June 2023

MOD
Market-Oriented Dairy
empowering dairy business

MOD NEWSLETTER

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A sustainable approach to build capacity of Sri Lanka's dairy value chain

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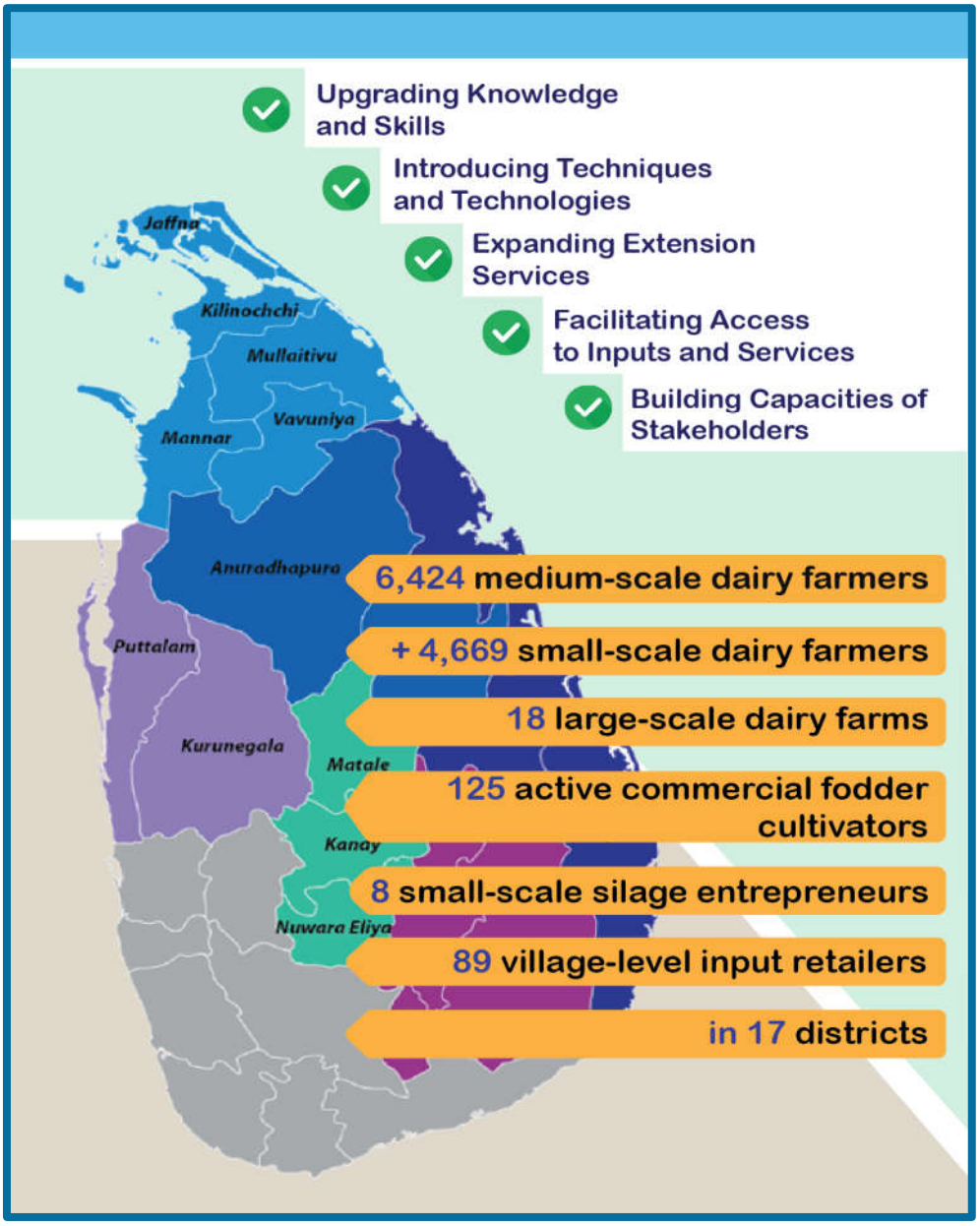


MANAGING THROUGH CRISES AND FORGING PATHWAYS TO A SUSTAINABLE GROWTH

Following the global pandemic and a national economic crisis, the USDA Food for Progress-funded Market-Oriented Dairy (MOD) project bears witness to the resilience of Sri Lanka's medium-scale dairy entrepreneurs to continue their journey to maximize production and earning potential. At the farm-level, dairy farmers empowered with knowledge and skills from MOD improved productivity and net margins, made smarter investment choices, and were better able to weather external shocks. Similarly, a supportive ecosystem driven through market needs is developing at the village level to offer inputs at a lower cost. The following pages illustrate the collaborative efforts facilitated by MOD to unleash the power of all stakeholders working together for the betterment of the industry.

