

Keynote Address



SHRI MEENESH SHAH
Chairman
National Dairy Development Board
Anand

I feel privileged to have this opportunity to deliver the Keynote address today on the theme "**India: Dairy to the world - Opportunities and Challenges**" at the 49th Dairy Industry Conference here in Gandhinagar. I would like to congratulate the Indian Dairy Association for choosing a theme that truly reflects the current times.

This year's Dairy Industry Conference is special in many ways. After a gap of 3 years, we have been able to assemble again at one place to collectively put our thoughts together for the betterment of the dairy industry. It is indeed a great pleasure to stand before you in person as the COVID-19 pandemic had changed the ways of life as we knew it. We must thank the almighty to have given us the strength to tide over such unprecedented times and give us the opportunity to take a renewed pledge to make a positive difference in the lives of our dairy farmers. It is for the second time in

almost three decades that the DIC is being held in Gujarat, the birthplace of the dairy cooperative movement leading to creation of Anand pattern of Cooperatives which was replicated across the country by NDDDB during Operation Flood and thereafter. It was in 1996 that the last DIC was held in Gujarat which had coincided with the golden jubilee celebration of AMUL. Our Founding Chairman Dr. Kurien was at the helm of affairs at that time and we continue to tread the path that was shown by the visionary leader. He had aptly said:

"India's place in the sun would come from the partnership between wisdom of its rural people and skill of its professionals."

I believe the time is as opportune as ever for India to take its rightful place in the Sun in the dairy industry. We are at the cusp of a great transformation to become the dairy to the world provided we all are ready to shoulder the responsibility and to create synergies between the untiring efforts of our dairy farmers and the dedication of our professionals – as Dr Kurien said. In the 1950s, no one would have imagined that a newly independent milk deficit nation could ever become Atmanirbhar and emerge as the world's largest milk producing nation. This has been a remarkable revolution for a country that has over a billion people. If that could be achieved, we should not have even an iota of doubt today that we can also become the dairy to the world in the near future. This could be our next big revolution, our moment in the Sun!

This DIC comes almost 6 months after we hosted the largest ever and one of the most fruitful World Dairy Summits of IDF in New Delhi during September 2022. We successfully showcased the uniqueness of the Indian way of dairying to the World. The World now truly recognizes our contributions and looks up to us to lead the sector forward. This is also the year of India's G-20 Presidency and the DIC's theme is in consonance with G-20's theme of "*Vasudhaiva Kutumbakam*" – a philosophy that we have followed since ancient times. I am pleased to announce that we are planning to host an international symposium in collaboration with FAO under the umbrella of G-20 in a few months' time.

We have completed 75 years of Independence and as we enter into the *Amrit Kaal*, we have to focus all our energies for the next 25 years to realize the Government's vision of transforming India into a developed and prosperous nation as we celebrate 100 years of Independence in 2047.

This brings to my mind the popular parable of the bricklayers. Once sometime in the late 17th Century in London, a famous architect happened upon three bricklayers. He asks them what they are doing. The first one responds that he is laying bricks, the second one says that he is building a wall, while the third one, the most efficient of the three, responds that he is building a beautiful place of worship to the Almighty. This story underlines the power of vision and purpose, without which it is difficult to achieve great things.

Just like the third bricklayer who could visualize that his work had a larger objective, all stakeholders in the Indian dairy sector will need to have a similar approach to contribute for realizing our dream in the next 25 years. It would require copious innovation, immense grit & determination and skillful ingenuity.

We have a blueprint ready for vision 2047 and it is about time that we all effectively collaborate synergies to achieve it. By 2047, we plan to increase the bovine productivity by 4 times, increase Indian dairy exports to 15% of total global dairy export, and build sustainable green practices to achieve the COP26 targets. Through this platform, I would like to invite all of you to actively participate in this transformative expedition.

India's Role in Global Dairying

Milk production in India has been growing at an annual growth rate of around 6%, almost triple the World's average growth in milk production. Today, India's share is about 23% in global milk production. Similarly, the Per Capita Availability (PCA) of milk has also reached to 427 grams per day in 2020-21, which is much more than the world average of about 310 grams per day.

