

Ubisi symposium

Dairy safety and hygiene – a farm-to-table approach necessary

UBISI 2004, the international symposium on dairy safety and hygiene in Cape Town was attended by delegates from 41 member countries of the International Dairy Federation (IDF), representing 73% of world milk production. It was held under the joint auspices of the IDF, the Food and Agricultural Organisation of the United Nations (FAO), the World Organisation for Animal Health (OIE) and organised by the South African National Committee of the IDF.

– Reg Weiss reports.



The splendid view from the venue, the President Hotel in Sea Point, Cape Town (photo Koos Coetzee)

Beware of attacks on dairy products

Vicious attacks on milk and dairy products, arising from the fierce competition among food giants for consumer support, demanded particular vigilance from the dairy community, said the President of the International Dairy Federation, **Philippe Jachnik**, at UBISI 2004 in Cape Town.

Jachnik, speaking on trends and challenges for the dairy industry, said that the stakes were particularly high, since these attacks were often based on topics alleged to be related to food safety, nutrition or even culture and religion. Within its means the IDF would have to make a determinant contribution on this issue.

Despite of the complex challenges facing the industry, the future of the world dairy economy remained worthwhile and demanded the services of talented men and women. Milk was still a magnificent nutritional product with exciting growth prospects in the changing pattern of global nutrition.

The IDF

Since its creation, the IDF had pursued only one goal – the continued success of the dairy sector. Producers and companies had responded rapidly to consumer tastes and values that were



Phillipe Jachnik, President of the IDF

changing in new and unpredictable ways. In many countries, including South Africa, however, a very complex modern dairy industry now lived side by side with the simpler more traditional way of doing things. Complex or simple, however, the industry had already become part of the global business and would become increasingly more so. This made it all the more important for the industry to rely on the IDF.

Producer-processor relations in many parts of the world had really suffered in the competition with other food industry sectors. In the past, the industry had been too production-driven and thus politically driven. It should not now, however, go from one extreme to the next. Discovering a little late that success came from being market driven, the processors should not forget that without milk producers neither they, nor their considerably increasing investments, were anything. The converse also applied.

"Concretely, in many regions of the world, we are going to have to work at progressively setting up new contractual relationships between processors and producers, based on the two parameters of quantities and prices and bearing in mind that that the price includes

everything to do with quality. As a backdrop we must remember that milk producers obviously also aspire increasingly to a quality of life on the same level as the rest of the population."

The WTO

The future of the WTO's multilateral negotiations were unpredictable, but no one could deny that it was only because of international pressure that some changes in farm and dairy policies ever took place in some parts of the world. The results of WTO had to be evaluated against the indirect effect it had on decisions taken elsewhere.

The fundamental changes in EU farm policy were fraught with enormous consequences for the European dairy sector. The enlargement of the EU by 10 more countries would provide it with 100 million more consumers and many more milk producers.

Rising expectations among consumers, often prompted by food retailers, were leading to fierce competition between the various sectors of the food industry. Consumers were becoming increasingly critical of the way their food was being produced. This applied not only to the high-income groups, but was rapidly increasing also in the middle and low-income regions. This heightened competition between the different families of products, often leading to attacks on milk and dairy products.

Competition

Mass distribution was now a heavyweight in the global economy and the competition between the various store chains was becoming ferocious. New developments in mass distribution and food services outside of the industrialised countries held significant implications for foodstuff suppliers.

The effects of developments within the dairy companies themselves were often underestimated. Increasingly they were developing their own strategies, regardless of whether they were internationalised or globalised companies, regional companies, national companies or local companies. These strategies were increasingly loaded with consequences for the dairy sector as a whole.

The driving forces that would determine whether certain companies would grow,



included the need to counterbalance the power of the mass distribution giants and food services, the necessity to spread the enormous research and development outlays over a larger base and the means required to create commercial brands and sustain them. On certain markets, at any rate, growth would not come from traditional products but through innovation.

Also important was the need to equalise margins derived from marketing a variety of products and ingredients derived from the same

raw material. This task would increasingly rest with individual companies rather than policy-making authorities. "But big is not always beautiful and globalisation provides fresh opportunities for local jewels."

A growing number of food companies had now positioned themselves between food and pharmacy, thus becoming assemblers of various raw materials, from each of which they only took that which interested them. "How are we going to explain this business to the dairy cow, which is already quite an assembler herself?"