Transforming Rural Landscapes

SUPPORTING QUALITY FODDER CULTIVATION

Promoting 'fodder as a crop', regenerative agriculture practices, and collaborative applied research efforts

Quality animal nutrition continues to be the primary consideration to improve milk production. Whilst educating and providing technical know-how to dairy farmers to produce their own quality fodder, MOD has also developed commercial fodder cultivators across all regions. Today, over 125 such commercial fodder cultivators are in operation selling fresh grasses to large farms and small-scale silage entrepreneurs developed by MOD.

To date, MOD-trained dairy farmers have cultivated a total acreage, including ratoon crops, of 32,765 acres for their own use, with commercial fodder cultivators helping to bridge the gap in supply. MOD-trained commercial cultivators have also cultivated 9,385 acres including ratoon crops, for commercial sale.

Working together with the All Island Dairy Association (AIDA), MOD prepared a needs analysis and justification to facilitate the recognition of **fodder as a crop**. With the leadership of the Department of Animal Production and Health (DAPH) and the Department of Agriculture, fodder cultivators are beginning to receive increased access to land, water and other benefits given to all crops.

To overcome the crisis created by the ban on use of all chemical fertilizers, MOD brought in international expertise to collaborate with local counterparts and practitioners to explore **regenerative agriculture solutions**. Vermi-compost and vermi-tea are low-cost, effective organic options suggested for dairy farmers and fodder cultivators. Not only are farmers and cultivators taking advantage of these options for their own use, but some have also created commercial ventures selling vermi-compost.

Working with nine other partners including universities, private sector organizations and a dairy farmer, MOD commenced a **collaborative applied research** study on four research sites to determine the optimal fertilizer regime for fodder cultivations using a hybrid-fertilizer method to lower cost of production and improve yields. The results so far are very encouraging, and the findings will be made public in August 2023.

Silage packs for medium-scale farms

QUALITY SILAGE PACKAGING FOR CONVENIENCE

Small-scale silage entrepreneurs produce easily portable silage packs for small- and medium-scale dairy farms

Whether fodder is grown at the farm or not, meeting year-round quality feed requirements remains a challenge for Sri Lankan dairy farms of all sizes. MOD has thus far helped to establish eight silage entrepreneurs through technical training in quality manufacture and packing to produce approximately 250,000 kg per month in total.

These entrepreneurs are registered under the DAPH's Feed Registrar as animal feed producers. They are also encouraged to test the quality of the product regularly, to monitor and improve it.

Of the eight entrepreneurs developed, two are supported by Nestlè Lanka and three are supported by Cargills. MOD worked with these private sector partners to introduce these entrepreneurs to their farmer network, and provided soft loans for machinery, among other support.

Based on demand, these entrepreneurs are ready to expand to up to 100,000 kg per month per entrepreneur.

While we develop commercial fodder cultivators to primarily sell for smaller dairy farms, a large proportion of the fresh fodder is purchased by silage entrepreneurs and large farms. A successful model exists where a small-scale commercial fodder supplier supplies the nearby dairy farmers directly. With the support of the private sector, such models can be developed across the island to supply fodder during the dry season.

Examples of both the successful commercial fodder cultivation and silage producer models exist that can be replicated by processing companies to supply their dairy farm networks. Through MOD's efforts, we have witnessed that a suitable market exists with both upcountry and Jaffna dairy farmers.

These business propositions are attractive to youth with many already engaging in the sector. In addition, many silage entrepreneurs are providing employment for an increasing number of women.

