabwean farmers who remain under siege after battling it out for nearly a decade now. Properties are still being lost and milk production has dropped below 56 000 tons this year. Is there hope for these farmers now



that the government of unity came into effect in February this year?

We also look at the various feed crops that farmers can grow to feed their dairy animals, and give some advice on which crop works best in what conditions.

It is time for the ESADA conference and exhibition in South Africa and the staff and editorial committee of *Dairy Mail Africa* welcomes one and all to our beautiful country. We also hope that we will continue working together and forge new partnerships for the survival and upliftment of the dairy sector in Africa.

A handwritten signature in black ink, which appears to read 'Zonnyan'.

Editor



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On the cover: Lucy Wambui Kamau from Lari Dairies in Kenya. (Photograph by Fidelis Zvomuya)

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Mailbag

Joseph Gachara Gakuru
from Ngecha in Kenya writes:

I have learnt about your publication, *Dairy Mail Africa* magazine, and found it educative and beneficial to a dairy farmer's business, the reason that interested me in requesting you to put me on the mailing list.

I am a small-scale dairy farmer. I have five Friesian dairy cows in central province, Kiambu District, Limuru division, Kenya. I have been in the business for almost three years now. I supply my raw milk to Limuru dairy farmers' cooperative society.

I have invested a lot in the business, i.e. construction and feeds, but the discouraging thing is that so far I am losing instead of making a profit in the business.

Although I have learnt some of the reasons why I get low milk production (substandard feeds I am buying from our animal feed shops

or perhaps the genes of my cows), I still feel strongly that I need know-how such as what I am likely to get from your magazine and it is the main reason for requesting for them regularly.

Through the same magazine I promise to be giving my views to other farmers in Africa. I look forward to getting registered on your list. Thank you in advance for your services.

Francis Kapishe from
Shamva in Zimbabwe writes:

I am a member of Shamva Dairy Association here in Zimbabwe. I came across a copy of your *Dairy Mail Africa* at a field day held for dairy farmers at Rusitu, Chipinge. I found your publication to be educative and very informative. As dairy farmers who are fighting to improve the production of milk in our district, your magazine becomes a source of information and inspiration.



Joel K Ngeny from Elburgon in Kenya writes:

I came across your publication, *Dairy Mail Africa* of July 2008, and I was impressed with its contents which I found educational.

I am a small-scale dairy farmer in Saptex Farm, Elburgon, in the Rift Valley province. I am requesting you to send me your copies so that I may improve my dairy farming activities. I think this will provide me with adequate information on dairy farming activities, which will enable me to improve the quality and quantity of dairy farmers.

Joel Kiprotich from Kipkelion in Kenya writes:

I would be grateful if you would consider me as one of your readers of your quarterly publication. I have come across your magazine and I was very happy to read some of the African articles that are very educational to a dairy farmer.

Indeed, reading the articles from various parts of Africa actually brings about an exchange of ideas as well as practical knowledge among African dairy farmers. Innovative ideas can actually make us grow to greater heights in terms of dairy productivity.

Mr NA Kinyua from Chuka in Meru South, Kenya writes:

I wish to humbly inform you that I have recently come across your magazine, *Dairy Mail Africa*, Vol 3 No 2 of July 2008. Let me inform

you that your magazine is so interesting, educative and very informative. As an agriculture teacher in high school and a dairy farmer, I was so moved by this magazine and this is why I would kindly request you to put me on the mailing list for your future publications. Please, if there are any other publications you also produce, I would also request you to start mailing the same to me.

Your publication will greatly expand my knowledge in the teaching profession and also improve my dairy farming techniques.


Francis Njuguna Mungai, Tamanya Dairy Farmers Ltd in Embu, Kenya, writes:

Despite the dairy industry's enormous contributions to the Kenya GDP and ensuring food security, there is still much to be done for the rural farmers who milk an average of 2-10 litres a day, to start reaping and enjoying the growth and development in the dairy industry in the recent past.

The future of this very important industry lies in first and foremost empowering these small-scale farmers, and this can only be done when these farmers are encouraged to come together so that they can have strong bargaining power when selling their produce.

This can also act as a central point where they can access business development services such as artificial insemination, which will help them to improve their herds and thus increase their dairy production.

All the stakeholders in the dairy industry in Kenya should now be focused on developing a sustainable dairy industry and this should be farmer-centered without undermining other players' role in the milk value chain.

Farmers should be encouraged to regard dairy farming as a business and to be open to the emerging new methods of dairy husbandry. They should also be encouraged and supported to add value to their milk by cooling it, to reduce deterioration and also increase the selling price. 

Briefly | Africa

Zim, Zambia in milk export dispute

Zimbabwe has challenged a protectionist move by neighbouring Zambia, its second largest trading partner in southern Africa, to restrict the country's sterilised milk imports by withholding import licences for wholesale and retail shops.

The ministry of industry and international trade notified the Common Market for Eastern and Southern Africa (COMESA) secretariat last year through the regional economic community's non-tariff barriers (NTB) monitoring and reporting mechanism, that Zambia was "not issuing permits for the importation of sterilised milk from the country." The matter is still pending.

Anthony Mandiwanza, chief executive officer of Dairibord Zimbabwe, said the company's sterilised milk exports to Zambia had not been disturbed by the conflict. However, the Zimbabwe Cross Border Traders Association (ZCBTA), said it has had to contend with numerous NTBs, including licence restrictions. The sterilised milk dispute is the second in a series of NTB conflicts in just three years. – *Fingaz*

Seven support grants for Zambia

The United States African Development Foundation (USADF) signed seven grants designed to improve income and create jobs in Zambia. The grants will benefit the Chibote Dairy Cooperative, Diocese of Mongu Development Care, Foundation for Wildlife and Habitat Conservation, Lua Lua Savings and Credit Cooperative Union, Makumbi Farmer Cooperative Society Limited, Mulondolwa Jatrophia Industries, and Zambia National Federation of the Blind.

Chibote Dairy Cooperative Operating in Kalulushi District in the Copperbelt Province of Zambia, CCSL seeks to expand its dairy

production by selling milk to the local market. The 18-month, \$79 289 grant will support the cooperative by developing its financial, operational, and administrative systems and by training staff in business practices, animal husbandry, and milk handling. – *Press release*

Donors develop appetite for milk

Apparently impressed by its phenomenal growth, development partners in Kenya are placing their bets on the country's dairy industry. Over the last six years, donors have loosened their purse strings to channel a steady stream of dollars to various dairy projects across the country.

The International Fund for Agricultural Development (IFAD) is already implementing a \$19,5 million (about Sh1,6 billion) smallholder dairy project in Nakuru district and also has programmes in Nyanza, Central and Eastern provinces. Experts attribute the rising donor interest in the sector to its ability to fight poverty. – *Daily Nation*

Indigenous numbers remain high

Authorities in Rwanda's Rwamagana district, say the number of indigenous cattle breeds is still high. A recent domestic animals census in the district revealed that there are 3 353 head of cattle comprising of 2 456 local breeds, 392 exotic breed and 505 cross-breeds.

