

Mid Term Review
March 20, 2024

Series of Training and Capacity Building Sessions: ‘Transfer know-how on TomEJC Mango Production for Exports’

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The Lanka Fruit & Vegetable Producers, Processors and Exporters Association (LFVPPEA), in collaboration with the Institute of Policy Studies of Sri Lanka (IPS), initiated a series of workshops titled 'Transfer know-how on TomEJC Mango Production for Exports'…

Background

- *In 2022, **fruit production** reported a notable **decline of 26.9 percent** compared to the previous year, as highlighted in the Central Bank of Sri Lanka (CBSL) report.*

- *This **contraction** was particularly significant **in orange, lime, rambutan, avocado, and melon** production.*

- *However, amidst this general decline, there were **positive trends** with increases in **mango, papaya, plantain, and pineapple production**.*

- *The surge in global demand, especially from **temperate countries** where mangoes are **rapidly gaining popularity** (Mitra, S.K. 2016), contributed to the upward trajectory for specific fruits.*

- *Furthermore, the strategic **introduction of less perishable and exportable mango varieties**, tailored to the **adaptability of diverse agro-ecological regions**, proved instrumental in enhancing overall fruit yield of Mango.*

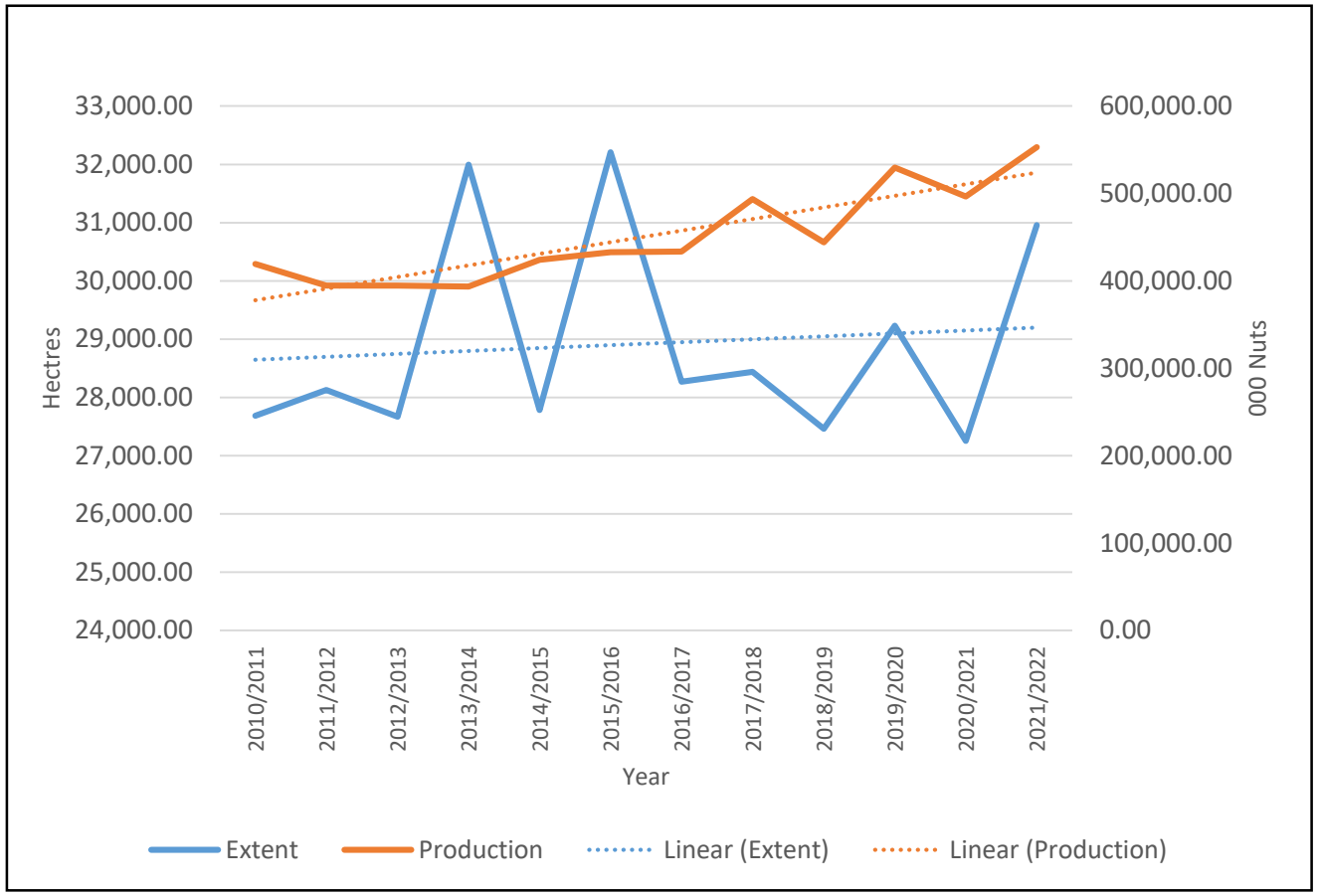
  i.e.