Sustainable Farm Models

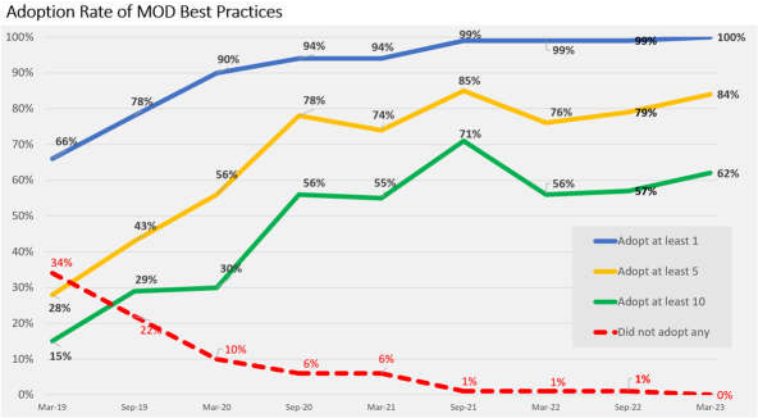
Transformation from 25 to 100+ liters per day using a low-cost approach

Transformation from 30 to 100+ liters per day investing in a loose barn

FINANCIALLY VIABLE DAIRY FARMING SYSTEMS

Less cows, more milk: a simple formula and a focus on the basics improves farm productivity and income

The right mindset, enhanced knowledge and skills, the discipline to follow an action plan and adherence to best practices have been the keys to increasing milk production and incomes year-round. Over the past five years, of the full cohort of dairy farmers trained, nearly 3,000 are emerging as progressive dairy farmers targeting 60 to 100 liters per day or more.



The rate of adoption of the ten key best practices promoted by MOD and guaranteed to increase milk production has increased over time. The slight dip and the quick recovery following lockdowns show the resilience of these farmers.

At present, 84 percent of the farmer base have adopted at least five best practices and over 62 percent have adopted all ten best practices resulting in increased milk yields.

While below 100L per day farms can generate above average profit margins based on proven models, MOD is supporting the DAPH-led initiative with the private sector to develop the 100L farm model (minimum 17 animals with 60-70 in milking, at least 1.5 acres of quality fodder, and access to water) to meet the industry requirement for fresh milk.

‘Connect for Growth’ Voucher Initiative

VOUCHER ASSISTANCE TO PROGRESSIVE FARMERS

Cost-shared program helps progressive farmers access inputs to improve productivity and growth targets

During the initial phase of the MOD project, interventions focused on building capacities, changing mindsets and influencing behavioral changes. This helped wean farmers off the expectation of grants from donor agencies and encouraged approaching dairy as a business. However, post-pandemic and national financial crisis, the cost of inputs and lending rates were beyond the reach of MOD’s progressive farmers who were already well on their way to increasing milk production but needed assistance to maximize milk yields. MOD introduced the ‘Connect for Growth’ voucher initiative to support such farmers on a cost-shared basis (for capital inputs only) after assessing utility value and return on investment. The capital inputs must complement and support the farm action plan and result in measurable productivity/production improvements. Priority areas include cultivation to meet annual feed requirements, technologies to improve feeding, animal welfare and housing, and improving milk quality and evening milking.

To date 542 vouchers have been redeemed by 371 dairy entrepreneurs with a total value of LKR 72 million.

Thirty-four vendors are registered partners in the program.

