



**Agriculture Reform Panel Discussion
Prospects for Sri Lanka's Dairy Industry:
International Case Studies**

OUTCOME DOCUMENT

16th May 2023
Colombo, Sri Lanka

INTRODUCTION

Sri Lanka is currently facing its worst economic crisis in its history as an independent nation, which has, amongst other things, resulted in high food inflation and growing food insecurity. As the Government of Sri Lanka (GoSL) embarks on a series of reforms to tackle the impacts and root-causes of the crisis, it has indicated that agricultural reform will be one of its priorities, including dairy sector development.

In recent decades, development partners have provided considerable support to develop the dairy sector and promote rural livelihoods. Support through the New Zealand Government's development programme stems from the bilateral Dairy Cooperation Arrangement (DCA) signed in 2013. The DCA focuses on stabilising trading conditions and the development of the Sri Lankan dairy industry to reduce poverty and improve quality of life. Most recently, the Sri Lankan Government has partnered with the National Dairy Development Board of India (NDDDB) and the large Indian milk cooperative, Amul, to increase milk production in the country. The proposed initiative will build on the above efforts and help to support address requests from the Government of Sri Lanka for technical expertise and exchange.

Against this background, Pathfinder Foundation in collaboration with the New Zealand High Commission, in partnership with, convened a high-level dairy development panel discussion on 16th May, 2023 in Colombo, with the following overall objectives:

To inspire and inform Sri Lanka's dairy development stakeholders, as the country embarks on a process of agricultural policy reform. drawing upon case studies from New Zealand, India, and other relevant countries, for Sri Lanka.

To share scientific evidence, policy analysis, and international best practices in dairy development, with the Sri Lankan Government, policymakers, researchers, industry bodies and other relevant technical experts

The half day event consisted of an Opening Session followed by two Technical Sessions. (Agenda is annexed). A total of 68 participants that include senior officials from the Government of Sri Lanka (GOSL) and New Zealand, academia and the private sector attended the event (The list of participants is annexed). 5-6 New Zealand/Indian high-level experts provided valuable insights and perspectives focusing on different aspects of dairy development and policymaking.

The Opening Session

The event began with the welcome remarks of Amb. Bernard Goonetilleke, Chairman, Pathfinder Foundation. While thanking the New Zealand High Commission for collaboration with the Pathfinder Foundation in organizing this important event, he highlighted that this high-level dairy development panel discussion takes place at a critical juncture as the Sri Lankan government has embarked on planning of policy reforms, including the agricultural sector. Hence this is an opportunity to provide insights and recommendations for Sri Lanka's dairy industry drawing upon case studies from New Zealand, India, and other relevant countries. The objective should be to ensure the formulation of accurate policy instruments and directives, considering the negative impact of previous defective policies, such as the failed introduction of organic farming.

With regard to the role of the dairy industry, the specific challenges it faces and the way forward, he highlighted the following facts:

- The dairy industry, as an allied sub-sector of agriculture, is playing a vital role in Sri Lanka's economy, providing livelihoods, contributing to rural development, and ensuring food security.
- Challenges faced by the industry include a majority of smallholder dairy producers, necessitating a policy consideration regarding the promotion of large-scale farms or the provision of facilities for smallholders. Supporting small-scale farmers can also contribute to improving household income and nutrition.
- Despite recent progress, the dairy industry in Sri Lanka continues to face challenges such as low productivity, inadequate infrastructure and support services, and poor quality of feed and fodder. These factors are resulting in low milk production and an inability to meet domestic demand for milk and dairy products.
- Sri Lanka is heavily reliant on imports, particularly powdered milk, mainly sourced from New Zealand, Australia, and Europe, due to the supply-demand imbalance. Local production of powdered milk is limited and primarily serving industrial purposes rather than meeting consumer needs.
- The government aims to improve domestic milk production to reduce import reliance, given the current economic crisis. They are formulating a national policy with specific objectives and an action plan to create a competitive and sustainable dairy industry.
- Amb. Goonetilleke concluded his welcome remarks, stating that the Pathfinder Foundation, as a co-organizer of the event, is hoping that the technical discussions, involving experts from the dairy industry, both local and international, will result in productive outcomes for the development of a market-oriented and sustainable Sri Lankan dairy industry.

H.E. Michael Appleton, High Commissioner of New Zealand delivered his opening remarks stating the following:

- This dairy development panel discussion aims to show solidarity with Sri Lanka during a challenging period and provide practical support for recovery and reforms.
- New Zealand-Sri Lanka dairy cooperation has a long-standing history. The cooperation focuses on sharing expertise to improve productivity and efficiency in both countries' dairy industries. Examples include the establishment of 'The New Zealand Farm' in the 1960s and educational opportunities under the Colombo Plan.
- The New Zealand Government has been guided by the Sri Lankan government's objectives and areas of improvement since the economic crisis.
- Cooperation initiatives align with Sri Lankan government priorities, including dairy sector development, state sector reform, and monetary policy institutional improvements.
- The event aims to contribute New Zealand's expertise to help make the Sri Lankan dairy sector more productive and efficient.