Along with being the largest producer, we are also one of the largest and fastest growing dairy markets of the world. Today our dairy market is worth Rs. 13 lakh Crore which is likely to more than double to Rs. 30 lakh Crore by 2027.

When the last DIC was held in Gujarat, our annual milk production was about 70 MMT and in 27 years it has tripled today. Looking ahead, even by conservative estimates, in the next 25 years, the milk production would reach to more than 600 MMT. This would be little less than half of the global milk production in 2047.

While we embark on this exciting journey, the other major milk production centres in the world have already started experiencing stagnation or even decline in milk production. Therefore, as we move ahead and assume greater role among the global dairy community, we will have more and more responsibilities on our shoulders as we become a global dairy powerhouse.

Such fast paced developments will provide us with umpteen opportunities and we must be ready to grab them with both hands. At the same time, the road ahead will surely be peppered with challenges.

Before we look at some of the opportunities that are present before us, allow me to elaborate on the key factors which can be attributed to the remarkable success of Indian dairying.

Success of Indian Dairying

Today the milk produced in the country is valued at Rs 9.3 lakh crore. It is the largest agriculture produce by value, even surpassing the combined value of cereals, pulses and sugarcane. It is contributing 5% to the national economy which is world's 5th largest economy and providing employment to 8 crore farmers directly, majority of whom are small and marginal farmers, and landless households.

The dairy cooperatives have played a pivotal role in the success of dairying in India. The inherent nature of the milk coupled with wide geographical distribution of dairy farms and hot temperate climate in India makes cooperatives the best model for development of dairying. The Indian dairy cooperatives have been able to establish one of the most efficient supply chains in the world ensuring that about 75% of consumer rupee goes back to the farmers. This is highest globally in all milk supply chains and it is also the highest among all other agriculture commodities in India. The dairy cooperatives provide the facility of collecting milk right in the village itself ensuring transparent, fair and remunerative prices, all year round. The dairy cooperatives also provide many doorstep services to the farmers, much before the Amazons and Flipkarts of the world started home delivery! These features have kept dairying as an attractive and remunerative livelihood option and a profession of choice. It also continues to provide a steady stream of income to our farmers even in these uncertain climatic conditions when there are increasing instances of crop failures due to either excessive or unseasonal rains or droughts or due to unpredictable change in seasonal patterns.

The cooperative dairy structures have been built very painstakingly and as a result, their robustness has stood the test of time. In the past 6-7 decades, the impact it has had on socio-economic empowerment in the rural milieu can never be overemphasized.

It all started as a struggle inspired by the freedom movement to break free from the clutches of manipulative middleman in Kheda district of Gujarat. Farmers under the leadership of Sardar Patel, Morarji Desai and Tribhuvandas Patel managed to start the dairy

cooperatives. From humble beginnings in 1946, just before the dawn of independence, collecting about 250 kilograms from 2 villages it has today become a network of 2.2 lakh societies collecting about 600 Lakh Kilograms in the country each day, all 365 days.

We can attribute this remarkable transformation to the presence of 3 major pillars among other factors. First our dairy farmers and professionals, second resilient institutional structures, and third enabling policy environment provided by successive governments.

Dr. Kurien had said, *"We must build on the resources represented by our young professionals and by our nation's farmers. Without their involvement, we cannot succeed. With their involvement we cannot fail."* This has really been proven true.

We feel honoured that Government of India gave credence to the importance of the sector by first creating an independent Ministry of Fisheries, Animal Husbandry and Dairying in May 2019 which was followed by creation of a new Cooperation Ministry in July 2021. The Ministry has appropriately given the call of *"Sahakar se Samridhi"*. These are big policy measures, which will have a multifarious effect and give us the much needed additional strength in all our endeavours.

