

Keynote Address*



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Good Morning to all distinguished participants!

It is a pleasure for me to be here today to celebrate the World Milk Day. While conveying my best wishes to all those associated with the milk sector, I am grateful to Shri A.K. Khosla, Vice President-IDA; Dr. Rahul Saxena, Chairman, IDA (NZ); Shri S.S. Mann, former Chairman, IDA (NZ); Dr. B.S. Beniwal, Secretary, IDA (NZ); and other distinguished IDA representatives, both present in-person and virtually, for the honour to be with you to share my views.

India's Impressive Success in Dairy Sector

This is my first visit, but I am a long-time reader of your magazine and admire IDA's achievements. I would like to compliment IDA being a vibrant and a leading association in agriculture sector. Its past leaders like Sardar Datar Singh, Dr. K.C. Sen, Dr. Kothawala, Dr. V. Kurien, Dr. Bhattacharya were true stalwarts. The contributions of Dr. G.S. Rajorhia are also commendable. Strong leadership is essential for an association's success, which fortunately has been provided by all above stalwarts.

India is the largest producer of milk in the world. We have not only provided self-sufficiency in the milk sector but also contributed significantly to the national GDP.

The Livestock sector contributes 25 to 30 per cent and our per capita availability of milk (459 g/capita/day) is much higher than those projected by Food and Agriculture Organization of the United Nations (FAO) and other health organizations. We have celebrated not only "Green Revolution" but also "White Revolution", being our remarkable accomplishments. Dr Norman E. Borlaug rightly emphasized four critical factors for the success: (i) policy support by the government, (ii) institutions like Indian Agricultural Research Institute (IARI) and National Dairy Research Institute (NDRI), (iii) well-trained human resource, and (iv) our progressive farmers quick to adopt new technologies. Research institutions themselves are not important unless they produce right kind of human resource.

I come from a farming family in Rajasthan. I understand the importance of livestock. Had it not been livestock production associated with crops, possibly we would not have survived. We have seen number of droughts and failure of crops. If we could survive, it was mainly on account of selling milk and having some earning. Let me confess, whatever I am today, it is mainly because of milch animals mainly maintained by my mother.

Today, let us recognize the contributions of stalwarts like Dr MS Swaminathan for the "Green Revolution" and Dr. V. Kurien for the "White Revolution". I am fortunate to have received patronage of both of them. Today,

Dr. R.S. Paroda delivered the Keynote address on the occasion of World Milk Day at IDA HQ. The event was organized by IDA (North Zone).

India has achieved a six and half fold increase in foodgrain production and a 13-14-fold increase in milk production, compared to four and half fold population growth. This wouldn't have been possible without technological advancements and their adoption on large scale under the guidance of such stalwarts.

Dr. Kurien had studied at the Michigan State University (MSU). I recall that when I visited MSU, I noticed a great sense of pride about him among the university leadership. Today, when we celebrate World Milk Day, let us pay our tribute to him for having brought in White Revolution in India. Dairy development would not have been possible without the right policy support extended by the then Prime Minister Shri Lal Bahadur Shastri. We must also recognize today the role of Gujarat farmers for the success of cooperative movement. In the North, especially Punjab, Haryana and Uttar Pradesh similar cooperative sector did not succeed. In this context, mutual trust between farmers and cooperative societies is essential.

Looking Ahead: Challenges and Opportunities

India's dairy sector requires a high growth rate to meet the projected demand of 600 million tons (mt) by 2047 (*Amrit Kaal*), compared to the current 231 mt. Thus, we need to at least triple the average milk yield per animal. The average milk yield per animal in our country is quite low (2.5 to 3 liters/day), whereas we need to at least triple it (10 liters/day). We have almost 10 per cent of the global livestock population. A large proportion of our human population is sustaining on dairy sector. Animals also require good fodder and feed, besides better housing management for increased productivity. The Lakshya Dairy farm in Jind alone has around 1,000 buffaloes and 400 Holstein Frison cows, all very scientifically managed.

To increase Farmers' income, dependence on crop sector alone will not help. The global conference on ARD (GCARD), held in Montpellier, France in 2010 had concluded that we need to have a paradigm shift from cropping system to that of the farming system and major focus be now on the need of small holder farmers. For higher income, farmers would need a diversified production package.

In India, the backbone of dairying is the smallholder farmers contributing to over 70 per cent of total milk production. In recent years, there has been a shift in the taste and preferences of consumers. As such, it is being realized that without much transformation in the existing milk production and processing system, it may be difficult to meet the demand for quality and value-added milk and milk products in future. While bovine milk is the most dominant dairy food in the world, non-bovine (e.g. goat, sheep and camel) milk is also considered an

important source of nutrition and medicine. Sheep and goat milk is very rich in vitamins and minerals and is also suitable for those who have allergy from cow milk.

