

A bumpy ride ahead

Is the recession going to see all the froth coming off agricultural commodity prices, leading farmers almost back to the levels where they were two to three years ago?

This is not going to be a good year for most farmers, due to the global economic melt-down. Farmers have started questioning analysts as to how they will fare if the economic slowdown hits their profits, just as they begin to emerge from drought.

Some farmers are already wondering whether the financial turmoil would further weaken demand for agricultural commodities, as the world heads into a recession. Commodity prices have dropped from the historic highs of earlier last year, as investors desert the market and demand moderates.

The dairy industry has almost been the one agricultural enterprise that continued to exist through the early years of depression, riding on its own momentum and forging ahead without aid. It has also been the very last of the great agricultural commodities to feel the effect of changed social and economic conditions.

Dairy in Africa, just like agriculture of the past, has gone through its expansive production age and, like the agriculture of tomorrow, is now on the doorstep of some new directions.

In our main feature we bring you some interesting lessons from India, which Africa can definitely benefit from.

Despite all the fears, the dairy industry is expanding in Africa, with new ventures in countries such as Mozambique. In this edition we bring you the story of the first cheese factory in that country. Land O'Lakes is also expanding



its work to Mozambique and we take a peek at what the cooperative plans for the country.

In our technical section we look at calf-rearing and include some handy illustrations on how to take care of calves.

The Esada conference's dates and venue have been set. We encourage you to register online and become part of Africa's largest dairy gathering.

We will be running a special Esada-supplement in our June edition, and I would like to call upon companies and service providers throughout the continent to take this opportunity and advertise their work and products.

A handwritten signature in black ink, appearing to read 'Zomyan'.

Editor



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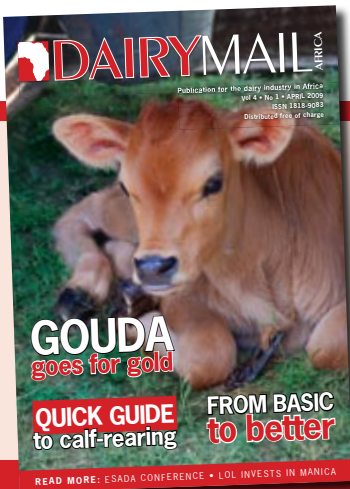
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On the cover: Calf-rearing is a very important aspect of dairy farming. (Photograph by Fidelis Zvomuya)

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Esada news



by Peter Ngaruiya, Esada programme manager

On behalf of the Eastern and Southern Africa Dairy Association (Esada) I wish to invite you to indulge in the first edition of the *Dairy Mail Africa* for 2009.

Around the same time last year, the dairy industry in Kenya was experiencing the hardest times in the recent past. The post-polls violence which engulfed the country in the first and second month of the year, left a trail of destruction which saw the country's dairy production nose-dive by almost 50%.

It is estimated that the dairy sector lost almost US\$270 million in terms of livestock theft and lost revenue from uncollected milk. The recovery is underway but it will take a while to get back to where the industry was prior to the unfortunate occurrence.

In fact 2008 was a year of intertwining occurrences that has further complicated

the recovery process. Skyrocketing fuel, feeds and fertiliser prices dealt another major blow to a recuperating industry. The climatic condition during the year was not very helpful either. These factors have left the country and indeed the Eastern Africa region, reeling from a serious case of food insecurity.

As the reality of food insecurity and the effect of the global financial crunch become apparent, the need to revisit the role of the dairy sector in the global economy cannot be overstated.

According to the *World Dairy Situation 2008*, "the agriculture and food sector nowadays is more integrated into the world economy largely due to the financial sector that saw interesting opportunities in a buoyant market and the energy sector through the demand for feedstock for biofuel production.

The agricultural sector in general and the dairy sector in particular, will increasingly experience the discipline of the market after many years of policies that largely insulated it.”

The face of dairy changes

Not long ago, dairy farming was not considered a commercial undertaking, particularly in the Eastern Africa region. In fact, it was widely viewed as subsistence activity, mainly for domestic consumption and, at a slightly commercial level, exchange for labour or other non-monetary commodities.