We are well aware of the success of Operation Flood, for which NDDB came into existence in 1965 at the behest of late Shri Lal Bahadur Shastri, the then Prime Minister of India. He wished for transplanting the "Spirit of Anand" across the country and NDDB then rolled out a nationwide OF programme which ran for 26 years and rest as they say is "history". We have never looked back since then. The OF was followed up by Perspective Plan and then by National Dairy Plan-I. NDP-I which concluded in 2019-20, was a highly successful program as it exceeded many of the original targets as envisaged at the beginning. Major thrust areas of NDP-I was to increase productivity of milch animals and thereby increase milk production to meet the rapidly growing demand for milk and provide rural milk producers with greater access to the organized milk processing sector.

The Independent Evaluation Group of World Bank rated NDP I as "Highly Satisfactory" project, in its Implementation Completion and Results Report (ICRR), which is the highest possible rating for a World Bank funded project. The implementation of NDP I has established the fact that a scientifically planned integrated approach towards dairy development can indeed be successful in a large and diverse country like India.

NDP phase II is in the advanced stages of approval and it is likely to be rolled out soon where the focus is

on increasing the share of milk sold to the organized sector, increasing milk processing capacity under quality assessment systems for ensuring safe and hygienic milk to consumers, increasing the market share of dairy cooperatives, encouraging beneficiaries to adopt climate-smart practices and reduction in methane emissions per litre of milk.

During the last couple of years, when the COVID-19 pandemic had struck, there was large unemployment especially for low income jobs and daily wage earners. Many of them were forced to migrate back to their native villages thousands of kilometres away just to survive. During such difficult times, except some hiccups in the initial few weeks, cooperative dairies continued to provide a steady stream of income at the villages even when the markets were closed. As we slowly move towards normalcy, there are many who have preferred to stay back at their native places and continue with dairy farming. We have witnessed numerous beautiful success stories scripted through dairy farming. The Gopal Ratna Awards, given out every year to innovative farmers showcases the stories of many such dairy farmers who have beaten the odds through dairying.

Now that we have a rich historical legacy of successes, we have to work harder to raise the bar further. To achieve this, let us now move to the opportunities that knock at our doors.

OPPORTUNITIES

Domestic Market

One of the key strengths of the Indian dairy sector has been the ever increasing demand. As Dr. Kurien had once famously said, *"There would have been no Anand unless there was a Bombay."* Markets are necessary to enable farmers to sell their produce and expanding markets incentivize the farmers to produce more. Rising population, rapid urbanization, increasing disposable income with a young demographic distribution are the core drivers of this rising demand.

By 2027, the market for products like cheese, flavoured milk, lassi, buttermilk, whey and organic milk is expected to grow by more than 20 per cent per annum. The annual growth of traditional dairy products like ghee, curd, ice cream etc. is expected to be in the range of 11-20 per cent. Some other dairy products which have good potential to grow rapidly in the future are Probiotic Dairy Products: 20 per cent, Cheese: 25 per cent, Whey: 22 per cent; Ice Cream: 18 per cent; Sweet Condensed Milk: 20 per cent; Milkshake: 22 per cent; Flavoured Milk: 25 per cent; UHT Milk: 19 per cent; Flavoured & Frozen Yoghurt: 22 per cent. I can say confidently that such risk free high growth is not even possible at the

stock markets or through any other low risk financial investment.

Changing Consumer Preferences

There was a time not too far back, when consumers were averse to consuming food items that were "packaged and processed." There was always an appeal for "fresh" products procured directly from farms or through some agents. This was also true for milk and milk products.

Despite the havoc that COVID-19 pandemic created, it fuelled a major change in this mindset of consumers. Since safety, hygiene and boosting immunity took the centre stage in our lives, the consumption patterns have seen a dramatic shift. This translated to more and more consumers preferring to consume packed food items from trusted brands which are safer and more hygienic.

The pandemic led to a significant growth in sales of packaged liquid milk and increase in home-consumption of dairy products. As the HoReCa was closed down during the lockdown along with all markets, the Indian kitchens experimented like never before and it spurred the sale of dairy products to another level. In normal times, it would have taken years together to witness such a shift.

