

## FORUM ON POSTHARVEST LOSSES OF FRUITS AND VEGETABLES

I had the pleasure to be at the Forum on Postharvest Losses of Fruits and Vegetables jointly organized by Faculty of Agriculture (University of Mauritius) & Food and Agricultural Research and Extension Institute (FAREI). This was an event under the Food Loss and Food Waste Reduction and Recovery Initiative organized by the Faculty of Agriculture. My visit to Mauritius is the outcome of a meeting I had with Associate Prof. Daya Goburdhun, during the All Africa Post Harvest Conference in Kenya in March 2017 when she invited me to share my experiences with Shelf Life Extension technologies with the Mauritian agriculture community. According to conservative estimates by Food and Agricultural Research and Extension Institute (FAREI), Mauritius, Postharvest losses (PHL) of vegetables and fruits have been estimated to be 25-35% in Mauritius. Based upon inputs and insights provided by the informed attendees, the PHL for a lot of commodities including tomato, lychee and banana were substantially higher. Mrs. Munbodh Soodha from FAREI with her presentation succinctly identified these causes: lack of postharvest knowledge, rough handling, lack of cold chain, microbial infestation, mechanical damage of harvested produce as well as inappropriate storage practices, and wrong transportation along the marketing channels. Her presentation also provided insights on some of the shelf life extension technologies that FAREI has worked on. She also mentioned about the availability of a ripening chamber at FAREI facility that the farming community could access and use to meet their ripening needs.

My presentation on “Intelligent Polymer Membrane Technology for Shelf Life Extension of Fruits and Vegetables”, was well received. The idea of the presentation was to demonstrate the ability to extend the shelf life of fruits and vegetables using passive Modified Atmosphere based packaging technology for the Mauritian farming community.



Results of shelf life extensions for a variety of perishables commodities at different storage temperatures were also provided during the presentation. The picture demonstrates the shelf life extension of tomato (to 16 days) on the left is tomato stored in CA FILMS, on the right is the tomato stored without packaging. The

audience had some very interesting questions related to bio-degradability of the technology,



specific packaging requirements, and technology insertions, its costs, and its acceptability in other countries and markets.

Some important and relevant questions/issues raised by the attendees included:

1. While everyone was in agreement with regards to the PHL, the audience mentioned the lack of local food processing industries to offset these losses, e.g. by coming up with unique and secondary products, such as tomato paste and purees. Most of the processed products are currently being imported.
2. Lack of market linkage for the food products was a matter of grave concern.
3. Better clarity on the bio-degradability of plastic bags was required. It was mentioned that the currently available bio-degradable bags are very expensive.
4. The audience felt better clarity needs to be provided for MauriGAP to ensure farming community could sign up and be part of this change.
5. While the availability of ripening chambers at FAREI was a welcome step, the audience felt it posed a logistical challenge to the farmers. Better access to ripening chambers, such as on-site ripening could be a better solution to meet ripening needs.
6. Access to cold chain was always a challenge, and other economical and rudimentary technologies needs to be researched and promoted.

It was refreshing and also exciting to see the enthusiasm and passion shown by the audience towards the Mauritian agriculture, and the will to make a difference was very admirable. My initial impression of the current state of affairs with regards to the agriculture industry was that it has made the first step towards accepting that the PHL are high, and appropriate steps have to be taken to fix this issue at hand.

Post-harvest loss is an entrenched yet solvable problem. PHL alone has a considerable potential to increase the efficiency of the Mauritian food supply chain. Given that many smallholder farmers in Mauritius live on the margins of food insecurity, a reduction in PHL could have an immediate and significant impact on their livelihoods. However, reduction of PHL will not occur simply by focusing on a single component within the value chain. Loss on a farm to fork food supply chain will only decline if we confront the issue using a "systems approach." This approach must be conceptualized on both demand and supply-driven scales.