The new breeds are distributed through Ubudehe, and the cattle stocking programmes of Send a Cow and the Heifer Project International. Richard Niyomwungeri disclosed that the district has embarked on artificial insemination to increase the number of cross-bred cattle. At least 2 015 cows have so far been inseminated. – *NewTimes*

Uganda heifer project

The Heifer International East Africa Dairy Development (EADD) project is handing out bicycles to dairy farmers to help with sensitisation of better farming practices. Patrick Nalere, Heifer's IEADD country director, said the project was aimed at improving productivity through improved milk quality and reducing loss through spoilage. He said the bicycles would assist the farmers to access more markets. Over 190 dairy farmers from Mityana, Masindi, Luweero, Nakaseke, Masaka and Wakiso are to benefit from the project. – *New Vision*

Rwanda milk production soars

Rwanda's milk production has increased from 189 827 tons in 2007, to 257 197 tons in 2008, according to statistics from the National Bank of Rwanda (NBR). This represents a 35% increase in production. According to recently released figures, there was also a 64% increase in 2006.

Dr Théogène Rutagwenda, the director-general of the Rwanda Animal Resources and Development Agency (RARDA), attributed the increase to the increased practice of crossbreeding among local cows and heifers with exotic breeds. Last year's statistics from NBR also revealed that milk importation has greatly reduced since 2002 from 1 378 tons to 450 tons in 2007. This represents a 67% decrease. – *NewTimes*

Unprocessed milk to be criminalised

The Uganda Dairy Processors' Association (UDPA) has started campaigns to promote consumption of processed milk and other dairy products. The country's per capita milk consumption of about 50 litres, is well below the Food and Agricultural Organisation and the World Health Organisation's recommended per capita consumption rate of 200 litres.

Tom Opio Oming, the UDPA chairman, advised the public to be aware of expired dairy products and to report them to concerned processors. Agnes Audax Baguma, the DDA quality and regulatory manager, said only 10 out of 82 outlets passed the October inspection. – *New Vision*

Software can help dairy farmers

Faced with increased competition and a further decrease in subsidies, many Kenyan dairy cooperatives are now using an information management programme especially developed to help farming cooperatives run more efficiently. One way the cooperatives could increase efficiency, is through increased and better use of computers.

To help dairy farmers' cooperatives improve the efficiency of their information devices and systems, open source software developers have worked together to develop Coopworks. Development began in 2006 and the programme is now freely available for download. – *reportingtheworldover.com* 

A close-up, low-angle photograph of a cow's head against a clear blue sky. The cow has white fur with some brown patches on its face. A yellow ear tag with the number '2174' is visible on its left ear. The cow's eye is partially visible, and its nose is at the bottom right of the frame.

Power or milk drain?

by Fidelis Zvomuya

Zimbabwe's dairy sector is in a perilous state. Milk production has declined by more than 74% from 187 million litres in 2000, to a projected minus 50 million this year. Contributing to this decline are the ongoing controversial farm invasions that have seen the number of producers dropping from 514 in 1990, to the current figure of less than 100.

Fresh farm invasions gripped the country in March this year, soon after the implementation of the government of unity between President Robert Mugabe's Zanu PF and the two MDC factions led by Morgan Tsvangirai and Professor Arthur Mutambara.

The Commercial Farmers Union of Zimbabwe (CFU) says more than 100 white-owned farms have been invaded by top government and ZANU PF officials, since the establishment of an inclusive government.

Four of the remaining dairy farms have been affected by this wave, despite dairy farms being protected from repossession under government policy.

Downs Farm, owned by Wayne Seamen, and Northleigh Dairy Farm, both in Chegutu, some 150 km south-west of Harare, and Mijin Rust dairy farm in Gutu, owned by Tom Nel, were invaded in March. Mijin Rust is one of the only two remaining dairy farms in Masvingo province.

Animal suffering

Farm workers were arrested with the intention of prosecuting them and completely removing them from the property. This resulted in 95% of the more than 1 000 cows drying up, affecting dairy production, as operations were disrupted.

Cows went for days without being milked and fed, threatening to kill the entire genetic breed. The situation turned dire during March with cows dying and some drying up. Some died from tickborne diseases and others were suffering from mastitis as a result of not being milked. Others were stolen or killed by the invaders.

Mastitis is an infection of the udder and is an often painful condition which can even

lead to death. Udders become red and swollen and the animals lose condition rapidly.

Despite this cruelty, police have refused escorts for farmers back to their farms to treat and dip their cattle.

The milk pirates

One of the invaders in Chegutu is alleged to be milking 108 cows left by Seamen and is said to be selling the raw milk at his urban residence in Chegutu town.

A farmer who asked not to be named for fear of victimisation, says the so-called claimants bring with them truckloads of ZANU PF youths who order farm workers to remove cattle from farms, as they are embarking on crop production.

"If we try to resist the invasion, some of us are assaulted, as these youths are armed with shotguns and AK47's.

"We have reported these cases to the police, but they are not helping at all. Some farmers and their families are now in hiding, as the locks to farm gates have been smashed," the farmer says.

“If we try to resist the invasion, some of us are assaulted, as these youths are armed with shotguns and AK47's”

This new development comes after a decade of violence and vandalism against white-owned farms in Zimbabwe. It also comes at a time when the sector is faced with huge economic challenges. These include escalating consumer prices against a backdrop of

declining disposable income. The farmers are faced with low volumes and huge overheads, which are impacting on their unit costs. All this has caused the country's milk reserves to run dry fast.

A scarce commodity

Economist, Erick Bloch, says milk has become one of the scarcest commodities in Zimbabwe since the first invasions in early 2000.

"Long queues form early in the morning in far-off places for milk," Bloch says. "In a land of such desperate hunger, the wanton waste of milk seems unbelievable."

While millions of Zimbabweans spend their day in the exhausting search for food, Mugabe supporters spend theirs in a frenzied effort to destroy the supply chain. ZANU PF youths are setting up camps at farm entrance gates, where they have nailed their posters to the farm buildings.

Posters reading: "Our land, our sovereignty," bearing a large photo of president Mugabe, are common on most of these farms. Mobs with sticks, stones and shotguns, order farmers to stop farming. There are also clear cases of willful destruction of farm equipment, produce and buildings.

The thugs at times loot the farms and steal everything they can haul away, including tractors, stoves, refrigerators, freezers, furniture and even the curtains on the windows. Using jackhammers, they blast through thick walls into safes, taking guns and money.

This has affected milk production in a country which is being forced to import the product from South Africa at more than double the price paid by South African consumers.

Demand and supply

According to CFU vice-president, Deon Theron, milk production has declined drastically and production is well below national demand.

"The country's annual milk demand is 240 million litres. But as these disruptions are continuing, we will not meet the demand even in the next ten years," he says.

"Most of the pure dairy cows have been stolen, killed or are being used for other farming activities by the new owners. Since 2000, land invasions have drastically reduced agricultural production, which once accounted for 40% of the economy," he says.

In 2001, 176 000 tons of milk were produced, 114 000 in 2003, 94 550 in 2005, 87 000 in 2007 and 77 080 tons in 2008.

In 1990, 256 million litres were produced by 514 farmers who have since been reduced to less than 100. The milking herd has declined from 104 000 to less than 30 000 during the same period. The current herd is estimated to be less than 25 000.

The current per capita consumption is seven litres, dropping from 25 litres in 1990. Also the average yield per cow has declined from 25 litres per cow per day to 14 litres due to lack of input, feed and vaccines.

The irony of having it all

But Zimbabwe has the potential to meet the demand. It currently has more than 200 non-operational dairy farms with available infrastructure as well as manpower. It has 34 registered milk processors with a total processing capacity of 400 million litres per year, with less than 25% being currently utilised.