You would agree that India now needs to transform its dairy sector from subsistence to commercial/semi-commercial oriented sector. While promoting the commercialization and value addition of dairying, there shall be an obvious need to protect the interests of smallholder dairy producers. Any mechanism which ignores livelihood issues would be inequitable and may not find general acceptance. Thus, to obtain the inclusive growth, boosting the smallholder dairying as a whole and promoting commercial dairying in identified regions would ensure sustainable economic development through dairying. In contrast, the milk processing in the country is at primitive stage. The total share of organized sector in cooperatives, Government as well as in private sector is very less, leaving a lion's share of the milk in the hands of the unorganized sector. In order to meet the growing domestic demand, the dairy sector must increase its competitiveness, also by bringing a qualitative transformation in the unorganized sector, which incidentally meets the entire demand for traditional dairy products. Further, there is also an urgent need to bridge the quality gaps in dairy production and processing, to make its presence felt in international market, while defending its domestic market from imports.

In India, we are struggling with first generation reproduction technologies (semen cryopreservation and artificial insemination), while in developed countries, third generation reproduction technologies (e.g. *in vitro* embryo production, *in vitro* fertilization-IVF, embryo transfer technology-ETT, ovum pickup-OPU) are being applied at farmers' level. We need to create needed infrastructure and expertise to use these advanced technologies.

In order to harness the potential of changing consumer preferences, the dairy industry will have to stand up to the expectations of the market and consumers' taste. Greater attention is needed to bring out new and more consumer-friendly products at reasonable costs, ensure food safety and quality, and enhance the milk processing capacity. The other policy issues which are important for dairy sector include: (i) identification and registration of all animals and dairy farms and linking them to better breeding facilities at their doorsteps, (ii) developing linkages between small dairy farmers and registered processing societies, private public companies to streamline processing and input supply management for sustainability, (iii) facilitation and promotion of "On-Farm Small Scale Milk Chilling" facility before selling the milk, and (iv) promoting collaboration across the supply chain. The coordination between producers,



processors, packagers, distributors, and retailers among themselves, as well as with local and state authorities is very important to ensure sustainable dairy development in India. Indian dairy sector is not only a contributor to National GDP (4.1 to 5%) and 26-30 per cent to Agricultural GDP (AgGDP).

In brief, the challenges that exist before the animal sector today are:

- Low milk processing and value addition
- Deficiencies in feed and fodder
- Declining sheep and local breed populations
- Low AI success rate (30%) compared to Brazil and Israel (100%)
- Stray calf becoming a major problem
- Need for infrastructure development and better housing

Recommendations

- We need to have mission-mode programs under a separate Livestock Mission to improve and conserve indigenous breeds known for their hardiness and adaptability. Also, we need a law to protect our valuable animal breeds
- Promote research and development with enhanced allocation of resources (at least double) for research on better animal healthcare, improved feed quality, and advanced breeding techniques.
- There is need to encourage the adoption of new technologies and create a more organized and efficient milk production system by having successful FPOs in the dairy sector.
- New technologies to be developed like AI for proven bulls and well-tested semen and sexed semen technology to avoid the problem of stray animals and also to scale the embryo transfer technology to improve

genetic potential and milk yield.

- A well-defined Minimum Support Price (MSP) system for milk needs to be established by the government.
- We need a more efficient milk production system driven by entrepreneurs and young people with much needed institutional support. Also dairy farmers need to have a stream lined credit system to access loans and reduction in GST (presently 12%) on dairy products to make them affordable to the consumers.
- The private sector, through CSR initiatives, can play a significant role in promoting animal welfare, farmers training, azolla production, deworming, and mineral mixes to address deficiency in animal feed and fodder availability.
- There is a need to develop processing plants, cold chain facilities, and AI infrastructure across the country. ICAR-NDRI could take initiative to establish dairy plants in different regions to build capacity of dairy producers seeking the support of World Bank, if needed.
- Policy reorientation is necessary to leverage globalization and India's capabilities in dairy sector to export value added dairy products.
- To revisit the Livestock Mission and Gokul Mission and have the time bound targets to accelerate the pace of dairy sector both in the organized and unorganized sectors.

In conclusion, I would like to re-emphasize that India has great potential to be a world leader in dairy sector, for which we shall have to create a more organized and efficient system through enabling farmer-oriented policies.

Thanks once again to the organizers for inviting me to this event.