University of Florida-led Interventions

SENIOR FACULTY OF THE UNIVERSITY OF FLORIDA ANIMAL SCIENCE DEPARTMENT CONTINUE TECHNICAL GUIDANCE

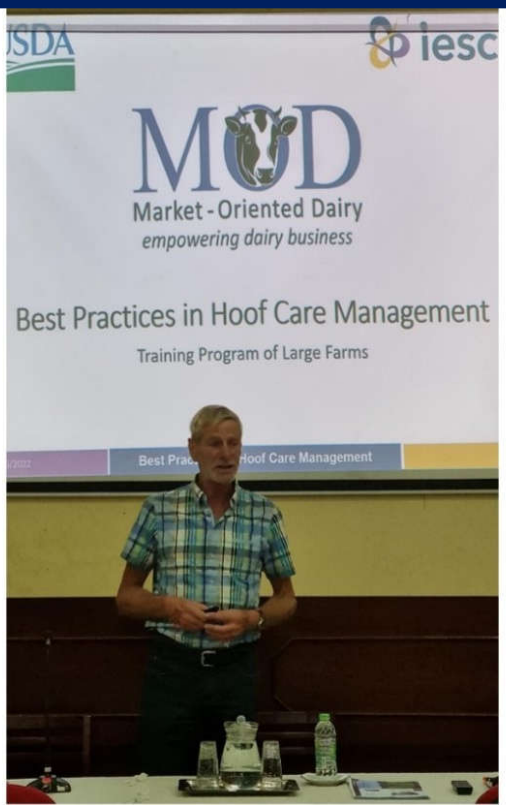
Annual visits by Professor Geoffrey Dahl, Director of the Feed the Future Innovation Lab for Livestock Systems and his team at the University of Florida helps upgrade technical knowledge in dairy management systems

The University of Florida (UF) is a sub-partner to IESC in the implementation of the USDA Food for Progress-funded MOD project. UF-led interventions include industry knowledge-sharing workshops, direct technical guidance to large farms, and certificate courses with practical training on dairy production practices for DAPH Veterinary Surgeons and Livestock Development Officers.

Key areas of training include better milking practices, farm resource analysis, application of the farm assessment tool, the Penn State method of particle size analysis, forage inventory, silage management, herd management, animal comfort, cattle shed design, and heat stress management.

Through MOD, UF also hosted a group of large farm owners and managers on a business tour to visit dairy farms in Georgia and Florida. By visiting large farms dealing with similar climatic conditions as those in Sri Lanka, the group gained insight into new methods of improving cow comfort, calf management, feed rationing, etc. Most of the participants have already begun introducing the best practices at their farms and are seeing significant results.

Globally Recognized Hoof-Care Management



WORLD-RENOWNED DUTCH TRAINER AND RESEARCHER PROVIDES HANDS-ON TRAINING

Large farm staff and DAPH technicians receive training on hoof trimming and hoof health

For the first time in Sri Lanka, private and public technicians were provided professional training on the Dutch Five-Step Hoof Trimming Method, considered the gold standard in maintaining cattle hooves. Proper maintenance of hooves reduced lameness and improves animal welfare.

Hoof care is critical to reduce repeated cow lameness, which impacts lactation. The cost impact of improper management of hooves is estimated at double the cost of mastitis at a farm. The farms have already commenced making the necessary changes to hoof management protocol with a plan of action to cover all animals in rotation.

MOD is looking at sourcing cost-effective equipment for most large farms that lack the required infrastructure to carry out the necessary trimming.

National Dairy Policy and Strategy Development

FACILITATING THE DRAFTING OF THE NATIONAL DAIRY POLICY AND STRATEGY

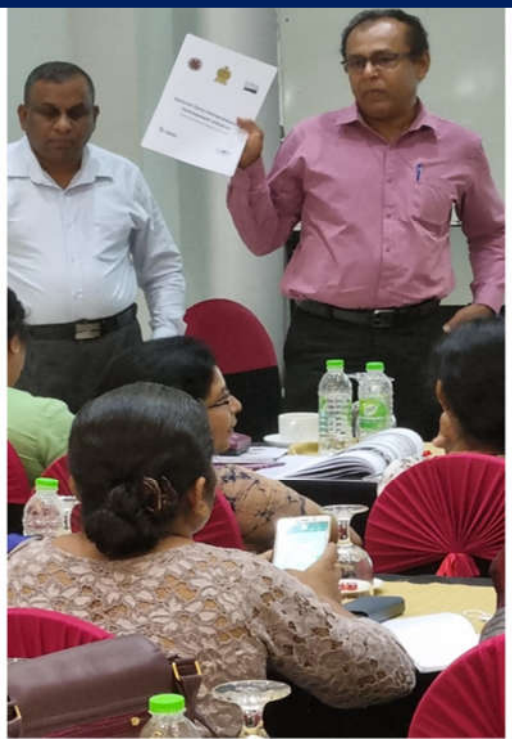
Supporting the Ministry of Agriculture-led effort to draft the country's first every dairy development policy through public-private dialog to align with the National Agriculture Policy

At the request of the Additional Secretary to the Ministry of Agriculture Livestock Division, MOD, together with the All Island Dairy Association, facilitated a series of workshops designed to draft the national dairy development policy, discuss pathways to improve quality of milk, and establish strategic actions required to increase quality milk production in Sri Lanka.