The processing plants are failing to meet their capacity due to shortages of milk, fuel, electricity, packaging materials and spare parts.

Recently Dairiboard Zimbabwe CEO, Antony



With milk running dry, does this sign have any more relevance in Zimbabwe?




The new farm “owners” are armed and not necessarily farming

Mandiwanza, said the country has a potential for dairy exports in excess of 100 million litres, which can bring in more than US\$65 million per year.

“Production hurdles include the lack of stock feed, vaccines, power outages, fuel, viability and lack of genetics material. Also with the dolarisation of the economy, prices are still very high for other inputs that are now available,” Theron says.

Zimbabwe also has weak programmes designed to increase milk production, but has very effective regulations for enforcing regulated milk prices. These disruptions have also affected the quality of raw milk.

It is estimated that butterfat is currently at 3,94 from 3,97. The standard is supposed to be at less than 3,0. Somatic cell counts are at an average of 741 from 593, which is supposed to be 400. Total bacterial count is currently at 157 from 106, which is supposed to be at 150.

All the potential ... 

About the Kenya Dairy Board

The Kenya Dairy Board (KDB) is a state corporation established under section 4 of the *Dairy Industry Act Cap 336*, enacted by Parliament in 1958. The Board is mandated to develop, promote and regulate the dairy industry and create an enabling environment for increased private sector entrepreneurship in milk production, processing and marketing.

The KDB strives to be the leader in regulating, promoting and developing a sustainable dairy industry that contributes to income generation and good health. Its mission is to facilitate stakeholder activities towards a sustainable dairy industry that provides quality and competitive dairy products.

Functions

- Advise government on policy issues relating to the industry, including development and trade.
- Promote extension, research and other related technology transfers in the dairy and related industries.
- Establish and maintain data on the dairy industry within and outside of the country, and make it available to industry stakeholders.
- Facilitate provision of technical advice and training on processing technologies, milk testing equipment and milk collecting centres.
- Regulation of imports and monitoring of exports.
- Partnerships with relevant institutions to formulate rules and regulations, setting national quality standards for milk and dairy products, and packaging materials.
- Promote quality assurance programmes and regulatory mechanisms for the purpose

of protecting consumers against health hazards.

- Facilitate the development of efficient production, marketing, distribution and supply of dairy products that are consumer specific.
- Promote local consumption as well as the exportation of milk and milk products.
- Promote private sector participation in milk production and processing, and distribution of milk and milk products.

Current projects

Kenya Dairy Sector Competitiveness Project: Funded by USAid and implemented by Land O Lakes, KDB, HPI, ABS.

East African Dairy Development Project: Funded by Bill Gates Foundation and Implemented by Heifer Project International.


Kenya Arid and Semi Arid Lands Research Project: Funded by E.U/G.O.K and implemented by KARI.

Smallholder Dairy Commercialisation Programme (SHDCP) : Funded by IFAD and implemented by G.O.K, MOLD, KDB.

Improving Quality Assurance in Milk Markets (IQAM): Funded by DANIDA through MESPT and implemented by SITE Enterprise Promotion and KDB.

E-Dairy Project: Being implemented by KDB and Agritrace.

The Dairy Task Force

Stakeholders appointed a committee led by the KDB in February 2008, to coordinate an impact assessment of the PEV on the dairy industry. The committee, known as the Dairy Task Force, was later expanded and officially appointed in May 2008. The taskforce has a membership of 20 key institutions in the dairy industry. 



Farmers helping farmers

by Laurie Kaniarz, administrative assistant, Foods Resource Bank

There is a long-standing tradition in the United States of farmers helping other farmers in times of need. When a neighbour experiences hard times, others have always been ready to help plant, bring in the crops, care for the animals – whatever it takes to get the farmer back on his or her feet.

In this same spirit, farmers from all around the US are lending a hand to their world neighbours as they recover from natural and man-made disasters, chronic hunger and malnutrition. They come together through the Foods Resource Bank (FRB), a US-based non-governmental organisation that works to create lasting solutions to world hunger, one village at a time.

Forming volunteer FRB “growing projects”, men and women in rural areas across the US raise money by producing a crop or commodity, selling it, and making the proceeds available to

FRB and its member organisations (15 Christian denominations and their agencies and in-country partners) for food security programmes in the developing world.

FRB’s focus is local, long-term, smallholder agricultural solutions to chronic hunger situations, trusting that if people have basic resources and agricultural know-how, they will build a living for themselves.

Across the Pacific

One of FRB’s growing project groups, a dairy cooperative in rural Ithaca, New York, decided to reach out to cattle farmers in various rural areas of Mozambique because, as dairy farmers, they could understand the needs of the farmers there.

They knew that cows give food, provide fertiliser, help in tilling and ploughing the land, create job opportunities which keep people from migrating to cities, and even protect the



environment by eating the native grasses and preventing grass fires which can devastate crops and fruit trees.

After 17 years of civil war, floods and fire in Mozambique, the cattle herd, formerly the mainstay of the local way of life, was reduced by 90%. By 2004, when the FRB programme first started, the absence of cows had resulted in severe malnutrition through a lack of dairy and protein substances, and the infant mortality rate was 50% for children under the age of five.

Coins and cows

The Ithaca project donated the annual income of milk sales from five of their cows to FRB for support of the Mozambique cattle programme, and two of the cooperative members travelled to Mozambique with FRB in 2007 to learn more about the people there.

The US dairy farmers donated the value of milk from one cow for one year. That amounts

to about \$3 000. At the churches, there were milk cartons set up to fill with coins. There also was a metal silo in the lobby of each church and on “Noisy Sunday” people would bring their money to plunk into the silo.

In all, US\$20 000 was raised each year and this brought about 100 cows each year for the people of Mozambique.

One of the visitors, Diane Eldred, said: “There are ten families in each village that receive two cows apiece. The people take ownership. We are helping them to help themselves.”

Eldred indicated that the FRB programme promotes food security and family and community health. The programme is benefiting 265 households, 1 855 individuals in 55 communities and with a budget of US\$50 000.

In Mozambique, the FRB and its members, led by World Hope International (WHI), endeavour to reduce malnutrition and provide rural communities with the opportunity for economic

development by reintroducing dairy cattle in affected communities.

Sharing the wealth

Since 2004, WHI has distributed cows to various families and has provided training in animal husbandry, milking practices and veterinary care. After the cows multiply for four years, each family gives two young animals to another, thereby “sharing the wealth.”

Water wells are a crucial need in this dry climate, so the FRB and WHI also assist local communities in drilling wells for safe drinking water, and give instruction in using drip irrigation from these wells on their crops, so they don't have to depend entirely on the irregular rains.

Sustainable farming techniques such as using cow manure for fertiliser in their fields and kitchen gardens, pasturing the cows in native grasses, planting in holes to take advantage of available moisture and trying out new, drought-resistant crops are taught as a way to use available resources, protect the environment, keep the community together, and create greater resilience against future shocks such as flooding, fires and famine.

Silvestre from Gija in Gaza Province, is one of the first cattle recipients of the programme, and has seen a direct benefit from the cows. After four years of multiplying his cattle, he gave four heifers to the next family. He fulfilled his obligation and still has a total of four cattle that he owns completely.