Today, consumer preferences are unfolding at an exponential pace. We as the dairy fraternity, cannot afford to ignore the buzzwords like organic/ prebiotics/ probiotics/postbiotics. While we are aware of probiotics like yoghurt and other fermented dairy products that enhance the population of good gut bacteria, the horizons have now expanded to prebiotics and postbiotics. While prebiotics provide the fuel needed for friendly gut bacteria to grow, post biotics are bioactive compounds formed by the action of probiotic bacteria on the prebiotic material. The consumption of dairy probiotics like buttermilk, yoghurt, cottage cheese, etc. are anticipated to grow in this scenario.

Export Potential

In the next 25 years, when our annual milk production level nears 600 MMT, it would be about 40-45% of global production. This would leave us with an estimated surplus of about 100 MMT from which we have to target to export as much as we can. While we are currently at less than 1% of the global dairy exports, we have tremendous potential to grow further. We are in such a geographical position that most of our neighbouring countries are major importers of dairy products. We need to overcome all the bottlenecks that prevent us from exporting to our neighbouring countries. Some of the factors that hinder exports are the uncompetitive prices, prevalence of FMD and other diseases, lack of

traceability, various Sanitary & Phytosanitary Measures (SPS), Technical Barriers to Trade (TBT) measures in the foreign market, low visibility of domestic products, ineffective marketing practices, etc.

Besides exports of conserved dairy commodities, the strong presence of Indian diaspora around the world ensures an assured market for our home grown dairy products. Just finding a pack of ice-cream of Amul or Nandini or Mother Dairy on the shelves of a supermarket in a distant country puts a smile on the face and a feeling of nostalgia for motherland for an Indian emigrant.

Also, the Hon'ble Union Minister of Home Affairs and Cooperation Shri Amit Shah Ji, has been instrumental in setting up of dedicated export houses cooperatives that will immensely help the dairy cooperatives in this direction. The dairy cooperatives in association with these export houses will be able to earn even better revenues for our dairy farmers. Affordable Indian dairy products would also help the underdeveloped and developing countries, especially in Africa, to meet their nutritional demand and help fight against malnutrition. Therefore, India could be the dairy powerhouse to the world, much better equipped to feed not only its domestic population, but also export to the rest of the world.

Vasudhaiva Kutumbakam

India believes in the philosophy of *Vasudhaiva Kutumbakam* for the greater good of the global community. Many of the neighbouring Asian and African countries have small holder milk production system like India, but dairying is not that developed in these countries. The Hon'ble Union Minister of Home Affairs and Cooperation had expressed his desire at the World Dairy Summit of IDF that these countries need to be supported and Indian small holder system should be replicated to transform their dairy sector for holistic dairy development on the principles of cooperation. In this direction, NDDDB is helping Sri Lanka in formulating a large scale dairy development plan and is in discussion with Nepal for strengthening their cooperatives for betterment of their dairy farmers.

Dairy Start-Ups

India today has a booming start-up ecosystem with support for right policy and funding environment. The dairy sector has also witnessed a number of start-ups related to various aspects of dairying. These start-ups have demonstrated the scope for deploying tech solutions to areas like milk testing, products traceability, low cost cooling solutions, quality dairy product delivery, catering to niche consumer segments, among others. Some of the successful notable dairy start-ups are Mooofarm, Mr. Milkman, Nutrimoo & Country Delight from Gurugram, Puresh Dairy from Jharkhand, Klimom

from Hyderabad, Happy Milk from Bengaluru, Whyte Farms in Delhi, Akshayakalpa in Tiptur, Karnataka, and Milk Mantra in Odisha. Apart from these dairy products-based start-ups, there are others like Stellapps which use IoT and big data to improve dairy distribution features, Statlogic from Chennai that develops AI-driven solutions for the animal husbandry and dairying field, and Dvara E-Dairy that provides digital financial and management solutions to the dairy farmers.