But competing needs for the available resources and the climate change debate, among others, has seen traditional herdsmen and subsistence dairy farmers think twice about their undertaking. In this regard a concerted effort is being made to commercialise and modernise the dairy sector in this side of Sahara. It is, however, an uphill task as the region is dominated by small-scale farmers and the benefit of economies of scale is greatly eroded, among other challenges.

In the pursuit to commercialise and modernise the sector, the authorities (governments) and the development partners need to consider the persistent threat to food security, which have a direct bearing on undermining the initiative. The private sector, on the other hand, needs to cooperate to compete.

Factors such as an unstable social and political environment, poor economic policies, lack of investment in human resource development, civil strife and scarcity of democratic institutions, poor infrastructure, low adoption of technology, and duplicative and conflicting donor involvement – which at times are conducted without local participation – precludes sustainable growth in the industry. The private sector’s unwillingness at times to work together and address the challenges

facing the industry, does not help.

It is against this backdrop that Esada has continuously come forward to knit the region’s dairy sector together. The industry requires a free flow of reliable and timely information, free trade and knowledge and experience-sharing platforms. Stakeholders in the region need to work hand in hand for the benefit of the industry.


In a liberalised and globalised market place, protectionist policies may not hold for long, and it is imperative for African dairy to embrace technology and modern dairying techniques to enhance the competitiveness of their products.

Come to the conference!

Esada is pleased to announce that the **5th African Dairy Conference and Exhibition** will take place from August 5-7, 2009 in Boksburg, South Africa (10 km from OR Tambo airport, Johannesburg). Registration is ongoing and huge discounts are up for grabs for early registration.

The conference programme has been uploaded on our website, www.dairyafrika.com, where you can also register online. This year we expect to hear a great deal of insights from renowned speakers. The event promises to be Africa’s dairy event of the year, with priceless opportunity to make business contacts.

We invite you to visit our website for more details on the event and other events lined up for the year. We would like to hear comments and suggestions on how Esada can serve the industry better.

Peter M Ngaruiya
Programme coordinator and
executive secretary, Esada 

Briefly | Africa

First cheese factory in Uganda

Together with a local partner, Scherjon Dairy Equipment Holland has built the first dairy factory in Uganda, called Gouda Gold Uganda. The unique project, made possible through development funds of the Dutch government, has proven to be very successful. In less than a year after the factory was put into use, it is already breaking even.

The factory in Kampala can process around 20 000 litres of milk a day and serves as a pilot store for future projects in other African countries. Gouda Gold Uganda is a significant supplier of Gouda and mozzarella cheese in the urban area around Kampala, Entebbe and Jinja.

Cheese exports destined for Kenya, Sudan and Rwanda are small, but growing. At the moment export licenses are being acquired for export to the EU. Since 2007, the local founding partner has sold his shares to both local and Dutch investors.

Further investments are aimed at stabilising the supply of infrastructural services and electricity supply will be secured by means of a biogas plant. In December 2008, a distribution contract was signed with Fresh Cuts Kampala. This company will do the distribution of the cheese in Uganda, and deal with the United Nations. – *Fidelis Zvomuya*

More dumping grounds for milk?

Europe's fair trade organisations are warning against newly increased European Union (EU) quotas for milk production and continued high export subsidies, which will lead to increased milk and butter dumping on world markets.

Germanwatch, Fian and Misereor, three German organisations working for global

fair trade, late last year warned about the consequences of the EU's reforms of its common agricultural policy (CAP) for Africa. While the new compromise includes some cuts in production subsidies, it also holds a major increase in milk quotas for EU farmers.

According to Germanwatch, excessive dairy products will increasingly be "dumped" at the world markets, the organisations predict. Especially with regard to milk and butter, EU agriculture ministers agreed on further high export subsidies. In the case of milk and butter, says Mute Schimpf from Misereor, the EU "continues to opt for export dumping in developing countries."