  Horanahiru (low county wet zone)
  Karthacolomban, Malwana (dry and intermediate zones)
  Velleicolomban (wet and intermediate zone)
  Villard, TOM EJC (dry zone)
  Dampara, Giraamba (wet zone)

- *With a substantial **production** in the country, the volume **surpasses domestic consumption**, making it imperative for export promotion.*

- *To facilitate exports, adherence to **quality standards** is essential.*

- *However, there exists a **knowledge gap among farmers** concerning the **systematic cultivation**, **proper crop handling**, and **post-harvest produce management**.*



Source: Author's compilation using DCS data (2010-2022)

Objectives of the series of capacity building sessions

- *To **impart theoretical knowledge**, starting from the selection of appropriate seedlings to the export of the produce*
- *To **offer hands-on experience** for commercial farmers in the field*
- *To **establish commercial farmer clusters**, fostering a sustainable model that empowers farmers to articulate their own needs and navigate the intricacies of the export market*

Theoretical knowledge: ‘Transfer know-how on TomEJC Mango Production for Exports’



Module 01 : *Best agronomic practices in the production of Mangoes for exports*

- *Field planting*
- *Fertilizer application*
- *After care operations*
- *Irrigation*
- *Training and pruning*
- *Flower induction*
- *Intercropping*

Module 02 : *Best practices of orchard management for production of quality TJC Mangoes*

- *Irrigation of the orchard*
- *Fertilizer application*
- *Pruning and Canopy Management*
- *Flowering and caring for flowers*
- *Fruiting and caring of fruits*
- *TEJC Mango Covering*
- *Harvesting*
- *Weed control and Mulching*

Module 03 : *Management of Mango pests*

- *Identification of pests*
- *Major pests*
- *Minor pests*
- *Integrated Pest Management Options*

Theoretical knowledge: 'Transfer know-how on TomEJC Mango Production for Exports' Cont.



Module 04 : *Integrated disease management of mango for the export market and conformation of phyto-sanitory requirements for mango exports*

- *Identification of diseases*
- *Major diseases*
- *Minor diseases*
- *Physiological Diseases*
- *Mango Orchard certification and System approach*
- *VHT and HWT*
- *Phyto-sanitory requirements for export destinations*
- *Non-compliance notifications*
- *Potential export destinations*
- *Challenges*

Module 05 : *Guidelines for Harvest and Postharvest handling procedures for Export of TOMEJC Mangoes*

- *Stage of Maturity at Harvest*
- *Harvest operations*
- *Sorting of fruits*
- *Cleaning and grading,*
- *Ripening*
- *Packing and transport*
- *Postharvest Disease Control*

Field Exposure:





















Trainers and TOT for trainers

Trainers *for the workshops, consisting of* ***60% from the Department of Agriculture (DOA)****, underwent intensive training at the Gimanhala Hotel, Dambulla , hosted by LFVPPEA, prior to the initiation of series of workshops. The trainers were trained by the* ***experts in the respective areas****.*