H.E. Michael Appleton during his intervention shared a statement by Hon. Damien O'Connor, Minister of Agriculture, New Zealand, which is one of the highlights of the event.

- New Zealand and Sri Lanka, both agricultural-producing countries, have valuable lessons to learn from each other. The importance of agriculture for economic, environmental, social, and cultural well-being is recognized.
- Both countries understand the challenges posed by climate change and the need to build resilience and ensure food security.
- New Zealand shares its experience of facing an economic crisis in the 1970s due to the loss of guaranteed market access to the UK.
- Subsidies were initially used to support the agricultural sector but proved unsustainable, leading to high unemployment and debt levels. New Zealand implemented reforms by removing subsidies and allowing the sector to self-regulate, resulting in improved efficiency and resilience. Collaboration at local, national, regional, and global levels is highlighted as a key factor for success.
- New Zealand is eager to share its experiences and encourages continued collaboration, particularly through shared membership in the Global Research Alliance.

Technical Sessions:

Technical Session 1: Overview of Dairy Development and Policymaking in New Zealand, India, and Sri Lanka

Moderator: Dr. Hemali Kothalawala, Director General, Department of Animal Production and Health, Peradeniya

Panelists:

Dr. Jacqueline Rowarth, Farmer elected Director, Dairy NZ

Dr. R.O. Gupta, Senior General Manager (Productivity Enhancement), NDDB

Mr. Adarsh Kumar, Senior Agribusiness Specialist, India, The World Bank

Dr. D.S.S. Perera, Director, Livestock Development, Presidential Secretariat

Dr. Hemali Kothalawala introduced the panelists and remarked that New Zealand and India are prominent players in the global dairy industry as the largest milk producers and exporters. The panel consisting of experts from the two countries will provide experience and insights to develop Sri Lanka's own dairy industry.

Dr. Jacqueline Rowarth

Farmer-elected Director, Dairy NZ

- The importance of the dairy sector in agriculture and its role in feeding the world, the significance of the sector's contribution to essential amino acids and the need to produce them with minimal environmental impact.
- New Zealand's past experiences with agricultural reform, including market loss and subsidy removal has led to challenges for farmers. However, despite initial difficulties, only a small percentage of farmers have left their farms, and new opportunities have emerged in the dairy industry as well as in other areas such as deer farming, blueberries, and kiwi fruit.
- New Zealand's focus on science and economics has driven the search for new opportunities, leading to changes in land use, the expansion of the dairy industry and the establishment of milk processing plants.
- The significance of trust, quality, and research in supporting farmers and ensuring the industry's economic stability. The importance of investment in research and extension activities funded by the Commodities Levy Act and the collaboration between scientists and farmers to improve productivity and efficiency and the importance of animal breeding, animal health, optimal nutrition, pasture management, and soil science in achieving these goals.
- New Zealand's livestock's exceptional efficiency, a key factor behind this being their excellent health condition. Close collaboration with veterinary professionals ensures that their dairy cows remain in peak condition. Additionally, working closely with veterinarians to optimize nutrition through feed management, including pasture and soil science. New Zealand dairy cows are often referred to as the 'All Blacks of the dairy world', highlighting their elite status in the agricultural sector.

- The dairy sector provides 45 million proteins and 25 million carbohydrates, supplying 1% of the global population with essential amino acids solely from dairy products. Remarkably, these achievements are accomplished with less than 0.04% of the world's greenhouse gas emissions, thanks to farm efficiency. This requires collaboration among scientists, extension officers, rural professionals, and even banks, working together and engaging with counterparts in other countries.