Tobias Reichert of Germanwatch adds that this kind of dumping does not do anything to fight poverty and hunger. According to Misereor, it is a general problem for development in rural Africa that subsidised products from Europe enter markets in developing countries and create unfair conditions in competition with local farmers. Especially when it comes to milk, EU policies are ruining local development. – *Afrol news*

Mali plans local milk production

Mali is putting plans in place to produce milk locally to ensure self-sufficiency in the product, according to official sources. Sources told *Pana* that the project, estimated to cost 15 billion CFA francs (about US\$30 million), was also aimed at contributing to poverty reduction.

According to the sources, the project will involve the establishment of 41 "milk basins" in the country, with each supplying enough product to its area of coverage. The government will also set up eight milk

transformation units with capacities ranging from 2 000 litres and 10 000 litres of milk per day. Mali is one of the greatest livestock farming countries in the West African sub-region. Its livestock profile is estimated at 8,1 million bovines, 23,4 million small ruminants and 800 000 camels. – *Pana*

Another toxic milk scare

Concerns were raised in Nigeria, as six different brands of ice cream were discovered to be tainted with toxic chemical, melamine. The discovery of melamine in the ice cream marketed in Lagos and Ogun States, has raised fresh concerns over safety of dairy products and its link with increasing kidney failure across the country.

Nigeria's National Agency for Food and Drug Administration and Control (Nafdac) detected toxic quantities of melamine in ice creams and milk powder imported from China by Londa Foods International Limited.

Nafdac said the milk powder and ice creams confiscated from the company, located beside Texaco petrol station off Lagos-Ibadan Expressway, Isheri Town, Ogun State, contains 21,1 mg/kg of melamine, which is far above the acceptable maximum limit of 2,5 mg/kg. Nigeria adopted Chinese standards, which says that any product containing melamine above 1 mg/kg is unacceptable. In the United States, the maximum limit is 2,5 mg/kg.

NAFDAC's deputy director of enforcement, Pharm Ololade Alabi, said the contaminated milk powder and ice cream produced by the company has been seized and the factory sealed up pending further investigation. – *The Guardian*.

Kenya to increase milk production

Machira Gichohi, the Kenya Dairy Board managing director, has said that, effective from this year, the East African country aims to produce more than four billion litres of milk

annually. This would be a 20% increase over the 2002 production figure, which stood at 400 million litres.


"Last year, we produced 362 million litres," Gichohi said during the launch of Fresha Classic milk from Githunguri Dairy Farmers Cooperatives. He said the new product, which is expected to boost sales, was launched at a time when his organisation aims to produce and market over 300 000 litres per day by the year 2010.

Kenya is the greatest exporter of milk products to Asia and Africa, and Gichohi is upbeat about reaching the target, because dairy factories are increasing their output. "Our farmers should adopt new technologies to market their products and enhance animal husbandry," he said. – *The Nation*

Dairy industry ready for legislation

Kenyan livestock minister, Dr Mohammed Kuti, said his government has developed a dairy industry act which is ready to be taken to Parliament. Kuti said the act, together with the livestock policy, is meant to be a guide on quality, safety and competitiveness. Speaking during the launch of a milk consumption campaign at Grand Laico hotel, Kuti said the sector contributed 4% towards the GDP in 2007.

The ministry, together with other stakeholders, was also realigning the industry objectives with Vision 2030 meant to turn Kenya into a medium economy. He said the industry faced a myriad of problems after liberalisation which led to withdrawal of key services to farmers, but the challenges were being overcome.

"Such services included breeding, animal health and extension services which resulted in a rise of milk hawking, hence posing health risks to consumers," Kuti said. The minister also said the downturn in the sector had been reversed, with milk production rising to four billion litres annually. – *The Nation* 



From basic to better

by SS Bhatnagar, from a paper presented at the Comesa seminar

Dairy farming has been a human occupation since the dawn of time, and milk has long been viewed as an essential part of man's diet. It is considered a staple, nutritious food. It is consumed in various forms and dairy fats such as butter or ghee are used in cooking, while various milk forms are incorporated in sweets and other delicacies.

Most countries in the Comesa economic bloc have a large proportion of fertile lands suitable for agricultural purposes, and the conversion of agricultural land to non-agricultural purposes seems to be under control. Average temperatures across most of Africa are below 30°C, unlike India where temperatures can exceed 45°C, so the dairy cooling chain is more easily manageable.