Following the workshops, the Ministry has held a series of discussions with key stakeholders and have published the Draft Dairy Development Policy as well as the updated Milk Quality Standards for public comment prior to presenting to the Parliament.

A public-private mechanism will be constituted by the Ministry to support implementation of the strategic actions and monitor their progress.

National and Affiliated Training


SUSTAINING KNOWLEDGE TRANSFER AND CONSISTENT MESSAGING

MOD supported the DAPH-led efforts to develop training curricula at the provincial and national levels as well as affiliated training modules for dairy processing companies and the Mahaweli Development Authority

- The Dairy Entrepreneur Empowerment Through Technical Assistance Program (DEETech) was co-developed at the request of the Provincial Director of the North Western Province. MOD provided refresher training for 128 Livestock Development Instructors (LDIs) and 47 veterinary surgeons (VSs) in the province. The program, which commenced in 2020, has already trained 2814 farmers.
- At the request of the Director General of DAPH, MOD co-developed the National Dairy Entrepreneur Development Program (NDEDP) to standardize training and extension messaging for the dairy sector. Facilitated by MOD, DAPH has provided training-of-trainer (ToT) training for 364 LDIs and 173 VSs in four provinces. Uva Province has taken the lead in rolling out the farmer training of the new module 01.
- To enable private sector companies to continue with farmer training and extension for the non-MOD cohort of farmers, MOD delivered ToT training for the staff of three processor companies. To date, they have trained 1513 farmers.
- MOD also developed the capacity of the extension staff of the Mahaweli Development Authority. To date they have trained 547 farmers.

Climate-Smart Dairy

MORE MILK, LESS EMISSIONS

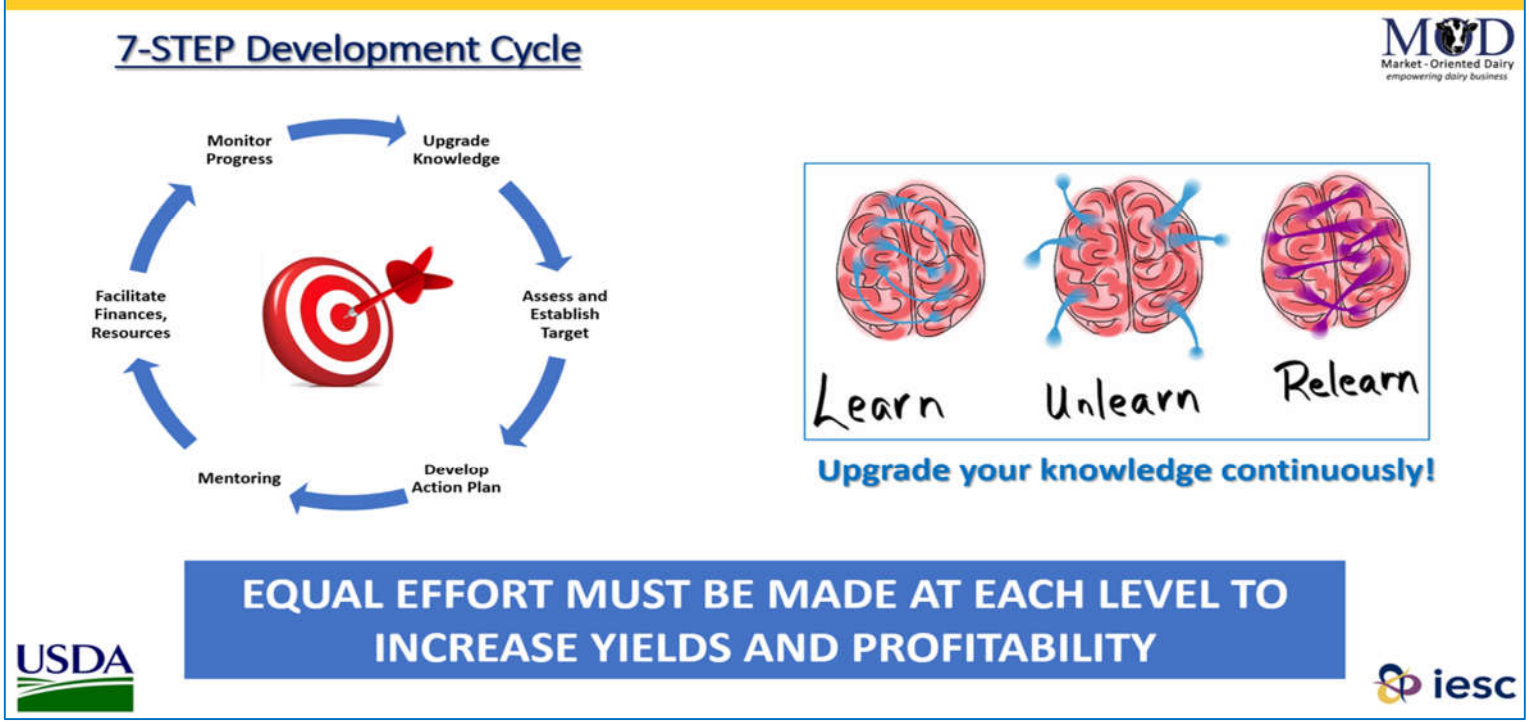
MOD supports DAPH-led initiative to develop a standardized methodology to manage and measure the progress of small- and medium-scale dairy farms productivity improvements resulting in lower emissions