Dr. R.O. Gupta

Senior General Manager (Productivity Enhancement), NDDB, India

- The National Dairy Development Program (NDDP) in India has played a significant role in the growth of the dairy sector. India is the largest milk producer globally, with a substantial population of cattle and buffaloes, involving around 80 million farmers.
- The dairy system is predominantly composed of smallholder farmers, with an average of two animals per household. Over time, milk production has increased from 17 million metric tons in 1951-52 to 221 million metric tons in 2021, with a per capita availability of milk rising from 128 grams to 444 grams.
- India's dairy sector has outpaced global growth rates, with a 6% growth rate compared to the world's average of 2.5%. Dairy farming in India serves as a livelihood for farmers rather than one for mass production. It provides stable income and acts as insurance in case of crop failure. Women also actively participate in dairy farming.
- The value of milk output constitutes 54% of the total value of the livestock sector. Approximately 37% of milk is consumed locally, while the remaining 63% is available for sale. The organized sector handles 33% of the surplus milk, split between cooperatives and private entities, while the unorganized sector handles the remaining 67%.
- Cooperatives play a vital role in supporting smallholder dairy farmers by providing market access and stabilizing milk prices. They ensure that every drop of surplus milk is purchased, even during challenging times like the COVID-19 pandemic. Cooperatives also contribute to price stability and compel private players to offer remunerative prices to farmers. Approximately 70% of the consumer rupee flows back to the farmers, making it one of the highest returns to farmers globally.
- The genesis of the NDDB can be traced back to the establishment of the National Dairy Development Board (NDDB) in 1965, inspired by the success of Amul Cooperative. The NDDB implemented the Operation Flood program from 1970 to 1996, which transformed India into the world's largest milk-producing nation. Subsequently, the NDP focused on cooperative business productivity enhancement, animal breeding, health and nutrition, quality assurance, and the National Information Network.
- The government of India has provided policy support to the dairy sector through various schemes aimed at increasing farmers' income and productivity. These include the Rashtriya Gokul Mission, National Animal Disease Control Program, National Digital Livestock Mission, National Livestock Mission, and support for dairy cooperatives and farmer producer

organizations. The NDDDB has been successful in enhancing artificial insemination coverage, breed improvement, milk processing infrastructure, and digitization of data.

- Overall, the initiatives undertaken by the NDDDB and government policy support have contributed to the growth and development of the dairy sector in India, ensuring livelihood security for dairy farmers and leveraging the cooperative network in rural areas.

Mr. Adarsh Kumar

Senior Agribusiness Specialist, India, The World Bank

- India's dairy sector has experienced significant growth over the past four decades, driven by substantial public sector investments, including the successful Operation Flood programs. Milk production has increased tenfold, and the sector has achieved an impressive 5% compound annual growth rate in the last 15 years.
- Milk has become the largest agricultural commodity in India, surpassing the combined value of food grain production. Income from livestock, particularly for smallholder farmers, has played a crucial role in poverty reduction, with a growth of over 50% between 2012 and 2019. The success of public sector investments in India's dairy sector can provide valuable lessons for other countries.
- Key components of the Indian dairy sector include the three-tier cooperative structure established by the National Dairy Development Board (NDDDB). This structure involves producer-owned institutions providing extension support to farmers, aggregating milk from rural areas, and includes village-level societies, district-level milk unions, and national programs for breed improvement, animal health, and artificial insemination. The government has also launched initiatives to promote private sector activity, such as the Dairy Processing and Infrastructure Development Fund, which provides subsidized loans for dairy-related infrastructure.
- India is the largest global producer of milk, with a significant cattle population, including buffaloes and cows. However, the country's dairy exports are not proportionate to its production size compared to major dairy producers like New Zealand.
- India faces challenges in reaching and intervening with its large number of small-scale dairy farmers, a significant percentage of which own nondescript cattle that affect productivity. Regional variations exist in organized sector milk production, concentrated in states like Maharashtra, Karnataka, Tamil Nadu, and Gujarat, which have benefited from breed improvement programs.
- While private-sector dairy has experienced rapid growth in recent years, a significant portion of milk production remains in the informal unorganized sector, with household consumption and local trade accounting for a substantial share. Future challenges in the dairy sector include addressing climate risks, particularly heat stress, and its impact on critical factors like water availability, animal reproduction, and health.

- The World Bank is increasingly focusing on these areas for significant public investment. Additionally, improving food safety and quality measures, especially in the informal sector, is essential as India formalizes its dairy industry and aims to increase exports. The country faces a high economic burden from foodborne diseases, emphasizing the need for investments in this area.
- Overall, the dairy sector in India is considered a remarkable success story, but there are still areas for improvement and future interventions.

Dr. D.S.S. Perera

Director, Livestock Development, Presidential Secretariat

- Sri Lanka's dairy sector is not as developed as that of countries like New Zealand or India. The country's industry comprises 1.65 million meat cattle, 500,000 buffaloes, and only 350,000 dairy farmers, with most of our milk coming from smallholders.
- Sri Lanka seeks collaboration with friendly nations like India and New Zealand to develop its dairy sector economically, technically, and in terms of human capacity. However, currently, there is an absence of a clear dairy policy, although efforts have been made to develop one with the assistance of consultants from Australia and the USA.
- One of the challenges is the lack of high-producing animals due to climatic and environmental factors that affect milk production. The government aims to prioritize good quality feed and forage to improve milk quality. Its mission, "Dairy for Healthy and a Prosperous Nation," aims to create a competitive and sustainable dairy industry that provides safe and nutritious dairy products.
- The goals include making dairy a profitable venture, achieving self-reliance in milk production, improving farm productivity, enhancing research and development, and obtaining quality data and information from the sector. The government strives to minimize the sector's environmental impact, promote gender equity and youth participation, develop human capital, and ensure animal welfare.
- To achieve these objectives, the country needs an enabling business environment while protecting smallholders. Balancing the reduction of the agricultural workforce with supporting those transitioning out of farming is a challenge.
- The aim is to promote milk production at all scales, improve milk and milk product quality, increase the availability of quality feed, support research and development, enhance data collection and analysis, reduce greenhouse gas emissions, adopt climate-smart practices, create an inclusive environment for women and youth, develop human resources, and ensure animal welfare.