Dairy must build healthy nation



Professor UBISI himself, prof Piet Jooste, in conversation with Njabulo Ngcobo and Edista Nugubane, both from the Owen Sithole College in Natal. Prof Jooste, the President of the SA National Committee of the IDF, was highly commended for the outstanding quality of the symposium and the global representation achieved

A healthy population was an even higher priority in South Africa than job creation, said **Dr Franklin Sonn**, former South African Ambassador in the United States, when he opened UBISI 2004.

South Africa needed to focus more closely on its poor, unprotected and undernourished. Job creation was being held up as one of South Africa's most daunting challenges but when, to a large extent, the population remained malnourished and sick, they could not work efficiently, even if they were provided with employment. Both he and President Mbeki agreed that there was not sufficient focus on the health of the South African population.

"Our real challenge is that we have many sick people, among others eight million infected with tuberculosis, as well as the

problem of HIV/Aids and other diseases arising from a lack of understanding of the factors important for the maintenance of good health. The most critical issues in our country remain the treatment and prevention of disease, especially those with the propensity for mass proliferation."

World's largest relies on women

India, the largest milk producer in the world, has great faith in womanpower and entire milk-processing plants are now run by women. One of these handling some 50 000 litres a day has a proud record of producing the highest quality of milk.

R S Chauhan, senior general manager of the National Dairy Development Board of India, told UBISI 2004 that his board had also worked out an ingenious method of ensuring that the women who did most of the work on the dairy farms retained the fruits of their labour.

Credit cards were issued to women whose husbands had a drinking problem and they, and they alone, could use these cards at their co-operatives to draw on the proceeds of their milk sales.

The real challenge was to bring about the essential attitudinal change among small milk producers with their 63 million cows and buffaloes. The producers collect the milk in the villages and deliver it as rapidly as possible by the first means available – bicycles, camel-drawn carts, rickshaws, boats, antiquated vehicles and even on the women's heads.

From different ends of the world



Soon to join the enlarged European Common Market is Poland, one of the biggest agricultural producers in Europe. Dr Hab Stefan Ziajka of the University of Warminsko-Mazurski and Dr Anna Tarczyńska of the Dairy Excellence Centre, represented their country at UBISI 2004



Nelius van Greunen, vice-chairman of the MPO Western Cape, discusses some interesting production statistics with Dr Torsten Hemme, an economist from the Institute of Farm Economics in Germany



From different ends of the earth were Gloria Martin from the quality milk programme in Nova Scotia and Dr Tek Bahadur Thapa from Nepal, "the roof of the world".



Dr Kobus Hendriks of Heilbron, Harry du Preez of Coligny, Tobie de Villiers of Clover Heilbron, Chris Starke of Grootte Post, Darling and Linda Brotherton of Alexandria in a happy frame of mind at UBISI 2004



In the safeguarding of milk purity the Netherlands leads the way. Paul Mathot of the Dutch Dairy Association (centre), advocate of integrated chain management in food safety, listens attentively to Koenraad Duhem, while Arja Scheiwoold from the Netherlands looks on



The Chairman of the Free State MPO, Koos Pienaar, consulting with Prof Lucia Anelich about the undue delay in establishing the proposed bureau for food safety, first mooted more than four years ago



From Havana to Helsinki and all parts of Africa, UBISI 2004 was a landmark for the IDF. Teuvo V A Siirtola Dairy Development Consultant from Finland, Dr Luis A Clerge Fabra of Cuba, President of the International Group of Experts at the FAO, and Martin Njovu, Quality Manager of Parmalat Zambia



French chic of the Cameroon meets up with a Cambridge don. Dr Andrew W Speedy, now attached to the FAO, gives some advice on the production of safe dairy products to Pate June Shang of the Cameroon, where they both speak French and English and let their calves suckle before the cows are milked

IDF to strengthen global role

Global food safety issues required global solutions, which included standards based on risk assessment and global surveillance, said **Philippe Jachnik**, President of the IDF, at the UBISI 2004 symposium. He told *The Dairy Mail* that the immediate objective of his organisation was to strengthen the IDF's worldwide platform for the exchange of credible information and to make it even more representative of the world's dairy industry.

Prime targets were Brazil, Pakistan and other South American countries. More members would mean broader experience and yet more expertise to tackle dairy's most urgent problems. It would also hopefully achieve greater recognition from the World Health Organisation, with whom there was already liaison in the very important field of nutrition.

The IDF already represented some 41 countries with 71% of the world's production. With the membership of Brazil and Pakistan, this figure would increase to 85%.

Jachnik said he believed in the ability of the IDF to learn continuously from any source anywhere and to convert this learning into action. More members meant broader experience and more expertise to bring to bear on the world's dairy problems. It would also mean greater weight in discussions with other international bodies. The IDF was already unique in the variety of the services it rendered to its members. It was also very proud of the role it had played in the establishment of Codex standards.