Last year, Silvestre sold one of his young bulls for \$600. He said that, with the money, he was able to buy food for his family when his crops failed, and pay for medicine for his daughter. He also built a mud house with a thatched roof for his family.

The ultimate goal of the Mozambique cattle and other FRB programmes around the world, is that beneficiary families and their communities become self-sufficient, producing enough food to feed themselves, with extra to share, barter or sell for staples and basic medicines and to send all their children to school.




Some of the smiling beneficiaries of FRB's Mozambique cattle programme

Teaching self-sufficiency

Why do the farmers in Ithaca, New York, and others in states like Iowa, Michigan, Missouri, Kansas and Indiana work so hard to reach out to people they may never meet?

“We are not a ‘hand-out’ programme, we are a ‘hand-up’ programme ... helping hungry people produce their own food so they can count on having enough to eat, with dignity and pride. We are getting at the root cause of poverty. It is the only way we can eliminate world hunger,” says Dottie Neal, of the FRB growing project in Schoolcraft, Michigan.

The farms involved in the programme are Scipio Springs Dairy, Willet Dairy, Oakwood Dairy in Aurelius, Patterson Farms, Twin Birch Dairy, Hardie Farms, Barbland Dairy, Aurora Ridge Dairy and Sunnyside Farm.

(For more information on FRB's programmes in the developing world, please visit www.foodsresourcebank.org.) 



Milk report

by Fidelis Zvomuya

According to the Food and Agricultural Organisation (FAO) milk production in Africa is anticipated to advance only 1% this year, to 36 million ton. Reflecting continued high maize prices and lower milk prices, output growth in South Africa will slow to 1,5%, down from almost 4% last year.

Production in Algeria, which is by far Africa's most significant importer of milk products, is also expected to expand by 2,2%, as a result of programmes to boost the sector. In Kenya, the dairy sector continues to struggle and production remains stagnant. Egypt, the continent's largest milk producer, may continue on its trend growth path of 1% per year.

In the East

Milk production is expected to rise by 3,5% in Asia, to 256 million ton. In China, damage control over the melamine crisis of 2008 has given rise to an improved inspection and regulatory framework. Milk output may rise 6% in 2009.

Milk production in India is expected to grow by 2,8% this year. Reports suggest that the expansion of demand for milk products has been somewhat weaker, as economic growth has cooled. Pakistan looks set to increase production again by 6% in this year.

South America

In South America, milk production is forecast to

record a robust growth of 3,4%, to 58 million ton in 2009. Argentinean output is expected to increase to 10,6 million ton, or by 2,9% in 2009, which is lower than the previous year, due to a drought which has affected production during its summer period, but also to the imposition of large export taxes on milk products.

Milk production in Brazil may increase by 5% to 29,5 million ton (production estimates have been revised down). In milk equivalent terms, Brazil will be the second largest exporter in the region this year. Colombia, the region's fourth largest milk producer, will again post limited gains. Milk production in Uruguay is expected to increase marginally in 2009, as its sector has been most heavily affected by poor pasture conditions.

Growth in Paraguay, a relatively small milk producer in the region, is expected to remain in the order of 6% from 2008, at around 6% per year; production may reach 467 000 ton in 2009, up 5,7% from 2008. In Mexico, one of the world's largest importers of milk powder, milk production may expand by 2%.

The northern hemisphere

The US dairy sector, which experienced seven consecutive years of robust growth, is now expected to contract in 2009, as low profitability and farm exit programmes have encouraged herd liquidation. Milk production is now expected to fall to 85,5 million ton in 2009.

In Europe, EU milk production started to contract in late 2008, under unprofitable conditions, ending the year down from 2007. For 2009, milk production is anticipated to fall slightly to 150.9 million ton, despite quota expansion offered in the previous year.

Milk prices in the European Union have fallen considerably, and have been subject to much variation and uncertainty. Producers in a number of EU members have called for supplementary subsidies. The fall in EU milk production will help contain its net exportable surplus of milk products, which is expected to fall by almost 1 million ton in 2009 compared to 2008.

Russian Federation

Milk production in the Ukraine is expected to decline again in 2009, down 6% from last year and over 20% below its 2002 peak. The contraction reflects problems that have plagued the industry in supplying exports to the Russian Federation, its largest external market.

Belarus, which is emerging as the region's largest exporter, will expand its production by another 5% on the previous year. Milk production in the Russian Federation may increase by 1% which may depress markets further.

Down under

In Oceania, milk production in the marketing 2007-08 fell 3,2%. In 2008-09, output is foreseen to recover in both Australia and New Zealand by 1,9 and 6%, respectively.

Australia's milk output will reach 9,4 million ton in marketing year 2008-09 (ending June), the first yearly increase in four years, and almost 20% below its peak level of 2001-02. In New Zealand milk production could reach a record 16,2 million ton in 2008-09, which may help it to further consolidate its position as the world's largest exporter of milk products.

However, as exportable supplies have improved significantly, international prices have correspondingly fallen, and stocks are reported to be mounting in these countries. Producer returns are likely to plummet.

Export supplies contract in 2009

Global exports of key milk products, in milk equivalent terms, are forecast to decline to 39,4 million ton in 2009, down marginally by 0,3 million ton from the estimate for 2008. This decline is due to significant reductions in both US and EU, in the order of 0,8 million ton less each.

Import demand is weak

A key factor in the current financial crisis is access to credit, which is increasingly difficult. An important driving force in the changing shape of the global dairy market has been international investments. It is foreseen that global investments in dairy processing will diminish.


In the context of declining export supplies, an important factor impacting on international dairy markets is the slowdown in economic growth of key importing regions, as demand for dairy products is very much influenced by changes in purchasing power, particularly for higher cost items such as cheese.

Recession may affect trade composition

Global exports of butter may drop to 798 000 ton in 2009, down 1,4% from the previous year. Butter exports from the EU are expected to remain around 150 000 ton, its lowest level in decades. By contrast, New Zealand's shipments should increase to around 338 000 ton, depending on how stocks are managed.

Skim milk powder exports are now expected to fall marginally to 1 186 000 ton in 2009, down 2% from the previous year, largely due to a significant decline in exports from the US to around the 350 thousand ton level, as its excess supplies of milk have dropped.

Global exports of whole milk powder are expected in the order of 1 826 000 ton in 2009, 1,2% lower than in 2008, largely due to a sizeable forecast decline from the milk equivalent.

International cheese trade continues to grow, albeit slowly. It is by far the highest value market for milk product trade; exports are expected to reach 1 766 000 ton in 2009, up modestly from 2008 levels. 



Get smooth with Mageu Number 1

The popular traditional African energy drink, Mageu Number 1, has introduced the latest addition to the family, Mageu Number 1 Smooth, a refreshingly smoother and creamier drink available in three exciting new flavours, Lemon & Lime, Strawberry Cream and Banana Custard.

Based on the trusted Mageu Number 1 fermentation process, but using a finer quality maize meal, Mageu Number 1 Smooth is targeted at the black diamond female market.

A healthy lifestyle

This consumer desires a food beverage that is low-fat to suit her lifestyle and with added Vitamin C, it is the ideal snack to ensure that the modern women gets the energy boost

she needs to get her through the day at work, home or at leisure.

Mageu Number 1 Smooth, loaded with essential vitamins and the goodness of maize, is packaged in modern, convenient 330 ml containers in soft feminine colours with resealable caps. Mageu Number 1 Smooth fits easily into a handbag or desk drawer for quick access, any time of the day.