Technical Session 2: Perspectives from the Industry - Cooperative Models, Smallholder, and the Private Sector

Moderator: Professor Pradeepa Silva, Faculty of Agriculture, University of Peradeniya

Panelists

Ms. Mel Poulton, New Zealand Farmer and Special Agricultural Trade Envoy

Mr. Binesh Pananwala, President of the All-Island Dairy Association

Mr. Earl Rattray, Dairy Farmer and Chairman of Binsar Farms Pvt Ltd (India)

Ms. Selina Prem Kumar, Chief Executive Officer, Yugashakthi (Guarantee) Limited

Professor Pradeepa Silva in her introductory remarks, stated that the focus of the session was on gaining perspectives from the industry, specifically cooperative models, smallholders, and the private sector, which the four highly-skilled panelists represented. She anticipated a lively and engaging discussion with the diverse experience of the panelists.

Ms. Mel Poulton

New Zealand Farmer and Special Agricultural Trade Envoy

- New Zealand's ecosystem, including the food and dairy sector, has evolved over the years through major reforms in the 1980s, such as the removal of agricultural subsidies. It consists of international market representatives, government engagement, industry organizations like Dairy NZ, exporters and processors, farmers, and the science and education sector. This ecosystem has contributed to New Zealand's success and ongoing development.
- New Zealand's approach has been market-focused and export-driven. Priority is developing free trade agreements and engaging in international forums to create frameworks and confidence for exporting companies and farmers to conduct business. This trade-focused approach has been a deliberate and purposeful part of the industry's evolution.
- From a farmer's perspective, removing subsidies initially caused fear and uncertainty. However, over time, New Zealand farmers have become confident, business-savvy, innovative, and creative. They have embraced the responsibility of managing various factors in a whole systems approach. This includes taking care of themselves, their staff, livestock, crops, soil, environment, and business systems. Farmers must balance market requirements, climate change, environmental concerns, and global challenges while implementing policies specific to their farming context.
- In conclusion, New Zealand's journey involved adapting the ecosystem, being market-driven, and empowering farmers to become successful, business-savvy individuals who are conscious of their social and environmental responsibilities while meeting market demands.

Mr. Binesh Pananwala
President of the All-Island Dairy Association

- The All-Island Dairy Association (AIDA), formed in February 2017 under the Ceylon Chamber of Commerce, serves as a business forum and was later incorporated as a limited company in 2018. AIDA has played a crucial role in shaping government policies for the dairy industry and has collaborated with relevant departments to support and meet local requirements.
- The government is close to finalizing a dairy development plan for the country with the involvement of AIDA and other stakeholders. However, there are still gaps to address, such as the participation of small farmers and other producers.
- AIDA aims to represent the entire dairy industry and provide services that complement the government's efforts, especially during financial crises. The recent challenges in the agriculture sector, particularly the fertilizer and feed shortages, have negatively impacted milk production and farmers' livelihoods. AIDA has worked on strategies to overcome these issues and increase milk production, as the country currently relies heavily on imported milk powder.
- The organized sector, which comprises a small percentage of farms, has been significantly affected, and there is a brain drain issue with skilled workers leaving for better opportunities abroad. Fodder production and vaccine availability are also areas that require attention.
- Sri Lanka has ample grassland, but there is a need for government support and further development to make it conducive for dairy farming. The government is considering investments and offering land to the private sector to enhance the industry. AIDA, representing producers and processors, collaborates with authorities to ensure the growth of a sustainable and profitable dairy sector that contributes to the nation's development.

Mr. Earl Rattray

Dairy Farmer and Chairman of Binsar Farms Pvt Ltd (India)

- Conditions of the dairy farm located just outside New Delhi and Haryana is similar to Sri Lanka. The farm, which is located in a productive cropping area near a small village dominated by families with a few cows or buffaloes commenced operations in 2012 with the goal of producing quality milk at scale. Initially, the farm faced challenges due to the lack of trust in livestock genetics and had to start with 50 nondescript animals. However, they have now grown to over 370 animals, producing about 1 million liters of milk annually.
- Key factors of success include focusing on compact jersey cows, emphasizing calf rearing, monitoring and quantifying data to make informed decisions, optimizing feed production, and prioritizing simplicity and reliability in our farming systems.
- Prioritized maintaining high-quality standards and have been able to achieve the same level as in New Zealand. Additionally, the farm has had a positive impact on the local economy, providing employment opportunities and supporting farmers in the area with veterinary advice and knowledge sharing.
- Believe that the dairy farming landscape will continue to evolve, with smaller farmers transitioning to urban areas and markets shifting towards formal systems. Starting a dairy farming business requires adaptability, perseverance, and the willingness to learn from mistakes.
- It is crucial to be cautious of advice from experts who may lack practical experience. Connectivity and appropriate technology can accelerate progress, but it should be accessible and sustainable for the specific context. Collaboration and partnerships, such as cooperatives, can provide advantages for smallholder farmers.
- Realized that large-scale dairy farming can be profitable and have achieved significant financial success in the industry.