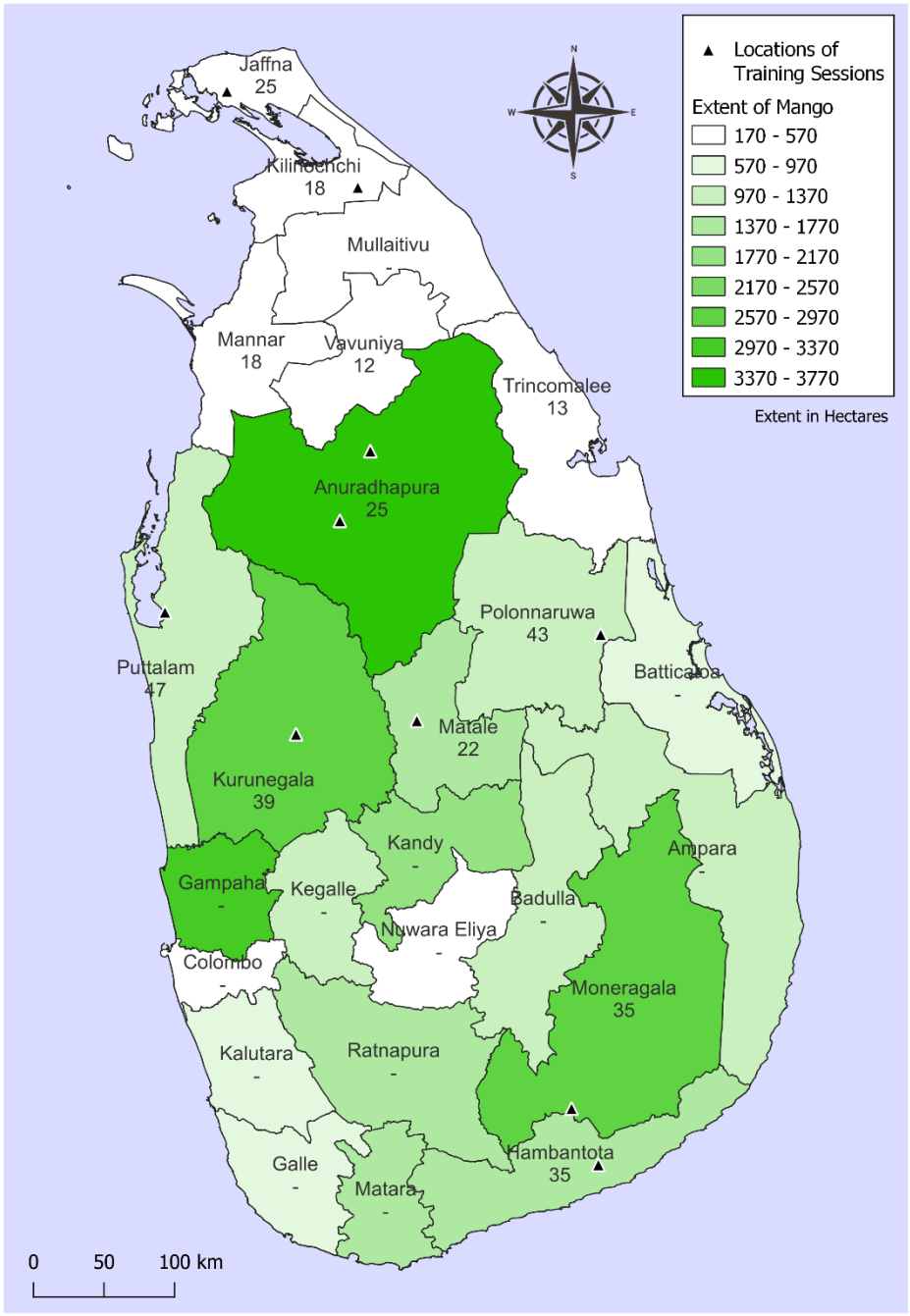
- **Dr. Sujatha Weerasinghe**
  - Senior Lecturer (Retired), Institute for Agro technology and Rural Sciences Hambantota, Univeristy of Colombo
- **Mr. Weerasooriya Bandara**
  - General Manager, Ellawala Horticulture PVT. Ltd
- **Dr. Premeratne Bandara**
  - Agriculture Entomologist, Department of Agriculture
- **Dr. W. A. R. T. Wickramaarachchi**
  - Additional Director, IPPC Official contact point, National Plant Quarantine Service, Department of Agriculture
- **Dr. K. H. Sarananda**
  - Senior Lecturer, Department of Biosystems engineering, Faculty of Agriculture and Plantation Management, Wayamba University of Sri Lanka