Overall, these start-ups leave us with a sense of optimism regarding the investment potential inherent in the dairy sector and remind us that it is a vibrant sector that continues to grow while engaging and attracting new technology and investment. I am positive that with the kind of enabling ecosystem and support being provided by the government today, many more such start-ups will flourish and enrich the dairy sector in the country. A step in this very direction is being taken through organizing events such as the recently concluded Grand Start-up Conclave on Animal Husbandry and Dairy held in Hyderabad, jointly organized by the DAHD and Start-up India on the 28th February. The Conclave included showcasing of start-ups, sessions for start-ups to pitch their ideas and models to stakeholders like investors, venture capitalists, dairy cooperatives etc., apart from various other workshops.

The dairy sector really is one that abounds in opportunities. I have complete faith that we will utilize these opportunities to truly become the dairy to the world. But like everything else in life, the development of this sector too comes with certain challenges.

CHALLENGES

Low Productivity

While India is the largest milk producer in the world, it also has the largest bovine population. Indian dairy sector is characterized by low productivity of its animals, requiring more herds of cattle. The data indicates that the average annual productivity of cattle in India is 1,777 kg/animal, which is lower than the global average of 2,699.

We have the vision to enhance the productivity to reach 7,700 kg per animal by 2047. This also means that scientific feeding and breeding techniques will have to be adopted to ensure that up to 90% genetic potential of bovines is exploited from the current level of 70%.

We have already been taking steps in this direction. NDDDB has been designated as the implementing agency for the Rashtriya Gokul Mission (RGM) scheme of the Department of Animal Husbandry and Dairying, Government of India. The scheme aims to improve milk production and productivity of bovines by enhancing

coverage of artificial insemination using semen from High Genetic Merit (HGM) bulls. It also aims to conserve indigenous cattle and buffalo breeds. NDDDB has taken on multiple activities under RGM such as implementing PT-PS (Progeny Testing- Progeny Selection) projects, importing bovine germplasm, strengthening of ETT/IVF (embryo transfer technology/in-vitro fertilisation) facilities, undertaking pilot project on AI with sexed semen, besides providing training and monitoring of AI in NER States.

Genomic Selection methodologies have ensured faster herd improvement, aided by BUFFCHIP and INDUSCHIP developed by NDDDB. Genomic selection is being implemented on the ground with respect to major breeds of cattle in the country to aid-in accelerated genetic progress. High genetic merit bulls are imported, and then genomically selected for semen production. This technology is being combined with the use of sexed semen, and OPU-IVF technologies. Systematic breeding using these technologies will multiply elite females, reduce the birth of unwanted male calves, and thereby ensure efficient and sustainable dairying.

Feed and Fodder Shortage

As mentioned earlier, the demand for dairy products is growing rapidly. To cater to this demand, the productivity of our animals needs to be increased. Therefore, we require good quality feed and fodder for our livestock. The Indian Grasslands and Fodder Research Institute (IGFRI), Jhansi has estimated that there is a deficit of 11.24%, 23.4% and 28.9% in green fodder, dry fodder, and concentrates respectively in India (2019). The cost of straw has increased nearly 2-3 times in the past two years owing to increasing farm mechanization, diversion for commercial purposes like paper mills, reduction in per capita land availability, shortage of yield, scarcity of water, and climate change.

We do not have the luxury of vast pasture lands or grasslands that can be put to use as grazing lands for the vast cattle population. This coupled with the huge population density and intensive agriculture system further limits the land available to be brought under fodder grass cultivation. The area under fodder cultivation is 4.6% of the total cropped area, with this share remaining static for about 4 decades.

Considering this situation, the GoI has announced setting up of 100 fodder-centric FPOs (Farmer Producer Organisation) namely "Fodder Plus FPOs" in the country with NDDDB as the implementing agency. Apart from this, emphasis is being placed on enhancing the fodder seed processing capacity. From the current capacity of 4000 MT per annum production/distribution of fodder seeds, we are eyeing a growth up to 15,000 MT by

2047. A realistic evaluation of the situation brings us to the understanding that depending entirely on improved fodder production will not be enough. Therefore, we need to explore increased dependence on silage, Total Mixed Ration (TMR), and concentrates to ensure more balanced feeding regime for our cattle population so that the productivity of the animals commensurate to their genetic potential.