Ms. Selina Prem Kumar
Chief Executive Officer, Yugashakthi (Guarantee) Limited

- In representing smallholder dairy farmers, two key areas that affect smallholder dairy farmers have been the focus, based on experience since 2016. At the inception of Yugashakthi, the goal was to boost domestic milk production and the rural economy through small-scale dairy farming, with a particular focus on the dry zone.
- After the civil conflict ended in 2009, the organization assisted those who experienced loss of livelihoods in starting dairy operations with their available animals. Initially, only eight farmers turned up in September 2011, producing a total of 272 liters of milk for the month. Despite challenges, many farmers soon embraced dairy farming for its potential profitability and the ability to provide for their families.
- Feeding, breeding, and animal health are core issues for farmers, and they worked to address these challenges. Lack of pasture and high production costs due to the need to purchase feed were major hurdles.
- Inadequate, and delayed animal health services further compounded the difficulties. They recognized that without proper feeding, the health and breeding cycles of the animals would suffer. However, the industry began to flourish in the Northern region, with significant increases in milk production and farmers' incomes. Over two years, farmers received a substantial boost to their income, with an average of Rs.35,000 per farmer from selling excess milk.
- Smallholder farmers face several gaps and challenges. Despite accounting for over 70% of farmers and maintaining a significant number of animals, the smallholder sector is at risk of decline. Ensuring the motivation and profitability of smallholder farmers became crucial. The lack of information sharing between smallholders and decision-makers is another key gap. Farmers are rarely consulted or involved in setting farm gate prices or determining the cost of production. Unlike cooperative systems in other countries, where farmers' views are considered in decision-making, this consultation is largely absent in Sri Lanka.
- Keeping the younger generation engaged in dairy farming becomes vital. The traditional methods of milking and the overall perception of the sector deter them from participating. To retain their interest, there is a need to focus on comprehensive national policies, training programs, and promoting dairy farming as a profitable business. Access to information about feeds and utilization of local resources at the village level are essential considerations.
- Collaboration and coordination across different levels of the dairy industry are crucial. While healthy competition is beneficial, must ensure not to create an artificial market for milk procurement. Standardized policies for animal health and production should be established, facilitating effective collaboration between the ministry, the veterinary sector, and universities. This collaboration should ultimately benefit the smallholder farmers.
- In the areas where Yugashakthi works, the percentage of female farmers has increased from 23% to 49%. However, it is important to ensure that these women are actively involved in major programmes and policy-making initiatives.

The Closing Remarks and recommendations of the event was delivered by Ms. Mel Phillips, Counsellor (Primary Industries) at the New Zealand High Commission in New Delhi, and Dr. Dayaratna Silva, Executive Director of the Pathfinder Foundation.

Recommendations and Closing Remarks

Ms. Mel Phillips

Counsellor (Primary Industries), New Zealand High Commission, New Delhi

- The importance of nutrition around feed and fodder, pasture management, water and electricity and basic access to facilities by focusing on simple technologies.
- The interface between animal nutrition, dairy production and its impact on human nutrition, given the benefits of dairy is vital. Sri Lanka being a country that is facing both an animal and a human nutrition deficiency, there is a real opportunity by uplifting the dairy sector, thereby lifting the lives and the health of all Sri Lankans.
- The importance of the ecosystem and working together, whether its the government, those focusing on R&D, or experts working in the education's base or those in the service sector. The public and private sector companies and farmers who are the mainstay of the dairy sector. The farmer, whether large or smallholder, are the center of the ecosystem, and how they all integrate, and work together is really a metric of health.
- Productivity without profit is not sustainable. One of the key factors is to keep the youth interested and engaged in the dairy and agriculture sector, therefore they have to see a future in the industry with profitability and market-oriented interventions that will push the dairy sector forward.

Dr. Dayaratna Silva

Executive Director, Pathfinder Foundation

- The dairy industry brings many development benefits to the country, including rural development, livelihood for the rural people, a very important aspect of development, food security and helping to create prosperous and healthy needs, that is the importance of the sector. Policy reforms are required to make the industry more sustainable and market-oriented.
- There is no one size fits all arrangement to develop the dairy industry. New Zealand too had the difficult period with the elimination of subsidies and created an enabling environment that is more sustainable and business oriented. India may be using a model which may differ from that of New Zealand. Sri Lanka can adapt its own model, drawing what is important; lessons, good practices, success stories from these two countries.
- Importance of support services and where Sri Lanka stands in providing reliable and efficient support services.
- Policymakers and practitioners must become more agile and respond to the required policy report.