Distribution of Sessions

	Location (10)	Covered Districts (13)	Date
1	Dambulla (Matale)	Matale	
2	Weerawila (Hambanthota)	Hambanthota	July 15, 2023
3	Thanamalvila (Monaragala)	Monaragala	July 29, 2023
4	Anuradhapura	Anuradhapura, Trincomalee	August 12, 2023
5	Polonnaruwa	Polonnaruwa	August 26, 2023
6	Jaffna	Jaffna, Mannar	September 16, 2023
7	Medawachchiya		September 23 - 24, 2023
8	Wariyapola (Kurunegala)	Kurunegala	September 30, 2023
9	Kilinnochchi	Kilinnochchi, Mullaitevu, Vavuniya	October 14,2023
10	Puttalam	Puttalama	November 11, 2023

 # The inclusivity of languages, incorporating both Tamil and English in sessions at Jaffna and Kilinochchi, broadened the impact of the workshops.





Source: Author's illustration using DCS data (2022)

Overview on Participants

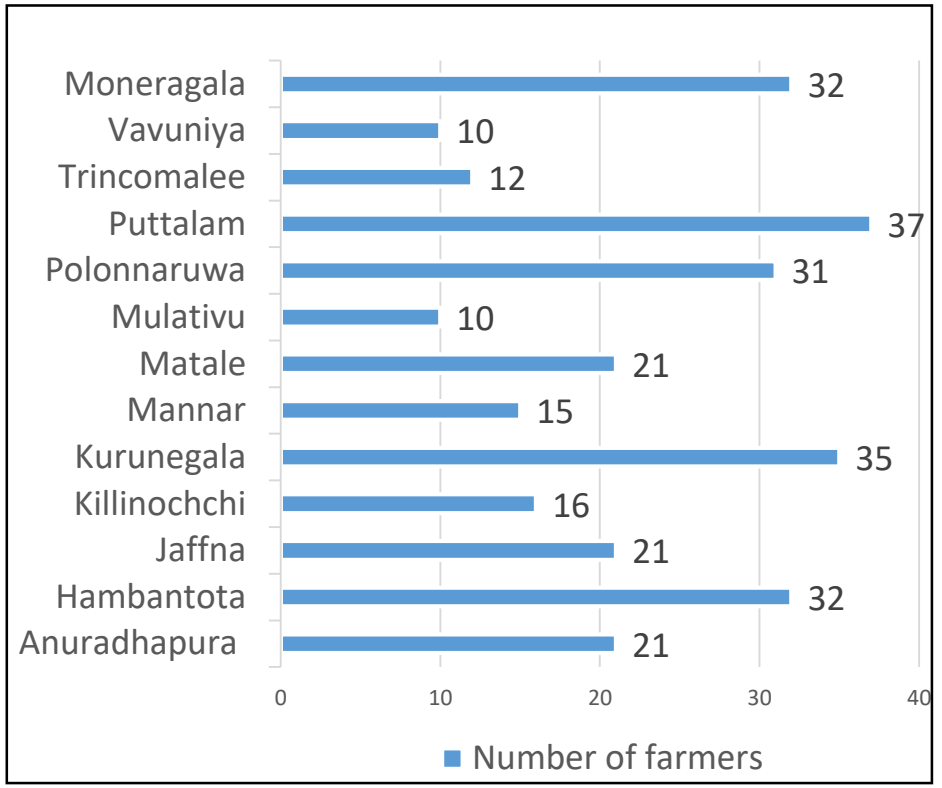
- *A total of **293 farmers** from across the country participated in the training sessions, collectively **representing 2810 acres** of mango cultivations. Excluding the Monaragala district, these areas, with **125,720 trees in the producing stage**, yielded **768,635 kg of mangoes** in 2022.*