The Climate-Smart Dairy model developed by MOD aligns with the action plan recommended by the Food and Agriculture Organization of the United Nations in 2017 to reduce livestock emissions by boosting efficiency of livestock production and resource use. More efficient and productive dairy farms tend to implement best practices such as feed nutrition and water consumption, improved land and water management in fodder production, use of renewable energy, measures to improve animal comfort, controlled use of fertilizer and machinery etc. The model and the scorecard assessing dairy farms using 32 criteria will provide the framework to monitor the climate-smartness of Sri Lanka's dairy farms.

The model was validated using internationally accepted norms with field data collected from 27 farms in varying degrees of management intensity as indicated by their adoption rate of dairy management best practices and established key performance indicators. The use of the scorecard will indicate the gaps and pathways for continuous improvement.

DAPH and MOD are currently in the process of identifying 25 farms to be developed as model farms for the pilot program.

Results-based Extension



ROLE OF EXTENSION SERVICES FOR SUSTAINED GROWTH

MOD's simple, consistent, and focused process ensures successful increases in milk yields and incomes year-round

MOD's **productivity mantra is Less Cows, More Milk!** The tried and tested results-based extension process focuses on delivering a planned, sustainable growth for beneficiaries encouraging the smart use of available resources to improve productivity and profitability.

7-STEP Development Cycle

1. Upgrade knowledge (at every step: training, workshops, FDGs, mentoring)
2. Assess available resources and potential and establish target
3. Develop action plans and KPIs to reach agreed targets and ensure income/expense records are maintained
4. Technical assistance through regular mentoring to implement action plans
5. Facilitate finance and other resource requirements as needed to implement action plans
6. Monitor progress of the implementation of action plans; re-assess and fine-tune as required
7. Ensure production/productivity targets are achieved

RESULT:

Farmers must be empowered

The farmers should be able to make the correct decisions to improve their income.

The role of extension service providers is to support through facilitation to address any gaps to achieve their targets.

We encourage all our partners to engage in our affiliated training programs where we train the trainers to carry out further teaching and mentoring. Over the next twelve months, we are focusing on transferring capabilities in upgrading the capacities of dairy farmers into dairy entrepreneurs as we plan a smooth and successful transition.

Developing a Virtual Dairy Community

JOIN US TO EXPAND THE REACH OF TECHNICAL KNOWLEDGE

MOD's FaceBook page is gathering a cohort of dairy practitioners interested in improving quality milk production

Through attractive eye-catching visuals to convey important extension messaging, MOD is sharing dairy management best practices virtually to reach a wider audience. As interest amongst the project's virtual community grows, FaceBook is emerging as an excellent platform to share knowledge, increase productivity and engage value chain players supporting small- and medium- scale producers. All content is created in both local languages.

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