- How to get all the players in the entire gamut of the ecosystem to play their part – the role of the government as a regulator, as well as the individual, and their experience creating a business-savvy smallholder farming system.
- The dairy industry has different models - multilateral cooperation, bilateral cooperation and trilateral cooperation. These are good models at the UN level which are used to achieve SDG goals. Suggestion as a way forward is to have the largest milk producer in our region, India and one of the largest success stories, the largest exporter, New Zealand to work in a trilateral partnership with Sri Lanka and work together to share knowledge, experience, resource support, and even exchange of programs to make this industry more viable and market oriented.

BIOGRAPHIES

Jacqueline Rowarth, Farmer elected Director, Dairy NZ

Jacqueline Rowarth has a Bachelor's degree in Agricultural Science with honours in Environmental Agriculture, and a PhD in Soil Science from Massey University. She has worked in research, education, management and governance with AgResearch, Lincoln University, Unitec in Auckland, The University of Melbourne, Massey University, University of Waikato, the Environmental Protection Authority, Crop and Food Research, AGMARDT and DairyNZ.

She is a Past President of the New Zealand Institute of Agricultural and Horticultural Science, and of the New Zealand Grassland Association. She is a frequent contributor to public debate in the media and speaks to industry, society and school groups whenever invited. In 2008 she was awarded Companion of the New Zealand Order of Merit for services to Agricultural Science, in 2009 she was given the inaugural award of Agricultural Personality of the Year by Federated Farmers and in 2010 she was selected as the Agricultural Communicator of the Year by the Guild of Agricultural Communicators and Journalists.

Jacqueline remains committed to trying to help society understand the importance of agriculture and horticulture and dispelling the myths that surround food production.

Dr. R.O. Gupta, Senior General Manager (Productivity Enhancement), NDDB, India

Dr. Gupta has a Master's Degree in Veterinary Medicine from Bombay Veterinary College in 1992, and have worked with Maharashtra Animal Husbandry Department for about 3.5 years. He has joined Raymond Embryo Research Centre in 1995 and worked on Embryo Transfer in cattle, managed a crossbred cattle farm of about 550 animals, established more than 1000 Artificial Insemination (AI) Centres in various states under government programmes. He has undergone a course on International Dairy Farming for Rural Development in The Netherlands. Dr. Gupta joined National Dairy Development Board in 2002 and worked in various capacities at various locations as in-charge semen station, instrumental in establishment of commercial AI services providing company, implemented and coordinated scientific Progeny Testing Programme for elite bull production, worked as Regional Head for 7 northern states and then headed Animal Breeding Group of NDDB and now working as Senior General Manager for Productivity enhancement group of NDDB coordinating various schemes of Govt. of India including import of germplasm. He has travelled to various countries like The Netherlands, Germany, Belgium, France, Denmark, Canada, Israel, Brazil, Sri Lanka.

Adarsh Kumar, Senior Agribusiness Specialist, India, The World Bank

Adarsh Kumar is a Senior Agribusiness Specialist with the Food and Agriculture Global Practice at the World Bank. His work focuses on skills training and enterprise development, with a focus on the agricultural sector. Prior work stints include founding an investment promotion facility for agri-enterprises; co-founding AIACA, a non-profit organization that works to strengthen enterprise growth in the crafts sector; and working on strengthening microcredit institutions and livelihoods initiatives across South Asia at the Ford Foundation. He holds a Bachelor's Degree in Business Management from Georgetown University and a Master's Degree in Public Policy from the Kennedy School of Government at Harvard University. Adarsh has been nominated as a Young Global Leader by the World Economic Forum and has been awarded both the Echoing Green and Ashoka fellowships for social entrepreneurship.

Prof. G.L.L.P. Silva - Senior Professor

Prof. Pradeepa Silva is a professor attached to the Department of Animal Science, Faculty of Agriculture, University of Peradeniya. She is an Animal Scientist, and her speciality is Genetics and

Animal Breeding. Her research interest mainly focuses on the performance and diversity of indigenous animal genetic resources in Sri Lanka. She has experience in working with farming communities for her research and development activities. She is serving as a member of several national committees at present and participating in project development and policy formulation at the national level.

Mel Poulton- Farmer and Special Agricultural Trade Envoy

Mel Poulton is a food & fibre producer, running a sheep and beef farm business based in the Tararua District in the lower North Island. She is also New Zealand's Agriculture Trade Envoy. It is a unique role, to bring a farmer's perspective to international trade in food and agriculture and to build partnerships with farming organisations and companies offshore. SATE is tasked with promoting a greater understanding of, and advocating for, New Zealand's agricultural trading interests, including dairy, meat, wool, horticulture, arable, and wine.