- *In addition to these commercial farmers, **officials from Nelna, Maliban, and Jewelex farms** also participated in the training session. Collectively, these farms contribute to a total of **692 acres** of mango orchards, with **57,165 bearing trees**.*









Source: Author's compilation using unverified information from LFVPPEA



- *The training session **at Manik Farm, Medawachchiya**, focused on **279.3 acres of mango orchards**, encompassing **29,049 trees** under the care of army officers. The event was attended by **senior officials** from **eight army farms** situated across various regions.*

  - ✓ *Army Farm Kandakadu*
  - ✓ *Army farm Manik farm*
  - ✓ *Army farm Vellamkulam*
  - ✓ *Army farm Yala*
  - ✓ *Army farm Adiyapuliyankulama*
  - ✓ *Army farm Niraviya*
  - ✓ *Army farm Kankasanturai*
  - ✓ *Army farm Iranamadu*







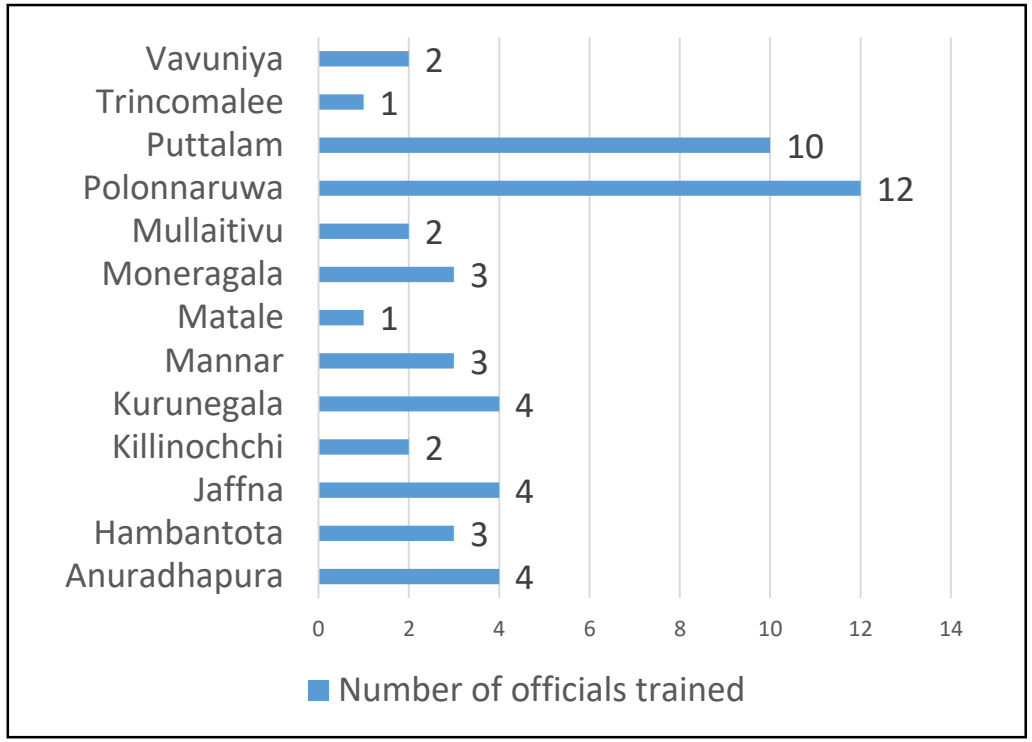






- *In addition to training commercial farmers and army officials,* ***other stakeholders (51 officials)*** *involved in mango cultivation underwent training* ***while ensuring the effective transmission of acquired knowledge to the farmers they interact with****.*