In addition, the culling of cattle with poor milk yields is culturally more readily acceptable in Africa, which means that dairy farming can be more efficient and profitable. Dairy farming is also a sector that is more easily managed than growing crops during extreme weather patterns that lead to drought or flooding.

Improving indigenous production

Within the Comesa region, total imports of dairy products into the bloc in 2006 amounted to US\$383,2 m. That is a substantial amount of foreign currency spent by African countries to import milk powder and other milk products. This vital foreign exchange can be saved through a deeper development of the dairy industry.

However, there are several other benefits in improving indigenous milk production, many of which are not directly just economic. As in India, greater milk production in Africa can kickstart programmes such as community education and resource development.

However, dairy farming, as an instrument of socio-economic development, needs a carefully drafted implementation plan. The lessons from India could be instrumental. In the sub-continent it was discovered that it is vital to promote milk and milk products and aim at maximising milk production for the manufacture of products from surplus milk.

Per capita milk consumption in Comesa countries has been reported as 36 litres of milk a year. Considering that there is an affluent population of not even 5% that consumes cheese, butter, yoghurt and other milk products, the rest of the population probably does not consume more than 20 litres, compared to the World Health Organisation's recommended consumption figure of 200 litres.

The Indian model suggests that Africa should focus on the producer-farmer and not the large-scale commercial dairy farm. The producer-farmer, with one or two heads of cattle, might aspire to eventually own a larger herd and possibly a large-scale farm.

However, the promotion of commercial and large-scale dairy farms as a government policy, should certainly not be made at the expense of the small-scale producer. However, some aspects of commercial large-scale dairy farms might be worth considering, such as building community milking stations where farmers can bring their cows for milking and milk collection.

But simpler innovations may be more appropriate for the African market, starting with an educational policy that can teach best practice on clean milk production and sourcing cattle feed. Advice on veterinary services, artificial insemination and other breeding inputs should also be made available, and systems put in place to ensure that farmers are paid promptly and properly.

Chilling and bulking

The next important issue is bulking of milk production at strategic locations and chilling it in the shortest possible time. This involves transporting milk in clean containers to bulking stations, and in this regard the African industry needs to

replace plastic containers with either aluminium or preferably stainless steel churns.

Transportation to bulking stations can be made simply on foot with a barrow, by donkey cart, bicycle or motor vehicle, but the important aspect is reducing the time it takes to reach the bulking station and low transport costs. Strategic locations that consolidate multiple smaller bulking stations, can both reduce time and transport costs.

A well-equipped bulking station will provide organoleptic testing of milk, a means to measure the weight of milk, test its fat content and obtain a lactometer reading. Ideally, the bulking station will also pay for the milk on delivery. The system needs to be transparent with a large display of the weight and quality parameters of the milk, so that the producer knows what payment to expect.

As well as winning the producer's trust that they will receive a fair deal, it is essential that bulking stations have a hot water generation system for cleaning purposes, an efficient transfer pump for the piping of the milk, and a voltage stabiliser for correcting local power supplies as well as a back-up generator.

The benefits of bulking milk at stations in India lies more in terms of saving on transport costs than any other factor. This should also be the case in Africa, although it is important that stations lie along a route that can be served by milk tankers collecting optimum payloads with minimum mileage.

The farmer producer can then provide surplus milk to bulking stations, after allocating enough to meet his family's and/or village's nutritional needs. Middlemen should, wherever possible, be avoided as developing a direct link between the producer and the processing dairy has many advantages. Effective management of the bulking system will always ensure that the farmer receives payment or a share in the profit if the operation is run on a cooperative basis.

India has modified several processes and developed its own technology and equipment to produce milk products to suit ethnic tastes – products such as special curds, indigenous

sweet meats, buttermilk, ghee and many similar products. Comesa countries should also develop their own products while promoting the consumption of fresh milk and milk-based products.