Binesh Pananwala, President of the All-Island Dairy Association

With over Three decades of experience in the Plantation Industry, Mr. Pananwala currently holds the position of Chief Executive Officer of Watawala Plantations PLC and Watawala Dairy Ltd. At present, Mr. Pananwala also serves as the President of All Island Dairy Association (AIDA); the apex body representing the interests of the dairy industry in Sri Lanka.

Mr. Pananwala holds a MSc in Crop Science from the University of Peradeniya. He Holds a MBA from Manipal (Sikkim) University. Mr. Pananwala is a holder of Diploma in Management of Plantations from Kothari Agriculture Management Center and has undergone extensive higher management training at the National University of Singapore and Center for Creative Leadership – Singapore. He also serves as the Council Member of the National Chamber of Commerce of Sri Lanka; Member of the Executive Council of the Palm Oil Industry Association of Sri Lanka; Member of the Main Committee of the Ceylon Chamber of Commerce, representing the All-Island Dairy Association

Earl Rattray- Dairy Farmer and Chairman of Binsar Farms Pvt Ltd (India)

Earl Rattray is a co-founder of Binsar Farms Ltd, a Haryana India based privately held dairy farming and fresh milk - direct to home delivery business, established in 2012, together with three Indian family shareholders.

Earl is a veteran of the New Zealand dairy industry. He has a longstanding dairy career which has taken him from sharemilking to farm ownership, to senior dairy industry leadership roles in New Zealand.

He was founding Board member on the establishment of the Fonterra Co-operative Group and chaired the New Zealand Dairy Companies Association for 5 years.

In addition to chairing the governing Board of Binsar Farms in India, he is a director of several small and medium sized companies in New Zealand, operating in Agri-business, Bio-Tech and Civil Construction sectors.

He holds interests in several farming businesses in various countries, and is a relentless enthusiast for dairy farming, and the role of dairy in human health and nutrition.

Selina Prem Kumar - Chief Executive Officer at Yugashakthi (Guarantee) Limited

Selina Prem Kumar has an educational background of Sociology and MBA. She has professional experience with world concerns in INGO as the former country director for Sri Lanka and has coordinated efforts in Nepal and four more countries in Asia on Humanitarian relief and development. Founded Yugashakthi Guaranteed limited, a social enterprise working to open sustainable markets to famers and deliver profits back to them. Currently serving as the CEO of this

enterprise providing guidance to work with small holder, farmers, mainly focused on dry zone and through social interventions, which focuses on the protection of women, children and smallholder farmers, both dairy and agriculture to ensure life is transformed to fullness.

Dr D.S.S. Perera, Director, Livestock Development, Presidential Secretariat

Dr Sanjika Perera is the Director of Livestock Development from Ministry of Agriculture. He is a graduate from the University of Peradeniya. He has a Master's of Organizational Management and has followed International Diploma in husbandry and animal feed in the Netherlands.

PROGRAMME

- 8.45 a.m. - 9:00 a.m. Registration and Tea/Coffee
- 9:00 a.m. - 09:30 a.m. Welcome Remarks – Ambassador Bernard Goonetilleke, Chairman, Pathfinder Foundation
- Opening Remarks – H.E. Michael Appleton, High Commissioner of New Zealand
- Message from Minister O’Connor, New Zealand Minister for Agriculture
- 09:30 a.m. – 11:00 a.m. **Session 1: Overview of Dairy Development and Policy-Making in NZ, India and Sri Lanka**
- Moderator:** Dr Hemali Kothalawala, Director General, Department of Animal Production and Health, Peradeniya
- Dr Jacqueline Rowarth, Farmer elected Director, Dairy NZ
- Dr R.O. Gupta, Senior General Manager (Productivity Enhancement), NDDB
- Mr Adarsh Kumar, Senior Agribusiness Specialist, India, The World Bank
- Dr D.S.S. Perera, Director, Livestock Development, Presidential Secretariat
- 11:00 a.m. – 11.15 a.m. Break for Tea/Coffee
- 11:15 a.m. – 12:45 p.m. **Session 2: Perspectives from the Industry – Cooperative Models, Smallholder Farms and the Private Sector**
- Moderator:** Professor Pradeepa Silva, Faculty of Agriculture, University of Peradeniya
- Ms Mel Poulton, New Zealand Farmer and Special Agricultural Trade Envoy
- Mr Binesh Pananwala, President of the All-Island Dairy Association
- Mr Earl Rattray, Dairy Farmer and Chairman of Binsar Farms Pvt Ltd (India)
- Ms Selina Prem Kumar, Chief Executive Officer, Yugashakthi (Guarantee) Limited

12:45 p.m. - 1:00 p.m. Wrap-Up and Closing Remarks

Ms Mel Phillips, Counsellor (Primary Industries), New Zealand High
Commission, New Delhi

Dr Dayaratna Silva, Executive Director, Pathfinder Foundation

1:00 p.m.