  - ✓ *SMOs (Horticulture)*
  - ✓ *SMOs (Plant Protection)*
  - ✓ *Farm Managers District Agricultural Training Centres*
  - ✓ *Agriculture instructors (Seed certification)*
  - ✓ *Technical Assistants (Department of Agriculture)*
  - ✓ *Deputy Resident Project Managers of Agriculture*
  - ✓ *Agriculture Officers*
  - ✓ *Agronomists*
  - ✓ *Senior Agronomists*



Source: Author's compilation using unverified information from LFVPPEA

- *This initiative* ***fostered mutual understanding between farmers and officials****, facilitating the exchange of theoretical know-how.*

Other benefits

- **Training guides**













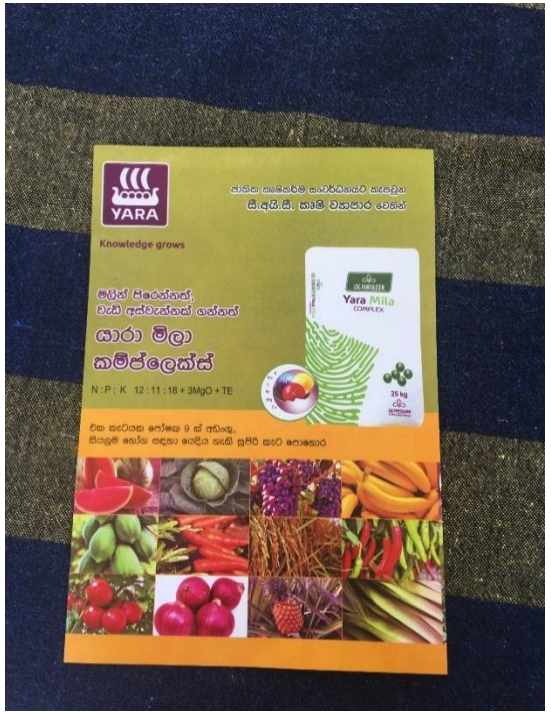
 # Farmers were provided with training manuals ***composed by the experts*** *who had trained the trainers during the TOT program. The manuals were* ***available in three languages****; Sinhala, Tamil, and English* ***allowing farmers to choose according to their preference****.*

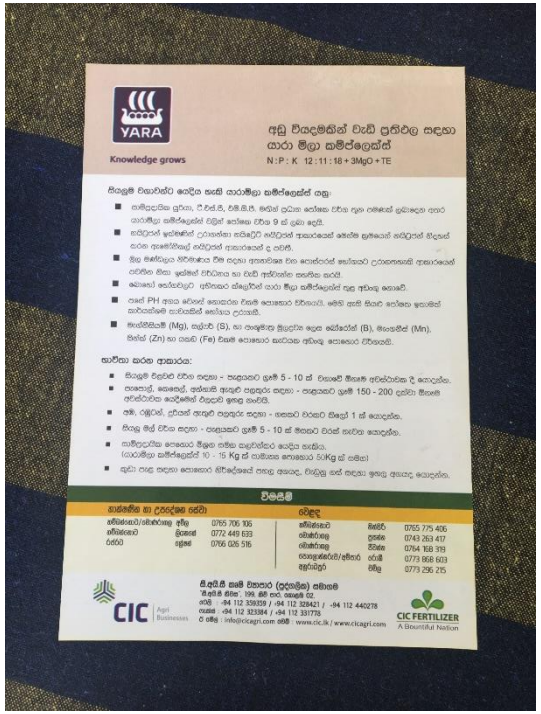
- **Networking with Private sector actors**

During the sessions, farmers not only received materials developed by these experts for future reference but also had the opportunity to connect with private sector actors in the value chain.