“Strategic locations that consolidate multiple smaller bulking stations, can both reduce time and transport costs”

While developing a dairy products market, special attention must be paid to quality assurance systems and standards and regulations for each stage of the production system. This should include the milking process, bulking, and the manufacturing of various milk products. International standards are readily available and could be easily adopted by Comesa member states.

Looking to the future, it would be highly desirable if Comesa was to develop centres of excellence connected to food, beverages and dairy processing, including setting up an “educational” dairy that could be operated by graduating students for a full academic year.

Developing local engineering capacity

In the early 1970s, imported equipment was required by India even for setting up small liquid milk installations with a handling capacity of just 10 000 litres a day. Indian dairy engineering industry today provides a cost-competitive alternative and even supplies export markets with equipment.

Governments must encourage collaboration in the development of engineering technologies and actively stimulate its industries, to meet the agricultural sector's requirements by making available capital equipment at competitive prices.

(Sources available from the author.) 

LOL invests in Manica

by Fidelis Zvomuya

Land O'Lakes International (LOL) is set to start a massive smallholder dairy herd-rebuilding programme in Mozambique's Manica province. The project, which is set to directly benefit more than 7 500 people and 537 500 indirectly, is expected to be completed by February 2012.

The project, once completed, expects to have an impact of US\$2,5 million in amounts of milk generated, the value of beef sold from male calves, and the asset value of the animals.

The project is being jointly implemented with other role players in the dairy industry and is set to increase smallholder farmers' income through participation in a sustainable dairy value chain. The project's activities will include herd restocking, which will see an increase in the number of dairy and cross-bred cattle in Manica. This will help increase milk production and household income.

Land O'Lakes will establish a breeding herd and use artificial insemination (AI) to improve the genetics of the local cows. A breeding herd of approximately 320 animals, will be established on three commercial farms. The offspring produced from this breeding herd will then be distributed to smallholder farmers who successfully completed training.

At least 2 000 farmers will be trained in fodder crop and pasture management, feed and nutrition techniques, animal husbandry, dairy hygiene and milk collection and marketing.

Ten producer level cooperatives and three milk collection centres will be formed, located on or near the three commercial farms housing the breeding herds. This will ensure that the milk produced, enters a cold chain and is handled properly to maintain quality and produce high returns.

One of the centres will serve as a pilot project for the use of biogas as an energy source to run a milk cooler. This will allow for the collection of data to determine the economic feasibility of this model.


Why Manica?

Manica was selected due to a number of ongoing economic development projects underway there. Also, Manica has the best agro-climate for dairy production.

There is also a modern dairy processing factory, Gouda Gold, owned by one of the few existing commercial dairy farmers (see our article in the processing section of this edition). Individuals will be identified and selected to receive training.

“A breeding herd totalling 320 animals, will be established on three commercial farms”

To help establish a herd as quickly as possible, “sexed semen” for AI will be used on the breeding herd. This technology should ensure that at least 70% of the offspring born are female calves, that will continue to reproduce. By the programme's end, more than 900 pure-bred dairy cows will have been distributed.

Male calves will also be distributed, offering an additional potential source of revenue. Land O'Lakes will assist farmers to sell these cattle for beef to an abattoir in Manica province. AI is also going to be used on local animals in the hope of inseminating at least 1 000 local cows with dairy genetics. The draught power training portion of the project will be implemented by Tillers International. The goal of this is to not only make the dairy farmers more productive, but to increase their crop productivity too. 

Photograph by Fidelis Zvomuya

Ex-Zimbabwean farmer, Brendon Evans, with the cheeses produced at his Manica-based processing plant, Gouda Gold

Gouda goes for gold

by Fidelis Zvomuya

Brendon Evans still has bad memories of the Nazi-like “Holocaust” he experienced in the hands of Zimbabwe’s notorious war veterans during the controversial and chaotic land reform programme. Evans lost more than 200 milking cows, farming equipment as well as the farm itself. He moved to Mozambique in 2002 and says he is quite happy to remain there, even if there is a change in the Zimbabwean administration.

Taking with him only 20 cows, before President Robert Mugabe’s regime imposed a complete ban on the exportation of agricultural inputs, he settled in Manica province, the place he now calls home.