Lunch

LIST OF PARTICIPANTS

NAME	ORGANIZATION
H.E. Michael Appleton	High Commissioner of New Zealand
H.E. Denis Chaibi	Ambassador, Delegation of the European Union
Andrew Traveller	Deputy High Commissioner of New Zealand
Mel Philips	Counsellor (Primary Industries), New Zealand High Commission, New Delhi
Amb. Bernard Goonetilleke	Chairman, Pathfinder Foundation
K. Balasundaram	CEO, Pathfinder Foundation
Dayaratna Silva	Executive Director, Pathfinder Foundation
Jacqueline Rowarth	Farmer elected Director
R.O. Gupta	Senior General Manager (Productivity Enhancement), NDDDB, India
D.S.S Perera	Director, Livestock Development, Presidential Secretariat
Mel Poulton	Farmer and Special Agricultural Trade Envoy
Binesh Pananwala	President, All Island Dairy Association (AIDA)
Earl Rattray	Dairy Farmer and Chairman of Binsar Farms Pvt Ltd (India) (Virtually)
Selina Prem Kumar	Chief Executive Officer at Yugashakthi
Pradeepa Silva	Senior Professor, University of Peradeniya (Moderator)
Hemali Kothalawala	Director General, Department of Animal Production and Health (Moderator)
A.C.H. Munaweera	GM/Consultant, All Island Dairy Association
A.P. D.G. Pathirana	Dairy Engineering Specialist, Department of Animal Production and Health
Asanka Wijesinghe	Research Fellow, Institute of Policy Studies
Ashraff Mohamed	Management Specialist, UNDP Sri Lanka
Asoka Bandara	Maliban Milk Products (Pvt) Limited
Ben Schwab	Department of Agricultural Economics, Faculty of Agriculture, University of Peradeniya
Chandana Hewawasam	Delegation of the European Union
Chandula Idirisinghe	Research Assistant, Institute of Policy Studies
Derek Heady	CGIAR
Fazlan Faizal	General Manager, Fonterra Brands Lanka (Pvt) Limited
G.A. Gunawardana	Principal Scientist (Veterinary Biotechnology), Dept. of Animal Production and Health
H. P. V. D. S. Bandara	Registrar/ Veterinary Drugs, Department of Animal Production and Health
H.W. Cyril	Chairman, National Livestock Development Board
Jairo Villamil	Senior Specialist, UNIDO
Janak Vidanaarchchi	Department of Animal Science, Faculty of Agriculture, University of Peradeniya
John Keyser	Senior Agriculture Economist, World Bank
Lakshan Mihindukulasooriya	Hypromac Engineering Services
Manjula Dahanayake	Group CEO, Lanka Milk Foods
Mohamed Imtiyaz	Farm's Pride Pvt Ltd

Nelum Vithana	Manager Corporate, Product Research & Development, Kothmale Holdings PLC
Niroshan Gamage	Livestock Division, Ministry of Agriculture / Livestock
Nissanka Prasad	National Staff, JICA
Noguchi Takuma	Senior Representative, JICA
P. H.P. Prasanna	Professor, Faculty of Agriculture, University of Peradeniya
Priyanwada Wickramasinghe	Director, Livestock Planning, Ministry of Agriculture
R.M.C. Deshapriya	Faculty of Agriculture, University of Peradeniya
Reda Souirgi	Country Director, Agence Francaise De Development
Saman Perera	Head of Milk Sourcing and Local Dairy, Fonterra Brands Lanka (Pvt) Ltd
Samantha Iddamaldeniya	Deputy Director/Research, Department of Animal Production and Health
Sanjika Perera	Director, Livestock Development
Shehara de Silva	AIDA Secretariat/ Ceylon Chamber of Commerce
Sumathy Puvanendiran	Principal Scientist/Virology, Department of Animal Production and Health
Thilak Kendaragama	Freelance Consultant, Former Secretary, Ministry of Livestock and Rural Community Development
Thilani Kankanamge	Agricultural Specialist, Embassy of the United States of America
Thilini Udesha	Advocata
Uditha Kosalawatta	Deputy Director/HRD, Department of Animal Production and Health
H. Kothalawala	Director VRI, Department of Animal Production and Health
A. G. Liyanagamage	Director/HRD, Department of Animal Production and Health
B. M. M. Ekanayake	ABS, Department of Animal Production and Health/ Peradeniya
Achala Samarasundara	Department of Animal Production and Health
Palika Fernando	Director / CPE, Department of Animal Production and Health
M. A. G. Thushari	Director, Presidential Secretariat
P. H. Senevirathne	Director
U. D. Ramanayake	Department of Animal Production and Health
Chamini Kannangara	Ministry of Agriculture
Ajith D. Perera	APTA / CCI