Share of the Organized Sector

The organized dairy sector provides assured market to millions of dairy farmers around the country while paying remunerative prices. They protect the individual dairy farmer from the risks inherent in market participation through improved bargaining power brought about through collectivisation.

Out of the total milk produced in the country, 37% is consumed in the production centres themselves. The remaining 63% is available as marketable surplus. The unorganized sector still controls about two-thirds of this surplus. Dairy cooperatives, other producer-owned institutions, and private dairies are continuously striving to bring more farmers within the ambit of the organised dairy sector. The Dairy Cooperatives and Producer Organisations collectively procure around 50% of the total milk handled by the organized sector. As compared to other sectors like fruits and vegetables sectors which are only about 5% organized, the milk sector is organized up to the tune of about 30-35%.

Even though we have been fairly successful in bringing higher and higher numbers of dairy farmers into the organized milk sector, there is still much ground left to be covered. Increase in the share of the organized milk sector benefits not just the producers, but also the consumers.

Quality

Maintaining and certifying the quality of process and products is important in all sectors, more so in the food sector. NDDB had launched the Quality Mark in 2016 to certify the quality and safety of milk and milk products from dairy cooperatives and producer organizations. Various parameters have to be met by the organizations interested in obtaining this certification. However to bring convergence in product and process certification being done by two separate entities namely NDDB and BIS, a Conformity Assessment Scheme was brought out by NDDB and BIS together, unifying process and product quality certification. 'Product- Food Safety Management System- Process' certification has been brought under one umbrella by this initiative, symbolized by a logo featuring NDDB-Quality Mark, Kamdhenu Cow, and the BIS-ISI mark.

Certifying our dairy products with an assured and trusted quality mark will increase confidence in the consumers about the safety of the products, address any quality issues, and will also enable us to improve the export potential of the dairy products.

Climate change and sustainability

The World got together in Paris for the COP26 in 2021 to set targets to limit global warming to 1.5 degree Celsius above pre-industrial levels. Failing to achieve this target will result in irreversible threat to both humans and to the Earth's ecosystem. The impact can already be felt and it can no longer just be dismissed as a threat on paper. Countries of the world have committed to move towards net-zero GHG emissions by 2050, while India too has committed to reach this goal by 2070.

Climate-smart dairy farming is the need of the hour if we are to achieve the target set by India of net-zero GHG emissions by 2070. Enteric fermentation in cattle has been recognized as one of the major contributors of GHGs. Scientific breeding, and feeding techniques, manure management and energy management are the keys to mitigate these. Genetic improvement of animal herd using sexed semen, and OPU-IVF will ensure both better milk production in accordance with the genetic potential of the breed, and lower herd size as a result of better productivity per animal.

Additionally, selection of better breeds and good quality feed are being undertaken to ensure superior feed conversion ratio. The Android-based Pashu Poshan software developed by NDDB helps farmers scientifically balance ration, saving costs and ensuring better feed conversion. Research into bypass feed types is also ongoing.

Besides these, NDDB is also a keen participant in the spheres of clean energy and bio-fertilisers. NDDB is involved in promoting biogas as cooking fuel, and as fuel for vehicles through establishment of compressed biogas (CBG) plants. Use of dung-based organic fertilisers is promoted through various programmes like Biogas programme of MNRE, Gobardhan Scheme, etc. NDDB has incorporated a subsidiary company "NDDB Mrida Ltd." in 2022 to implement and upscale the biogas and manure management in a focussed manner. India's first all-women cooperative on manure has been registered by NDDB under the trademark "SuDhan" to promote dung-based organic fertilisers.