Evans, who has made history by being the first one to set up a cheese manufacturing factory in Mozambique, says his success rests with the support he got from a Dutch organisation as well as the partnership he entered into with Scherjon Dairy Equipment and Advance Consulting, Haarlem – both Netherlands-based.

These two companies’ clients are small- and medium-sized processors producing between 1 000 and 100 000 litres of milk per day. “Thanks to the financial support that I got from the Dutch government through the private sector investment programme (PSI), I now own Mozambique’s first and only cheese manufacturing company, Gouda Gold,” Evans says.

Help from abroad

PSI, which forms part of the Netherlands’ development cooperation budget and was formerly known as PSOM, contributed €845 000, which accounted for 60% of the total budget of the project. The money was used for the purchasing of high-tech dairy processing equipment.

“We have the best Dutch equipment to produce these types of cheeses. We use the latest technology available in cheese processing. All parts of the operation are run by a computer programme and all stages are monitored in Holland.

“PSI made it possible for us to acquire this technology on a commercial loan. We still do not have enough milk available to make the plant viable. The grant got the factory up earlier,” Evans says.

“When the factory was opened, initial production was at around 350 kg per week. We increased production in June to one ton per week,

which is still far below the factory’s weekly production capacity of 12,5 tons,” he says.

Gouda Gold was established in 2006 and was officially opened in May 2007 by the Mozambican president, Armando Guebuza. It produces eight different flavours of cheese, yoghurt and also processes fresh milk. The cheese is being sold through supermarket chains, mainly in cities, catering companies, and airlines, among others. Evans says samples are currently being sent to potential markets in the region such as Zimbabwe, Zambia and Malawi.

“Currently the farm produces 16 000 litres of fresh milk per month”

According to Evans, the factory was built to meet all international and EU standards and also strictly follows the guidelines of the International Labour Organisation (ILO). The factory is strategically located on the outskirts of the provincial capital of Chimoio and is supplied with milk by 75 Holstein cows, which he now owns. Currently the farm produces 16 000 litres of fresh milk per month.

“We expect to soon start receiving the bulk of our milk from small-scale farmers throughout the province,” he says.



Evans explains how the process works in his milking parlour



- 1 Diana Evans manages the dairy farm on which Gouda Gold is situated
- 2 A worker of Gouda Gold working the cheese presses

Assisting the smallholder

The aim of the project is to revolutionise the dairy sector by providing a platform for smallholder dairy farmers in order to drastically increase the amount of milk produced locally. The dairy industry in Mozambique is virtually non-existent. The country depends almost entirely on imports from South Africa and Europe. It is estimated that about 120 000 litres are being imported per day.

The only bottling factory in the area owned by Parmalat Mozambique, uses milk powder and imported milk from South Africa, and sells it as UHT-milk. The cost price of milk is also high, as all inputs are imported. The total value of imports of dairy products in 2005 was over US\$20 million.

In 2006 Mozambique produced 68 800 tons of milk, down from 71 500 produced in 1980. The country's cattle herd was drastically reduced by the 16-year-old war that gripped it during the 1970s and 1980s. The current cattle stock is estimated at 1,3 million. In 2000 it had a total cattle herd of 519 778, of which only 1 655 were dairy cows.

The biggest challenge facing the country is the low per capita consumption of milk, which has shown a decreasing pattern – the average Mozambican consumes 5,7 litres of milk annually, constituting a decline of 63% from 9,1 litres in 1990. This is well below the world average of about 79 litres.

Evans works with Land O' Lakes who provided \$6 million, which will go towards providing at least 400 cows to local farmers and financing sexed artificial insemination. The delivery of impregnated cows started in February this year.

Local farmers are going to be selected and will go through extensive training and mentorship to equip them with the skills, knowledge and management techniques. Upon completion of the project, the total amount of milk produced should be above 48 000 litres monthly. About 15% will be provided by five smallholder farmers involved in the outgrowers scheme.


Ploughing back

Since it started its operation, Gouda Gold has already impacted positively on the local community. "The number of veterinary outlets and animal feed shops in Chimoio, for example, have increased from two to five," says Evans.