The initial launch in July 2009 is concentrated on South Africa's Gauteng region and will be



Complete your day with Elopak

supported by sampling at select events over the July/August 2009 period, including mall activations, advertorial in print media and in-store point-of-sale promotion.

Building on a good reputation

“The launch of Mageu Number 1 Smooth is a natural extension of Foodcorp’s popular Mageu Number 1 range, supported by the brand equity achieved through the original products. We noticed a demand for a smoother maize-based product, aimed at the female consumer, which the market identified with from their childhood.

“The product needed to highlight the health and energy benefits of a convenient tasty ‘meal’ for the women-on-the-go,” concluded Mageu Number 1 marketing manager, Karin Fritz.

Packaging

Packaging is one of the most fascinating and challenging areas of any product’s development. Pack design, shape, colour, functionality, materials, strength and shelf life capabilities are but a few of the factors that need to be taken into account when choosing a packaging medium for your product.

The new 330 ml Smooth cartons were converted on the newly acquired CPS (Canadian Primographic Systems) 7-colour UV Flexo press at Elopak/Nampak Liquid Packaging in Isithebe. Says Johan de Smidt, managing director, Elopak SA: “Solvent reductions and improved print quality continue to be key driving factors

for the ongoing introduction of UV Flexo into today’s packaging world. UV inks offer greater consistency in colour and viscosity and also sharper dot structure when compared to solvent based flexo inks. Technologically, flexo is no longer the poor relation to offset.

“The ideal snack to ensure that the modern women gets the energy boost she needs”

Elopak SA is now in a position to offer our customers and their designers, a practical creative tool and tremendous colour freedom without concerning ourselves with availability and number of printing units. Flexography is able to print at very high speed on virtually unlimited substrates as a result of the types of inks and drying methods. UV Flexography, and in our case UV Primography, a first in South Africa, is top of the converting chain for packaging.

Elopak’s sleek, mini-diamond carton range format has a slimmer foot print than the traditional standard size carton, making it easier for smaller hands to hold. The convenient sizes facilitate on the spot consumption and the screw cap makes it resealable should you wish to save some of your favourite beverage for later.

Mageu Number 1 Smooth will be positioned in the refrigerated section of major supermarkets and other retail outlets at a recommended launch price of R4,49 valid until the end of October 2009.



Yoghurt being sealed
at Lari Dairies
Cooperative Alliance

Technology makes the difference

by Fidelis Zvomuya

Mary Ndegwa holds a hair drier in her hands as she explains how her smallholder milk processing plant, processes fresh milk and makes yoghurt on a small scale.

Ndegwa is manager of the Kikuyu Dairy Farmers' Cooperative and their yoghurt has become one of the favourite products within the Kikuyu community, some 16 km south of Nairobi. Kikuyu Dairy Farmers' Cooperative is a local plant that still uses traditional stone-wood fire to pasteurise their milk.

Milk is reconstituted into the mixing pot and then purified, before it is pasteurised at 90°C and cooled at 42°C to a minimum of 5°C, after which it is moved into fermentation containers, Ndegwa explains.

"We homogenise the milk prior to fermentation. This helps to prevent the cream from rising to the surface during fermentation. Stabilisers and gums are then added to the milk to improve viscosity and texture," she says.

In order to ensure that the flavour, aroma and texture of the product is optimised, the growing conditions for the yoghurt starter culture must be as near to perfect as possible, she explains.

"The packaging starts here. With the aid of this hair drier, we seal the yoghurt container tops. We then transfer the products into the cold room for storage and distribution to consumers," Ndegwa says.

Traditional methods

But despite all the knowledge and skills vested in this Kenyan smallholder processing plant, they still cannot afford to purchase some of the latest technology needed for the pasteurisation of milk as well as yoghurt-making.

"We still use traditional methods to complete the whole process. This comes with high fuel costs and it has a negative impact on the environment. Our milk still has a cooked flavour due to our use of firewood. This is one thing that we wish to improve," she says.

Technological advances in milk processing and milk products have come about recently, resulting in milk processing not being an art anymore, but a science, Ndegwa explains.

"Dairy technology is all about dealing with the various methods of handling – from production to consumption. It includes processing, packaging, storage, transport and physical distribution, which remains a pipe dream for most smallholder dairy processing plants in this country," she says.

“In order to ensure that the flavour, aroma and texture of the product is optimised, the growing conditions for the yoghurt starter culture must be as near to perfect as possible”

Kikuyu Dairy Farmers' Cooperative started out in 1963 with a membership of 60. Today the cooperative has a total membership of 1 971 of which 450 are active members. Milk processing commenced in 2002, using simple and less costly techniques for preserving and processing raw milk into pasteurised milk, yoghurt, ghee and "mala".

Member farmers supply the plant with 3 500 litres per day, despite the fact that it has the capacity to process 5 000 litres per day. Processed milk is sold as fresh milk to consumers, with some going to other established processors.

Challenges

According to Ndegwa, despite high demand for milk in Africa's urban areas, smallholder processors have little or no access to niche markets for dairy products, due to a number of challenges.



Samuel Mutunga, production manager at Lari Dairies, believes that programmes to improve and strengthen cooperatives, can contribute towards the development of the dairy industry

These challenges include failure to meet quality standards, scattered producers coupled with a poorly organised marketing system, and weak linkage with other players in the dairy chain. These problems have seen most smallholder processors remaining where they have been since their establishment.

“Smallholder milk processing is straightforward in concept, but complex in execution. We have our market base which we built ourselves. What is needed is a new technology injection. Then we can give our best,” she says.

Kenya has more than 1,8 million small-scale dairy farmers. It produces more than 4 billion litres of milk per year, but only 20% of this is channeled through the formal market. The rest is marketed by hawkers who sell raw milk directly to the consumer. The country has more than 39 650 informal milk hawkers, which poses a huge challenge to formal milk processors, as the informal hawker pays the producer more.

Market constraints

Samuel Mutunga, production manager at Lari Dairies, says that Kenya’s smallholder milk processing industry is being hampered by marketing constraints, poor access to markets in rural areas, low durability of products, absence of a structured marketing system, and unattractive prices to producers where structured marketing does exist.

Mutunga says programmes to improve and strengthen cooperatives, can contribute towards the development of the dairy industry and substantially contribute to the alleviation of poverty.

“Pasteurisation failures in the dairy industry is a possible cause for an end product of poor quality. Poor quality of basic materials, difficulty in accessing packaging, insufficient mastery of technologies, difficulties accessing equipment, scarce adoption of innovations, and the insufficient mastery of regulations, all



Mary Ndegwa, manager of Kikuyu Dairy Farmers' Cooperative, shows how they seal yoghurt caps with the use of a hair drier

contribute towards poor production in most smallholder processors," he says.

The Lari Dairies Cooperative Alliance is a success story that has transformed itself into a brand name that is widely recognised in Kenya. The plant is located 50 km from Nairobi and plans to set up the plant were mooted in 2000, following the collapse of Kenya Cooperative Creameries.

The plant was constructed in 2001 and has a total membership of 13 000. A feasibility study, conducted by a consulting company in 2004, revealed that the area had a milk production potential of up to 40 000 litres per day.

The company was officially registered in 2005 and the processing equipment was installed in May 2006 by ALPS, a French Construction Company. Milk processing started on 31 November 2006. The plant has five departments: Production, quality assurance and control, engineering, marketing and administration.