- **Purchase point for Agro-chemical and other equipment**













- **Distribution of Essential Farming Accessories to Farmers**







*Occasionally, **secretaries**, **fruit covers**, **seedlings**, **hats**, and some other equipment were distributed among the farmers.*

- **Certificates at the end of the sessions**



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INSTITUTE OF POLICY STUDIES OF SRI LANKA

Monaragala DISTRICT PROGRAMME

Certificate

This is to Certify that .....

participated at a training program entitled on "Best practices of Tom EJC mango Production for exports" specifically organized for mango growers held on 29th July, 2023 at Monaragala by the Lanka Fruits and Vegetables Producers, Processors and Exporters Association (LFVPPEA).

The Training Covered the Following Modules of TomEJC Mango Production in Sri Lanka for Exports Association: (LFVPPEA)

Module 01 - Orchard Management Practices
Module 02 - Pests Management
Module 03 - Diseases Management
Module 04 - Phytosanitary Certification

Suresh Ellawala
Head- LFVPPEA Mango Cluster

Dr. Manoj Thibbotuwawa
ACIAR Project Coordinator,
Institute of Policy Studies of Sri Lanka

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LFVPPEA/ML/















Empowering Farmers and the National Fruit Industry

- *The **challenges faced by farmers** extend beyond the field. From **difficulties in reaching extension facilities** to a lack of theoretical knowledge, a clear **asymmetry of information** from farmer level to researchers persists. **Private sector involvement**, as witnessed in the mango workshops, becomes pivotal in bridging this information gap.*
- *These workshops empowered farmers with **scientific knowledge and practical skills**, enabling them to address issues, network, and, crucially, impart their newfound wisdom to others.*
- ***A systematic approach** was instilled, **reducing preharvest and postharvest losses** and ensuring **a uniform harvest**, in **adherence to export-quality** standards.*

*Dr. Patric Nugawela, a Board member, LFVPPEA, in his speech at the last training programme at Puttalama emphasized their ambitious goal of having approximately **5 million yielding mango trees in the next year**, **each** expected to produce at least **50 kg of mango yield per season**.*

If we can successfully adopt improvements among these 293 commercial farmers and enhance the potential yield per tree per season to 50 kg, the 125,720 bearing trees could lead to a substantial 1532.62% of yield increase, resulting in a total production of 12,572,000 kg of mangoes in the next year.

Feedbacks from the participants

* මෙම ප්‍රහාරක වැඩසටහන මගින් ලැබුණු දැනුම හා අවබෝධය තරමෙන මුළු පොත්හල කුළ ක්‍රම්භාදිනය ඵලදාව වැඩිකර ගැනීමට 1 වන පේදීයේ මුඛ අනතාරාය හඳුනා ගැනීමේ ශිල්පීන් නම් සිය ලිපිනය සඳහන් කර යවන්න.

* මුළු ලොවෙන් මෙම වැඩිපන් දියුණු වීමට අවශ්‍ය කරුණු හඳුනා ගැනීමේ ශිල්පීන් වෙත හදිසිවන්ම ඇතුල් වූ කරමි.

* මුළු බැන් සුදු ඵලදායී පොත්හල් වලින් 50%. දියවන්වෙ නෝ වෙනත් කුමවේදයක් මේ ඵලදායී ප්‍රතිඵල ලබා ගැනීමට, වන කල්හි උපකරණ කවරාල අත කෙරෙන් රූපය ලබා ගැනීමේ කුමවේදයේ සඳහන්ව නම ලියා යවන්න.

01) ඔබට කෙරුණු වැඩසටහන ලබාගත හැකිවන් ගෙන්ම උපදේශ දැනුවත් දැනුවත් කිරීම් ඔබගෙන් ප්‍රතිචාරයක් ලැබුණාද?

02) ඔබ ගොඩනැඟී විට වැදගත් සිතුවිලියක් ගොඩනැඟීමට ඔබගෙන් ප්‍රතිචාරයක් ලබාදීමට කටයුතු කරන ලද ශිල්පීන් හඳුනා ගැනීමට ඔබට හැකිවාද?

03) ඒගෙන්ම විදේශ ගවේෂකයන් වැඩසටහන කර ගෙනියන් ප්‍රතිලාභාන්විතය ලබන්න ප්‍රතිපාදනය වැඩ ගෙනියන්නේ කවුරුන්ද? ඔබ දන්නා නිසා කරුණාකර කියා දෙන්න.