"But Mozambique lacks the agricultural research infrastructure we accepted as normal in Zimbabwe. On top of the lack of technical support, there is a total lack of finance for farming," he says. Also, dam construction and basic irrigation infrastructure is the responsibility of the farmer.

In a telephone interview, Manica provincial governor, Raimundo Diomba recognises the problems bedevilling the province, such as bad roads and lack of resources, but assures farmers that government is doing all it can to help them achieve their goals.

"Our milk market is expanding. Driving this trend is consumer demand. But despite this growth we still have a lot to do to promote per capita milk consumption," he says.

(The author wishes to thank EVD International Business and Cooperation, a Netherlands government business support initiative, who made his trip to Mozambique possible.) 



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Calf housing on the farm of Samuel Walters, a milk producer based in South Africa's Western Cape province. The calves are fed from steel buckets and are housed in individual sectioned-off calf pens installed on a cement floor

Quick guide

to successful calf-rearing

by Lynette Louw

Any farmer who owns livestock, especially dairy cattle, will know that calf care is of utmost importance, as these young animals represent the future of not only the herd, but also the farmer's dairy enterprise.

If you hope to raise healthy calves, the very first thing to remember is the five pillars of calf-rearing.

Cleanliness

Calves must be born and raised in a clean and dry environment. Dry, clean bedding and clean floors are essential for healthy living. Cement or concrete floors are preferable, as they are easier to clean. Long-cut or baled straw make good bedding and fresh straw should be added daily. Whatever bedding you choose, it should be able to absorb moisture, and should never be wet or too soft.

Always feed calves from clean bottles and buckets. Steel buckets are preferred to plastic

ones, as steel is more hygienic. Sanitise buckets and bottles by scrubbing it regularly with a brush.

Colostrum

Colostrum is the foundation of all calf feed and it protects the calf against disease. The calf has to receive colostrum within one hour of its birth, and another two to four litres 12 hours later. Colostrum contains essential antibodies, vitamins and proteins that the calf needs for sound growth and protection against disease.

Colostrum provides the calf with much needed immunity against disease within the first weeks of life. After that, it is important that an



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Lab-o-Mat

immunisation programme is followed to protect the calf against future disease. Calves need to be immunised against a variety of diseases, which include scours, pasteurella, brucellosis, Rift Valley fever, lumpy skin disease, and other diseases (which may depend on the area and country in which you farm).

Scours (or **calf diarrhoea**) is one of the most common diseases among young calves and often strikes within the first 28 days of life. It is mostly due to bad quality colostrum or insufficient amounts of colostrum. Bacteria and viruses attack the calf's intestine, causing watery diarrhoea which results in the calf losing nutrients and dehydrating. This disease is often fatal.

When your calf has a dirty tail, shows signs of diarrhoea (which may contain blood), loses weight and moves slowly, it may have scours. Address scours by firstly treating the diarrhoea. Rehydrate the calf by feeding fluids with electrolytes and nutrients. Give only clean water and do not give milk or starter meal. Contact a veterinarian. Scours caused by bacteria, must be treated with antibiotics.

Consistency

Be sure to feed calves every day at the same time, and always give milk at the same temperature. Do not switch between cold and warm milk, as this might make the calf sick. Stick to a routine where you feed the calves in the same order – always the same calf first.

If at all possible, your calf or calves should be handled by only one person. The benefit of having a person dedicated to caring for the calves, is that he or she will get to know the calves very well and will be able to spot problems and disease on the spot. It is also easier for a single responsible person to set the right feeding routine and to see to the general hygiene of the housing and equipment.



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Calories

From the second and third day after birth, the calf must be fed milk from the cow. Give two litres in the morning and two in the evening. Start your calf on calf-starter or pellets on day four, and feed the pellets or starter meal twice per day.

Start **weaning** your calf off milk when it is six to eight weeks old. A rule of thumb is to start weaning once the calf consumes half a kilogram of starter meal every day. Be sure to follow a weaning programme, so that the milk is decreased gradually over a period of ten to 12 weeks. Here are some golden rules for weaning your calf:

- Always supply fresh, clean water and replace it twice per day
- Supply good quality hay, as this is good for the development of the rumen muscle
- Start giving vitamin A, D and E supplements two weeks before weaning
- Do not castrate or dehorn calves during the weaning period
- Move the calves to their new pens approximately one week after they have been weaned.