"We target and market our milk to slum dwellers around the city of Nairobi who have a low buying power, but need good nutrition at affordable rates, Mutunga says. He says the management and entire staff of Lari Dairies is committed to ensuring high quality standards in the entire value and supply chain.

"We do this through continuous quality improvement to meet customer requirements, sourcing raw material which meets stipulated quality standards, continuous training of employees to ensure adequacy of staff capacity, and compliance with all government and professional regulatory requirements," he says.

Despite this success, Lari is also faced by challenges such as inadequate packaging materials, limited organisational structure, low staff motivation, lack of brand identity in the market, a weak financial base, lack of clear distribution channels and an inadequate marketing budget. **DMA**



Assisting African dairy industries

by Kobus Mulder, manager of dairy, Agri-Expo

During the latter half of 2007, Agri-Expo was approached by SPEAR CC, a corporation specialising in agricultural development in Africa, to assist with training and knowledge transfer programmes in the dairy industries of various African countries.

These programmes are executed under the African Agricultural Development Programme of the South African government's Department of Agriculture to support the Nepad initiative of the African Union. After consultation with a number of East African role players, it was decided to embark on a programme in Mozambique, Tanzania, Kenya, Uganda and Rwanda.

The last 18 months have seen training programmes executed in Mozambique, Kenya and Tanzania with further programmes scheduled for Uganda and Rwanda in 2009. These programmes included training and guidance in milk production, first-step value addition and technical assistance with quality improvement of dairy products.

Progress in Tanzania

Assisting in the promotion of dairy products to increase consumption and advice on obtaining the correct processing equipment to enable small processors in value-adding to unpasteurised milk, has had some success already.

The most recent programme was presented in Tanzania in late February 2009, following requests from the Tanzania Milk Processors Association (Tampa) to assist local processors in their marketing efforts. Tanzania produces 1,5 billion litres of milk per year, of which about 10% is processed into pasteurised milk, fermented milk, yoghurt and cheese.

Being a relatively young industry, its processors have now come up against the well-known problem of poor handling at retail level and resultant losses. Agri-Expo compiled a one-day training programme which comprised of basic manufacturing and product information, and practical knowledge on the receiving, storing and merchandising of dairy products.

Emphasis was also placed on the handling of perishable products, transfer of product information to customers and the curbing of losses to the benefit of both retailer and processor.


Cheese on the menu

Although the Tanzanian per capita consumption of value-added dairy product is extremely low, the country has a ready market in the form of a million international visitors per year. Most are major consumers of yoghurt and cheese. It was therefore decided that the chefs and cooks of the hundreds of 4- and 5-star hotels in the country should be informed of the value of cheese as a menu item and ingredient for recipe dishes.

Much time was spent on informing the chefs about the modern uses of cheese as appetisers, starters, mains and desserts.

These workshops were presented in Dar-es-Salaam, Arusha and Zanzibar, in order to cover the most important tourist as well as important processing areas.

Many processors attended the workshops and requests have been received for follow-up workshops to assist with product quality improvement of all dairy products and it is the intention to hold these later in 2009. **DMA**



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Uganda embraces health

by Fidelis Zvomuya

The Sameer Group of Kenya's Uganda-based Sameer Agriculture & Livestock Ltd (SALL), recently commissioned a new state-of-the-art automated yoghurt line at its Kampala plant, to enable daily output capacity of 15 000 litres of yoghurt.

The yoghurt is packed in attractive new poly-sachets in a continuous so-called form, fill and seal (FFS) line, the company's managing director, Anand Gaggar, said in a statement. The yoghurt has a flavour range that includes plain, strawberry, vanilla, butterscotch and banana.

Expertise comes together

Sameer, in conjunction with the RJ Corp of India, established a joint venture company, SALL, which entered into an agreement with the government of Uganda to lease the assets of the Dairy Corporation Ltd in Kampala.

Sameer Group is a leading economic force in East Africa, with major investments and successful operating companies in all key business sectors. The RJ Corp has for over 20 years been a major player in the food and beverage industry in India.

"Our fresh dairy yoghurt contains live cultures consisting of three major bacteria namely *Lactobacillus acidophilus*, *Lactobacillus bulgaricus* and *S. thermophilus*, imported from France.

"The *Lactobacillus* in yoghurt maximises nutrient absorption in the body. It also ensures digestive health and stabilizes the immune system," he said.

Health aspects

According to Gaggar, the yoghurt is rich in potassium, proteins, calcium, zinc, iodine, phosphorus and B-vitamins – including B12.

"It (yoghurt) helps to lower bad LDL cholesterol and increases good HDL cholesterol. It protects against ulcers and bad breath," Gaggar said.

Fresh dairy yoghurt is reduced in fat and highly recommended for diet and weight control. It is recommended to all persons, even those who are lactose intolerant and cannot drink milk. "Lactose intolerance manifests itself due to a relative or absolute absence of the enzyme, lactase, in the small intestine. This prevents the body from digesting the lactose found in the milk, whereas yoghurt is safe and can be easily digested," Gaggar said.

SALL is an ISO 9001:2000 and, recently awarded in September, ISO 22000:2005 food safety management system certified company. SALL is the first dairy company to receive this certification in Uganda. Most of the company's products are also certified by the Uganda National Bureau of Standards. 

Feed crops for dairy cows

by Lynette Louw

There are a great many types of feed crops available for dairy cows. However, it is important that one distinguishes between the different uses of different crops. Some are better for hay, while others are more suitable for silage-making or as pasture. Remember that not all types of crops are necessarily suited to your region. Do your own research before buying seed and planting it.

Hay crops

Hay is a general term used for dried feed crops. Grasses and other plants are cut, dried and baled, and used to feed livestock, especially in the winter or dry months.

Teff is a silage that can easily be made into hay. It is easily established, grows fast, cuts easily and dries quickly, so that it can often be baled on the same day. Cows like the taste of teff. It is also economic when it comes to fertilisation and does well as a rotation crop.

Lucern is an irrigation crop and has different “dormancy” classes, which give an indication of the cultivar’s sensitivity to cold temperatures. A dormancy class of 10, for example, is very resistant to cold, and can be cut up to ten times a year. The best time to plant is autumn. Never replant lucern on an existing lucern field. The plant gives off a toxin that inhibits the germination of lucern seed.

Weeping love grass is easy to cut, dry and bale. However, it has little value as standing hay during winter. Therefore farmers often keep the first two cuts for themselves, and fertilises and sells the third. Keep the first cut aside for your highest producing cows and the second cut for the cows in later lactation.

Smutsfinger grass grows best in warm regions. It can take 18 months before there is any really good production. Allow Smutsfinger to go to seed once a year. After making hay, leave the second growth to go to seed. These fields can then be left and used as standing hay for the winter.

Foxtail buffalo grass grows at its best in warm parts where rainfall is low. The lower parts of the plant easily become rough and

thick, and can injure animals’ gums. Therefore it must be grazed short. It makes a good hay if it is cut down short.

Cowpeas can be used as silage crops in dry areas. Its hay is similar to lucern. However, the haymaking process is labour intensive, which makes it a difficult hay crop.

Rhodes grass is a good hay crop that is easy to establish and grows quickly. It is a good grass to establish together with Smutsfinger grass, as it does not have a long lifespan – by the time the Smutsfinger grass is well-established, the Rhodes grass has reached the end of its lifespan. Although the fields cannot be grazed at that stage, hay can be cut.