He paid high tribute to the South African organising committee of Ubisi 2004. The symposium represented a "farm to table" approach for emerging, as well as developed dairy countries. He was particularly proud to welcome experts from neighbouring African countries, as well as countries as far away as Iran, Nepal, India and China.

The OIE

Jachnik said he was also very proud of the fruitful working relationship between the IDF and the International Organisation for Animal Health (OIE), established in the most recent past. A formal agreement had been established last year, providing the framework for co-operation



The jovial president of the International Dairy Federation, Philippe Jachnik (centre), raises a glass to sunny South Africa and is joined by Prof Rusty Bishop of the University of Wisconsin (the Dairy State) and Dr R D Byrne of Virginia, who warned about microbiological hazards that need to be managed during and after processing

in different areas such as veterinary research into diseases of milk-producing species, co-operation in the development and revision of international animal health and zoonoses standards, as well as an exchange of views on the current approach towards disease surveillance and control strategies.

The world dairy sector was important to millions of farmers and workers, as well as to thousands of companies all over the world. While it was acknowledged that the number of milk producers would probably decline in the industrialised countries, there were huge areas of the world where quite the opposite would happen.

'Mr Quality cheese' honoured



Hansie Wolfaardt, manager of Parmalat's Bonnievale cheese factory, who has been honoured at the UBISI 2004 symposium (right) with Berlo Coetzee, Manager Milk Production and Dr Japie Conradie, Manager Raw Milk Quality, both from Parmalat, and Kobus Lessing, General Manager of Lancewood, George

Hansie Wolfaardt, president of the SA Society for Dairy Technology for the past four years and manager of the Bonnievale cheese factory, was honoured with the society's prestigious Award of Merit at the International Dairy Federation's gala dinner.

Willem Dippenaar also received a citation from the SASDT for a lifetime of outstanding service in the quality control of dairy products. Prof Bernie Bester of Pretoria University, secretary of the SASDT, presented the award to Dippenaar.

Presenting the award to Wolfaardt, Hennie Grobbelaar, national vice-president of the SASDT, paid tribute to Wolfaardt's ideal of turning the Bonnievale cheese factory into the best Parmalat plant in the world. "A more committed and passionate factory manager would be hard to find, and thanks to his guidance and drive, the Bonnievale plant boasts a string of quality management firsts."

The factory became the 26th factory in the world to achieve a special "20 Keys award" for practical programmes to revolutionise pro-

ductivity, achieved HACCP listing in 2001, became the first South African factory to receive EU listing in 2002 and, in 2003, was the first to get SABS 2000 accreditation.

He obtained his BCom from Unisa in 1989 and an MBA from the University of Stellenbosch Business School in 1994. His PhD studies on total quality management in food processing organisations have, unfortunately had to be temporarily shelved because of added responsibilities.

A farmer's son from Bonnievale, his life has been characterised by courage and perseverance. He was completely paralysed after a rugby match in 1974 but eventually recovered completely and qualified as a cheese maker at Glen in 1976.

He is a licensed private pilot who once flew a micro light from Johannesburg to Bonnievale in 2,5 days. He wrote off the micro light in a vineyard some years later but walked away unscathed. He is chairman of the Bonnievale runners' club and has completed the Comrades Marathon three times. A keen canoeist, he has also competed successfully in the Berg River Canoe Marathon.

Is anyone listening out there?

An appeal to organisers of symposia not to leave discussions on emerging nations to the very last session when audiences were either very badly thinned out or almost missing, was made by **Mr Arshad H Hashmi**, Pakistan's manager of agribusiness development for small and medium enterprises.

Pakistan and Brazil are two of the non-members presently being urged to join the International Dairy Federation to ensure that it represents more than 83% of world production. UBISI 2004 was characterised by the wide representation from emerging nations and Asian countries.

Consolidate milk laws

There is an urgent need for the multiplicity of laws in South Africa governing milk and dairy products to be consolidated into a single Act, said **Dr Gideon Brückner**, head of veterinary services in the Western Cape and representative on the OIE, the international office administering the terrestrial animal health code.

Dr Brückner, commenting on a call for a complete auditing checklist for health officials to work from, said there were some 12-15 different

In many ways there was a lack of expertise in the field of quantitative risk analysis but there was no need to re-invent the wheel to distinguish between diseases that were the most trade-sensitive and those which were less trade-sensitive

laws in South Africa relating to milk and dairy products which made it extremely difficult to achieve this ideal. South Africa could look to New Zealand that had gone a long way towards achieving a consolidation of their laws and regulations.