Comfort

Calves that are comfortable, can use their energy to grow big and strong. Comfort refers especially to dry bedding and proper calf housing. There are different types of **housing** in which to rear a calf. Here are the basic types:

- **Calf hutch:** This is a simple, loose-standing construction with three sides, a roof and an opening at the front. A hutch is good for one calf. It can


also be moved to another location if necessary.

- **Calf pen:** A pen is a sectioned-off area with a roof. One big area can be divided into sections for a number of calves. This prevents calves from suckling one another and transmitting disease.
- **Group pen:** This is a much bigger area and houses many calves. Here the calves share feed and water from communal troughs.



Clean and dry bedding is essential for rearing a healthy calf

Whatever type of housing you choose, always follow these basic guidelines:

- Always make sure that the housing is well-ventilated, draught-free and well-lit. Put in openings to let in fresh air and light
- Always separate calves from older cattle
- Housing should always be clean and dry
- Calves should have easy access to feed and water
- Provide enough water throughout the day, especially in hot weather
- Do not mix the feed in the pen or hutch and store the feed in another location, away from the housing. 

Calf-rearing illustrated



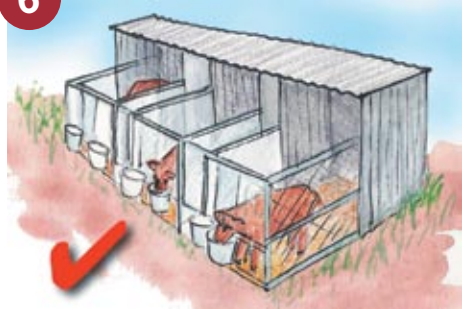
- 1 The newborn calf must receive colostrum from the cow within two to four hours after birth.
- 2 Dry bedding, clean water and a good feeding routine is key to successful calf-rearing.
- 3 Use steel buckets for feeding and wash utensils and equipment regularly with a brush.
- 4 Rehydrate calves with scours by feeding clean water with electrolytes and nutrients.

Calf-rearing illustrated

5



6



7



8



5

A calf hutch is suitable for one calf and has an opening in the front.

6

Calf pens are sectioned off and have a roof to protect against wind and weather.

7

Individual pens have walls and a roof and should protect the calf against draughts.

8

Group pens house calves from the same age group.

5th African Dairy Conference & Exhibition

The Eastern and Southern African Dairy Association (Esada) is pleased to announce that the 5th African Dairy Conference & Exhibition (ADC&E) will be held from 5-7 August 2009 in Boksburg, South Africa.

The ADC&E expects to attract over 300 professionals from all sectors of the dairy industry and will offer attendees an excellent opportunity to meet, network and share the latest information on the dairy industry.

The theme for the conference is "Food for Africa". Regional and international speakers will present papers on subjects such as the world dairy situation; dairy policy and trade; and dairy technology and marketing.

The venue: The conference will be held at the Birchwood Hotel Conference Centre near OR Tambo International Airport. It offers modern, spacious conference rooms and stylish accommodation.

The exhibition will be held in the Lapa of the Birchwood Hotel. This will be a unique venue in which to showcase dairy products,

machinery and services. Increase your visibility as a dairy industry leader by purchasing exhibition space and/or sponsoring in some way.

Dairy tours: CenDel/Esada is pleased to offer full conference delegates a choice of tours scheduled for Thursday afternoon. These include a trip to a dairy plant, a trip to a dairy farm in Gauteng or attending a cattle show and witnessing judging of the cattle.

Accommodation: The Birchwood Hotel offers luxurious accommodation and modern amenities as well as a comprehensive range of services.

Registration deadlines

Early bird registration: 1 May 2009 (Special discounted fee)

Registration deadline: 3 July 2009

Bookings and registration

To register or for more information, please visit the website on www.dairyafrika.com or e-mail Julie McLachlan at Julie@cen-del.co.za

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