NDDB has signed a MoU with Suzuki Motor Corporation of Japan to start a biogas demonstration plant to accelerate the achievement of the target of carbon neutrality. It will also evaluate the viability for future

commercialization and wider adoption, along with improving energy self-sufficiency. NDDB Mrida Ltd., has signed an agreement with Sistema.bio to work with smallholder dairy farmers to install modern flexi biogas plants to improve waste-to-energy conversion, which will both provide better manure management and supplement farmer incomes. NDDB has setup a 4000 cubic meter capacity biogas plant in the premises of Varanasi Milk Union. The plant shall be run on dung purchased from the farmers and the gas produced shall be utilized to satisfy thermal and electric energy needs of the dairy. The slurry produced from the plant shall be utilized to produce and sell slurry based organic fertilizers on the lines of Zakariyapura model. Water shortage has always been a perennial problem in our country. It is no surprise then that this problem affects the dairy sector too. Dairying is a water-intensive activity since it is required in large quantities right through keeping cattle to dairy processing. Milk production falls if the animals don't get enough clean water to drink. In dairy processing sector, large amounts of clean water is required both for direct use in the processing and also for cleaning and maintenance of the equipment. We need to look into measures to cut down or optimise the quantity of water used in processing plants to remain a competitive and adaptable sector.

Disease Outbreak

The COVID-19 pandemic has taught us an important lesson on the importance of disease prevention. It has opened our eyes to the reality that despite the advancements we have made so far, a microscopic entity like an invisible virus can bring the whole world to its knees.

We need to ensure that the lessons about disease prevention that we learned the hard way through the pandemic recently are applied to our animal wealth as well. Animals falling sick ends up being a major constraint on the finances of our farmers.

The recent outbreak of Lumpy Skin Disease in the country caused both decline in milk production and loss of animals too. Veterinary care is not readily available in many remote areas or is costly for many farmers to afford it. Even when doctors are available, treatment with antibiotics is expensive and causes loss to the farmers due to the withdrawal period. This is a double whammy for many. Awareness and prevention is the key.

NDDB has been promoting usage of Ethno-Veterinary Medicines (EVM). These are cost-effective and efficacious and can be prepared at home with commonly available ingredients. Such an alternative approach is supported by NDDB by encouraging milk unions to promote the use of such medicines, providing training

in its preparation, holding demonstrations, etc. We are also cognizant of the fact that antimicrobial resistance (AMR) is a persistent problem the world over, and adoption of EVM is our humble contribution towards tackling this issue.

The 100% Central Government funded National Animal Disease Control Programme (NADCP) was launched by the Hon'ble Prime Minister to eradicate Foot and Mouth Disease (FMD) and Brucellosis in livestock through vaccination. NDDB's Information Network for Animal Productivity and Health (INAPH), now declared as a national database, generates "Pashu Aadhaar" or unique animal identification through ear-tagging. It has been acting as a major supporting platform for the implementation of many activities including of NADCP. These will go a long way in preventing and controlling future disease outbreak.

Concluding Remarks

At the risk of sounding repetitive, I would again like to conclude by quoting Dr. Kurien, which is very relevant to our theme:

"Right now, we only have a dream. That dream will remain a dream unless we can work together. Those of us who want to see our nation become a major player in the international dairy market must agree to common objectives; we must work together to build upon our mutual strengths and overcome our weaknesses; we must share a strategy and a plan; we must allocate responsibility and, once we have accepted responsibility we must all meet our commitments, whatever be the costs; we must share risks as well as rewards; and we must be willing to finance the investments necessary to build international markets. There is no other way."

Let us rededicate ourselves to build upon this strong foundation, utilize the opportunities, provide right fuel to our neophilic urge and continue to innovate for introducing new technologies to bring in more efficiencies in the dairy value chain and overcome the challenges.

I am sure that the proceedings of the Conference without any reservation, will enrich our efforts of finding sustainable and innovative solutions for making dairying more remunerative to millions of our dairy farmers through increasing productivity, reducing costs and at the same time minimizing impact on our environment by adopting greener practices.

Thank you!