Speaking on the relevance of the OIE animal health code, he said it was often interpreted in some countries as being prescriptive and discriminatory against non-compliance, leaving a perception of being all-or-none and uncompromising and insensitive to the need for the trade in animal products. The code, however, made provision for specific rights and obligations and alternatives to be considered to minimise risk in

the trade of animals and animal products and created options to promote trade.

The code was not a textbook on animal diseases, but identified and recommended standards and guidelines. It facilitated trade in dairy animals and their products and also helped countries protect their dairy industries against the introduction of trade-sensitive diseases of dairy animals. It focussed primarily on animal health and the risks to animal health, while not negating the importance of human health.

In many ways there was a lack of expertise in the field of quantitative risk analysis but there was no need to re-invent the wheel to distinguish between diseases that were the most trade-sensitive and those which were less trade-sensitive.

Industry must manage supply risks

It was vital that the dairy industry, and not the State, should take the leadership and initiative in developing the necessary tools for integrated chain management of food safety, said **Paul J Mathot** of the Dutch Dairy Association. Building common risk management and recognition systems into the relevant sectors of the supply chain could be a long and complicated process but should not be shirked.

Mathot said that the industry was able to ensure product safety to a significant extent thanks to its quality management systems but some hazards were incapable of being controlled at dairy plant level. This was especially true of contaminants, residues and toxins transferred to the milk or milk products from preceding links in the supply chain.

This contamination could occur in ancillary or supply industries far back in the supply chain, embracing products not even remotely regarded as being hazardous for milk. These hazards often did not pose a risk for that part of the chain in which these suppliers operated.

Several different types of contaminants and pesticides simply could not be detected by analysis of the milk itself, partly because of time restraints and the short time lapse before the milk was processed.

Keep 'stable to table' safe

More than 62% of the 1 415 human infectious agents known to man can be transmitted between animals and humans, **Prof A L Michel** of Onderstepoort Veterinary Institute told the symposium. Zoonoses transmitted through milk could originate either from the dairy cow herself or from the environment at any stage from production to consumption.

Although the prevalence of major infections such as brucellosis and tuberculosis had at least been greatly reduced or eradicated in industrialised countries, these infections continued to be of concern in developing countries. Clinical symptoms in humans were mostly related to the gastro-intestinal tract and could be treated, but some food-borne pathogens such as the listeriosis and clostridial infections were able to cause acute deaths.

Control and prevention relied heavily on national eradication schemes for major livestock diseases, but to ensure food safety from production to consumption a comprehensive "stable to table" approach was required.

Apart from a few isolated infections, pasteurisation was a very good tool for making milk safe. Unfortunately, in some countries only a very small percentage of raw milk was delivered to pasteurisation plants. Of particular interest to the dairy industry was brucellosis, tuberculosis, leptospirosis, viruses, mycoses, bacteria and rickettsia causing mastitis, some of which were able to produce toxins with varying heat stability.

Lukas Kulkas, a veterinarian from Valio, Finland, said that sound herd management was a quality tool, when planned in co-operation with a veterinarian. It was necessary to motivate and continuously educate the farmers. In Finland this was part of a five-step programme, which led to eventual certification of herd health. At the third level herd health management became obligatory. Obligatory measures did not always work because farmers could become as stubborn as donkeys. Dialogue was important and veterinarians should not talk down to the farmers.

Fast food can also be safe

Street vendors, operating under very adverse conditions in largely unsavoury environments,

emerged with a surprisingly good food safety record in a survey conducted by the University of the Witwatersrand into small and less developed businesses. This was revealed at UBISI 2004 by **Prof Alec van Holy**, of the School of Molecular and Cell Biology of the University of the Witwatersrand.

The food served by the fast-food vendors was found to be of relatively good quality and safe to eat. The survey ascribed this to the rapid tempo at which the food was sold, the food preparation systems employed and the need to

**More than 62% of the
1 415 human infectious
agents known to man
can be transmitted
between animals and
humans, Prof A L Michel
of Onderstepoort
Veterinary Institute told
the symposium**

satisfy a discriminating and value-conscious clientele. The fast absorption of fresh ingredients, the high cooking and holding temperatures appeared to counteract any unhygienic influences of the rather unsatisfactory environments in which the vendors were forced to operate.

Prof van Holy said the critical control of hazards (HACCP) had become almost routine in larger, well-resourced food industries, but many small and less developed businesses, including street vendors, experienced difficulties because of a lack of food safety knowledge and accompanying resources. Apart from poor infrastructure and facilities, many of these operators did not have the financial resources to implement these plans. *TDM*