Lucern is an irrigation crop with different dormancy classes



- 1 Clovers are perennial and are usually planted in combination with other pastures such as kikuyu
- 2 Kikuyu is usually planted in combination with other crops and needs a lot of water

Pasture crops

Pastures are the basic feed resources for livestock. Pastures are areas where cows can graze, usually on a rotation basis. This means that one section is grazed, and then the cows are moved to another section to graze, so that the previous section can repair itself.

Japanese radishes provide excellent grazing during the winter months. The current trend is to utilise leaf growth rather than tubers. Plant density is very high – up to 25 kg per ha. It is the ideal crop to establish on silage fields for winter grazing.

Oats: There are two types of oats: Quick growers for haymaking and silage, and long growers for grazing. Once oats have gone to seed, its lifespan is over. If you want oats ready for grazing in winter, you must make sure that you plant it in time.

Ryegrass is the crop used most often as pasture for dairy cows. Annual ryegrass is divided into the Westerwolds and Italian varieties. Westerwolds are more resistant to cold. Its lifespan is shorter than Italian ryegrass. A combination of the two types is therefore the best strategy.

Perennial ryegrass can be divided into early, medium and late types. Make sure that you select a type that gives you grazing when you need it. Perennial ryegrass is most effective in mist belt regions. If it is planted outside its natural zone, its lifespan (of maximum three years) is shortened.

Stooling rye is an annual pasture crop. It is a slow rye that grows throughout winter and will produce as much as four grazings. Its fibre content is high and it is more resistant to drought.

Kikuyu is mostly planted in combination with other crops. It needs a lot of water and grows in summer. During the rest of the year, other crops such as ryegrass can be planted among the kikuyu. One of its biggest benefits is that it stabilises soil against slopes.

Clovers are perennial and are mainly planted in combination with other pastures, such as ryegrass and kikuyu. Red clovers are fast growers, but have a short lifespan and start disappearing after two or three years. Then the white clovers take over. A mixture of the two types is advised.




Sorghum can be produced under less favourable conditions and is an ideal silage for cows in later lactation

Silage crops

Silage is a type of preserved feed with a very distinctive smell, because it is produced through a fermentation process. Silage is an effective way to produce feed for your cows, as the crops can be harvested in almost any type of weather. The process of making silage is called ensiling. In certain dry areas, cowpeas can also be used as silage crops.

Maize remains the best silage crop. Quick growers produce more grain, while longer growers produce more vegetative material.

Sweet sorghum silage is ideal for cows in later lactation. Sorghum can be produced under less favourable conditions. In terms of tonnage, it has an advantage above maize, but when it comes to quality it is no match for maize. Use the best fields for maize, and plant the rest with sorghum.

Canola is the best option in the winter rainfall areas. While its cabbage taste may be a problem for cows, the taste is not noticeable in milk. The best option is to mix canola with another silage such as maize. Canola can be established in irrigated maize fields and is a very good rotation crop that counteracts root-rot. 

Bovine Brucellosis (Contagious abortion)

by Dr Willem A. Schultheiss, Intervet Schering-Plough Animal Health

Cause

Contagious abortion (Brucellosis) is a highly infectious erosion disease of cattle which causes large financial losses in the cattle industry. It is caused by a bacterium, *Brucella abortus bovis*. Although it is susceptible to exposure to drought, direct sunlight, heat and most disinfectants; under “ideal” circumstances *Brucella abortus* could survive for long periods (3-8 months) in faeces pits, aborted foetuses not exposed to sunlight or under a kikuyu-matt as found in calving camps being used extensively.

Why is Brucellosis important?

- It can be **transmitted to humans** if they drink unpasteurised milk, eat infected organs or if the organism penetrates through the eye mucosa or broken skin. It could cause undulating fever, flu-like symptoms, listlessness, night sweating, lethargy, chronic lower back and joint pain, meningitis and heart-valve infection.
 - Up to 80% of heifers or cows which are infected for the first time could abort. It is very rare that these animals **abort** again with consecutive pregnancies. The birth of weak calves worsens the large financial losses.
 - Cows stay **life-long carriers** as they keep on excreting the organism through birth fluids with each calving.
- The disease is **incurable** in cattle. No vaccine or antibiotic can cure infected animals.
 - Calves born from infected (positive) dams are permanent, life-long carriers of the disease. They test negative on serological tests.

Transmission

Brucellosis could be introduced into a clean herd by **buying in positive carrier animals**. These animals excrete large numbers of organisms through the uterine fluids during abortions or subsequent normal calvings. Other animals get infected when they lick or sniff infected material (birth-fluids, aborted foetus, newborn calf, afterbirth).

Milk from infected/carrier animals can also be a mode of transmission, especially if infected colostrum could have been added to a **colostrum** bank.

Bulls can become infected with concurrent testicular and sex gland inflammation, which could cause infertility and suppressed libido. Transmission of Brucellosis from bulls to cows can occur e.g. when cows smell or lick the ejaculate at the preputium of the bull.

Heifers are infected as foetuses in the uterus. All unborn heifers from positive mothers are be infected in this manner and stay undetected until they themselves

later abort. They are a constant source of infection.

Pathology and signs of Brucellosis

The organism localises in the inner lining of the uterus, as well as the foetal membrane (placenta). Inflammation and cell-death of these organs lead to abortions and early or weakly born calves. Retained placentas and uterine infections could often be the aftermath of abortions.

Diagnosis

The organism is isolated the easiest from the milk stomach contents of the aborted foetus, as well as from the afterbirth. These should be sent to the nearest veterinary laboratory on ice as quickly as possible after the abortion.

Blood tests should be performed on the herd on a yearly basis to monitor the Brucellosis-free status. The monthly bulk-tank milk-ring test will help as a routine screening test in dairy herds, but the sensitivity to pick up one positive animal in a bulk-tank with milk of hundreds of cows, is poor.

Management of Brucellosis in dairy herds with vaccinations

KEY FACTS:

The protection offered by a single Brucellosis vaccination in heifers between 4 and 7 months of age, is twofold:-

- Protection against ABORTION occurs in most heifers;

- Protection against INFECTION (without abortions) only occurs in 65-75% of heifers.

THERE IS NO EVIDENCE THAT A VACCINATION AGAINST BRUCELLOSIS APPLIED ONLY ONCE WILL AFFORD A LIFELONG PROTECTION

In conjunction with the important biosecurity rule of only buying new animals from herds, where ALL the animals have been tested negative on two consecutive blood tests, the controlled formation of a strong herd immunity against Brucellosis through vaccinations is an absolute necessity.

Strain 19 vaccine (S19) is traditionally given to all heifer calves between 4 to 8 months. These animals can only be blood-tested after 18 months of age because earlier testing will result in false positive reactions. Boosting with this vaccine is also prohibited because of false positive testing which cannot be distinguished from the virulent field strain. Furthermore the once-off vaccination of heifers with whichever vaccine, doesn't afford sufficient protection.

RB51 vaccine (Intervet/Schering-Plough Animal Health; Reg.No G3056, Act36/1947) differs from the S19 vaccine in that it doesn't cause a vaccine reaction with resultant false positive blood tests. The benefits to the dairy farmer are:

- Heifers vaccinated between



4 to 7 months can be serologically tested a year earlier instead at the age of 18 months – as is the case with S19 vaccine. This is critical for removing positive animals as early as possible from a herd.