04) ඒගෙන්ම මගොලේ ගැනවැඩ වැඩසටහන් සංවිධායකයන් බැහැරින් ප්‍රතිපෝෂණය දීමට කරුණා ගොනු නිවැරදිකම් ගෙනදා තැනීමට ද ප්‍රතිපත්තිය ලැබුණාද?



Figure : Farmer expressing his experience

අප වගාව විස්තීරණ කිරීමේ ප්‍රායෝගික විධි හැකියාවන් දැනුම ලබාගැනීමට ඇතැම් විට අපට ගොඩක් ඵලදායී වැඩ මුලුතැන්ගේ අප වගා කරුවන්ට බබ ප්‍රායෝගික විධින් ලබා දෙන දැනුම සහ ප්‍රාවීණත්ව වැඩිවැඩි ලබාගැනීමේ අවස්ථාවන්ත වෙති.

මෙවැනි ගැටලුවන් හා විසඳුම් ඇති කිරීමට අප විසින් දියුණු කරන්නන්ට ලබා ගැනීමට සෘජු විසඳුම් ලබාදීමට කටයුතු කරනු ලැබේ. ඉදිරි වගා කටයුතු සඳහා අවශ්‍ය කරුණු පිළිබඳ දැනුම ලබාගැනීමට අවශ්‍ය දැනුම් ලබා ගැනීමට කටයුතු කරන්න.

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The way forward

1) Knowledge Dissemination and Peer Education

- *Trained farmers and other stakeholders will be **encouraged to disseminate** the knowledge acquired during the sessions to their peers and fellow farmers.*

2) Impact Assessment

- ***A structured questionnaire survey** has been conducted to gather information about farmers and their practices. Currently, we are in the phase of data collection and entry, with the analysis expected to follow.*
- *Similar farmer groups will be **assessed in the future** and the farmer information **will be systematically databased to evaluate the sessions' impact**.*

3) Database development and A Mobile Application as a Solution

- *Based on survey findings and information available with LFVPPEA, currently, it is planned to **establish a database managed by an industry representative**, with LFVPPEA considered the most suitable stakeholder for this role.*
- *As per the objectives of the ACIAR project, the IPS team has **already conducted desk reviews and outlined the requirements for the proposed mobile application**. Subsequently, the team initiated discussions with renowned app developers such as Beta Launch and Tracified (99x team) to explore further collaboration.*
- *The proposed database will be seamlessly integrated into the aforementioned application, **playing a crucial role in the innovation hub** that is set to be established as part of the ACIAR Project.*

The way forward Cont.

4) Knowledge Dissemination Platform (Mobile Application)

- *The platform (mobile application) will serve as **a means to disseminate new knowledge**, employing user-friendly approaches like pre-recorded discussions, simulations, and AI bots. Additionally, hard copies of materials will be provided for individuals who prefer traditional formats.*

5) Additional Workshops and Entrepreneurial Development

- ***Additional workshops for the same group of farmers** will focus on areas such as marketing, record-keeping, and experimentation, aiming to elevate them as **modern entrepreneurs with esteemed brands**.*

6) Expansion to Other Mango Varieties

- *Expanding beyond the TJC farmers, the next phase aims to incorporate farmers cultivating other mango varieties since they make a significant **contribution to national production** and hold **cultural significance**.*

7) Formation of Regional Farmer Clusters

- *Regional farmer clusters will be established to **facilitate resource-sharing and plan marketing practices**. These clusters will be **empowered as aggregated export agents**, benefiting from the **advantages of scale and ensuring a stable supply**.*

8) Provision of Infrastructure Facilities

- *Infrastructure facilities, including **collection centers**, will be provided to the established farmer clusters.*

Glimpses of memories..

Hambanthota













Monaragala













Glimpses of memories Cont.

Jaffna








Killinochchi








Glimpses of memories Cont.

Polonnaruwa








Puttalama








Glimpses of memories Cont.

Anuradhapura

















Thank You !

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