

The Institution of Engineers (India)
Karnataka State Centre, Bangalore

Two-day All India Seminar

Emerging Technologies in Dairy Industry
Bangalore 29-30 April 2011

The Karnataka State Centre under the aegis of Chemical Engineering Division Board of the Institution of Engineers (India) and in association with KMF Milk Union, organized a two-day All India Seminar on “**Emerging Technologies in Dairy Industry**” on 29-30 April 2011.

The Seminar was inaugurated by **Prof. R.M. Vasagam**, Former Vice Chancellor, Anna University and **Dr. N.V. Belavadi**, Executive Director, National Dairy Development Board, Anand, Gujarat delivered the Key-note Address. **Sri Ravikumar Kakade**, Director – Marketing, KMF Ltd released the Souvenir brought out to mark the occasion.

Er. Conjeeveram E. Basker, Seminar Convener welcomed the invitees spoke on the significance of the theme.

In his Inaugural Address, Prof Vasagam stressed on the significance of dairy industry in the country's economy. He mentioned that hard work of Padma Bhushan Varghese Kurien, who is the father of India's White Revolution and further said, Operation Flood has “completely transformed the manner in which India produces milk”. Speaking on the major concerns and issues faced, he said that the prime goal is to sell dairy products across the globe.

In his Key-note Presentation, Dr. Belavadi drew parallels with the present dairy industry and what was existing 50 years ago when the concept of dairy technology was new to the people. By mid 90s, many private players entered the industry and the scenario changed. Addressing the challenges faced by the industry, he said the Planning Commission has set a target of 200 million tones of milk by 2025 to meet the growing demand of milk and milk products. He warned about the international competition and mentioned how New Zealand and some Norwegian countries which have immense natural resources have an advantage over the local industry.

Although the dairy sector has made rapid strides in the last four decades, especially after Operation Flood, the success achieved is not commendable. He observed that there are cracks visible in the structure of Dairy Co-operatives and women in most Co-operatives are still sidelined. Many of the Milk Co-operatives in the country still lack transparency and suggested that IT-enabled solutions such as those that ensure `direct payments to farmers' can make Co-operatives more accountable to mil producers. Building databases of Co-operatives and putting them online can also benefit participants.

Dr. Belavadi pointed out that Indian dairying is still largely built on the effort of small producers. Observing that about 70 per cent of the tasks are performed by family labour, he said rapid urbanization is causing youth to move out of the dairy industry.

Dr. L.V. Muralikrishna Reddy, Chairman, Chemical Engineering Division Board, IEI was the **Guest of Honour**. Speaking on the occasion, he gave a brief introduction of IEI, Chemical Engineering Division Board and Karnataka State Centre.

Talking about the theme of the Convention and sustainable milk production, he stressed that In search of efficiency, the dairy industry offers the major sector of the food industry at National Level. Internationally, there is lot of activity on “Go Green”, which resulted in great interest from Civil Society, Consumers, Government and Industry on how to minimize environmental impact of milk production.

In response to this, the dairy industry should actively consider work towards reducing green-house emissions associated with production, collection and processing of milk and delivering of dairy products in a sustainable manner. He called upon the scientists and engineers to give utmost priority to environmental concerns and expressed confidence that the subject Convention will discuss on the issues of sustainability.

On behalf of the Chemical Engineering Division Board, he thanked all the supporting agencies for the co-operation extended in organizing `first-of-its kind` programme on the forum of Karnataka State Centre of IEI at Bangalore.

Dr. M.N. Venkata Ramu, Director, CTI, KMF also graced the occasion and addressed the invitees.

Dr. Shashidhar S. Bhavikatti, Organising Secretary of the Seminar proposed vote of thanks.

The All India Seminar focused attention on major concerns and issues of Dairy Industry, namely, notable trends in emerging processes, technologies, product diversification, working practices, energy conservation aspects, quality and standards, etc and twenty-three Papers were presented by leading experts from dairy industry, academia and other industries in five technical sessions spread over two days.

The Seminar was co-sponsored by KMF Milk Federation and supported by Dairy Science College, Indian Dairy Association, IDEA, NDRI.

Sri D.V. Mallikarjun, Sri G.S. Govindaraju and Sri G. Mahesh Kumar of KMF extended valuable co-operation in organizing the Seminar successfully.

As a result of two-day deliberations held during the technical sessions, following Recommendations have been formulated.

Recommendations

1. Energy efficient processes and automation systems must be adopted to conserve energy and reduce the cost of milk supply and other dairy products.
2. Human intervention should be avoided as far as possible to keep hygiene and sanitation on par with compliances of HACCP, GMP and GHP practices.
3. Dairy industries should think in parallel to produce nutraceuticals, pro-biotics and pre-biotics which have global requirement.
4. Products from dairy industries should be checked for their safety and nutritional values using inexpensive specific and analytical spot tests.
5. Adulteration of the milk and the synthetic milk with pesticide contamination should be monitored periodically.
6. Sustainable milk production considering energy efficiency, environment and climatic changes mitigation
7. Technology may be developed for organic milk production
8. Develop modern analytical techniques using bio-sensors for dairy industries for food hygiene, sanitation, adulteration, presence of toxic chemical such as pesticides, formaldehyde, melamine urea, etc monitoring.