- If vaccination with S19 was omitted before 8 months, vaccination with RB51 after 8 months will cause no false positive reactions.
- RB51 can be repeated (boosted) safely, without influencing the blood test results, so as to increase the herd's protection

against Brucellosis from 65-70% to well over 90%.

Vaccination plan

A handy 5-dose (5 x 2 ml) packsize is available for vaccinating small numbers of animals (e.g. where calving occurs throughout the year) or for bigger herds with a more seasonal calving pattern, there is a 25-dose (25 x 2 ml) packsize.

The following table illustrates the suggested vaccination plan to protect a negative (clean) herd from infection of Brucellosis:

Age or stage of production cycle	Vaccine	Reason	Expected rate of protection
Between 4 – 8 months	S19 or RB51	Before 4 months passive immunity (colostrum) will interfere with the vaccine.	70%
9-12 months (Before first breeding)	First booster: RB51	RB51 is a live vaccine and should not be given to pregnant animals (will cause resorptions/abortions)	91%
About 30 days after first calving, but before second breeding	Second booster: RB51	Animals are still recovering from physiological and metabolic calving stress before 30 days post calving	97%
About 30 days after second calving, but before third breeding	Third booster: RB51	Four Brucellosis vaccinations provide nearly total herd protection which will last much longer than a single vaccination when young.	99%

It might seem “overdone” and expensive, but in a continent where biosecurity can not be guaranteed (due to uncontrolled movement of animals as well as the occurrence of scavenger birds and animals that spread

the disease by dragging infected material around), producers need to put the most effective vaccination programme in place with the help of their veterinarian or veterinary advisors.

For more information, phone Dr. Schultheiss on +27 11 923 9300, mobile: +27 82 323 7019 or e-mail him on willem.schultheiss@sp.intervet.com



IDF News

Milk makes children clever

Teenagers with higher academic performance are more likely to include milk, fruit and vegetables in their daily diet, states a recent study published in the *Canadian Journal of Dietetic Practice and Research*.

Dr Judith Bryans, registered nutritionist and director of the dairy council, says: "These results follow many other studies which have suggested that those who consume more milk, fruit and vegetables, are likely to have a better overall diet and higher nutrient intake, which may in turn contribute to better academic performance."

The daily consumption of milk, fruit and vegetables was determined through food frequency surveys, while academic performance was assessed by average school grades over a 12-month period. The researchers found that the higher academic achievers were more likely to consume milk, fruit and vegetables on a daily basis, compared to those reporting lower academic performance.

For more information on dairy nutrition, visit the Dairy Council's website at www.milk.co.uk.

IDF commits to fight climate change

Christian Robert, director-general of the IDF, presented an outline of the global dairy agenda to contribute to the mitigation of climate change, at the FAO symposium on "Mitigation of greenhouse gas emissions from animal production, a policy agenda", in Asuncion, Paraguay, from 6-8 May 2009.

Robert said that: "The IDF has developed and delivered work programmes in the environmental area and has effective mechanisms in place to share the outcomes throughout

the membership, which accounts for 86% of the world dairy production. The IDF is ideally placed to bring real consensus and change through the world's dairy producing nations."

At the end of the symposium, a draft statement on recommendations for mitigation of greenhouse gas emissions from animal production, was written by the FAO.

Dairy then and now

What is the most efficient and environmentally friendly way to raise dairy cows and produce milk? According to an article in the *Journal of Animal Science*, "the answer is found in today's technology, not in yesterday's idealised farming practices."

According to the article, modern dairy practices require considerably fewer resources than dairying in 1944 with 21% of animals, 23% of feedstuffs, 35% of the water, and only 10% of the land needed to produce the same 1 billion kg of milk.

In 1944 the US dairy population totalled 25,6 million cows producing 53 billion kg of milk annually. In 2007 the United States had 9,2 million dairy cows producing 84,2 billion kg of milk annually. The total carbon footprint for the 1944 dairy was 194 million metric tons of CO₂-equivalents compared with 114 million metric tons of CO₂ – equivalents for a 2007 dairy.

For any enquiries on any of these items or any other IDF-related item, please contact the Esada office in Kenya or Edu Roux at the SA National Committee of the IDF (SANCIDF) office at +27 12 843 5701 or +27 82 338 7820 or send an e-mail to edu.roux@agriconnect.co.za 



How to set up a feedmill

by Raymond E Zvavanyange

The livestock industry has risen to the challenges of this century. Across the African continent, producers old and new find themselves in close association, sharing information, success stories, technology and advice. The beef, dairy, poultry sectors are now characterised by features that are universal.

One emerging feature of the livestock industry at farm level, is the feedmill. The feedmill is simply a place where feed (food) is produced. They range from simple feed mills to ones that are sophisticated, each having its own unique features.

Producers are able to not only provide feed for livestock, but also present it in a form which the livestock has the highest chances

of consuming. This article explores the basic guidelines that one needs to observe when setting up a feedmill. It should be borne in mind that a feedmill can be an enterprise on its own or closely knitted with other operations at farm or industry level.

Who can start up a feedmill?

This can be anyone, an individual or organisation. Whatever the case may be, the person or organisation intending to start the operations, must be registered according to the laws and regulations of the country guiding such a venture.

What about the site?

You need to have knowledge of the proposed site or place that the local authorities have set aside as a development area. Surveyors are needed before you undertake any construction work. Take note of nearby settlements or populations. The site should be accessible by road and foot. Suppliers will be bringing in raw materials, so the road network has to be good.

What about written proposals?

While you visualise the feedmill in full operation, you need to put this in writing so that your ideas can be fully examined to determine their worthiness and feasibility. If drafted in good faith, the project and funding proposals are a strong developmental tool, with anything that was visualised taking on a practical side.

Who will buy the feed?

In today's business practices – whether it is milk, eggs, meat or byproducts you need to secure the market before due date. A market research or study is paramount as you get to meet with potential buyers and investors.

What about the equipment?

Again, the respective ministries or departments can advise on the current legislation governing

the importation of equipment. Take note that some equipment made locally may be promoted by legislation when compared to imported equipment. Governments do this to support and strengthen local industries. They may do this in the form of promotion centres.

You may also decide to hire or rent, but this can be expensive. Before and after the purchase of equipment, insist on a pre-test by the suppliers. Be sure to compare prices and the various offers that are provided by the suppliers. For shipping you need to know the port close to your area and the different charges.

And raw material supply?

You need to continuously build contacts, as business today is dynamic. While every effort should be made to get in touch with international contacts, do not leave out local and regional contacts. Communication can be established via e-mail, the internet, telephone, faxes and letters.

What about quality (of the feedmill and feed)?

Quality control is a big issue globally. On top of local and national standards, industries have to meet the international standards as well! A tour to some established feedmill could be a good start, giving you a picture of those that are already established.

Mind you, this is going to be a business so you have to be competitive as well. Nowadays we have what is known as standard operating procedures (SOPs). Be conversant in them. SOPs helps to keep check of deviations. Should a problem arise, it would be easy to locate and isolate it at the mill.

How do I put it all into action?

Get a good management team (finances, technical, administrative, etc). Bear in mind that disasters (fires, thefts, etc) may strike, so have measures in place to address such unexpected events. 