

Commercialization Progress

MOU signed between TNAU and Smart Harvest Agri, Canada

to Promote Technologies to Reduce Post-Harvest Losses in Perishables

India loses about **Rs. 2, 40,000 Crores** from the post-harvest losses in perishables annually due to lack of improper harvesting, handling and transport of fruits besides inadequate cold storage facilities. In order to address the global challenge of post-harvest losses, the Global Affairs Canada (GAC) and International Development Research Center (IDRC) jointly funded project on "*Enhanced Preservation of Fruits using Nanotechnology*" to TNAU for the past five years (2012-2018) with a financial outlay of **Rs. 11.4 crores**. The Tamil Nadu Agricultural University, Coimbatore, collaboratively worked with University of Guelph, Canada, and adopted their technologies such as pre-harvest spray or post harvest dip of hexanal formulation, hexanal vapour and developed nano-stickers, nano-pellets and nano-film developed from banana pseudostem. Hexanal is a biomolecule derived from plants possessing the capability of inhibiting phospholipase D enzyme and slowing down ethylene thereby shelf-life of fruits and vegetables get extended besides minimizing post-harvest losses. All these technologies singly or in combinations can reduce the post-harvest losses to the tune of 10-15% which is an economic boon to the country.

Ms. Jennifer Daubeny, Consulate General of Canada, delivered the special address narrating the significance of Canadian funding in developing nanotechnologies to reduce post-harvest losses that enables food security in Asian Countries. **Dr. K. Ramasamy**, Vice Chancellor, Tamil Nadu Agricultural University, Coimbatore presided over the function and highlighted the role of TNAU in knitting nanotechnology research framework and serving as a torch bearer in the country. He emphasized that the GAC-IDRC Project helped more than 60 students and researchers, developed two technologies, filed patents for two inventions, extensive infrastructure development besides helping more than 12,000 fruit growers in the State of Tamil Nadu. **Dr. Jayasankar Subramanian**, Professor, University of Guelph, Canada, explained the evolution of the project till reached the stage of technology delivery to benefit farmers. **Dr. K.S. Subramanian**, NABARD Chair Professor, TNAU, Coimbatore, lead Principal Investigator of the Project for India presented nanotechnologies developed to assist in the entire value chain from the farm to fork. **Mr. Arun Nagarajan**, President, Tamil Nadu Fruit Growers' Association, explained that the fruit growers are eager to use the technology to improve their farm income. **Mr. Terence Park**, Managing Director, Smart Harvest Agri, Canada, bestowed interest to take forward the technologies to the farm gate and signed MOU with TNAU for the Commercialization of the Hexanal Formulation. **Dr. G.J. Janavi**, Professor & Head, Department of Nano Science & Technology, TNAU, Coimbatore welcomed the gathering and **Dr. C. Sekar**, Dean, Imayam Agricultural College, Turaiyur, and Co-PI of the Project proposed a formal vote of thanks.

The Canadian Consul General **Ms. Jennifer Daubeny** visited all the exhibits and interacted with students, scholars and researchers besides the NGO partner Myrada. She was very impressed with the technologies developed by TNAU in collaboration with University of Guelph, Canada, and looking forward to support research programs in the near future. More than 200 Scientists and Diplomats from Canada, students, scholars, university officials participated in the event.



Products launch by ITI, Colombo

Two of the project's technology outputs - hexanal incorporated ITI Bio-wax and the Tree Fresh Formulation spray were transferred to Hayleys Agriculture Pvt. Ltd., a reputed Agro Service provider in Sri Lanka. The products were launched on 22nd March 2018 at the Taj Samudra Hotel, Colombo. The chief guest at the event was the Hon. Susil Premajayantha, Minister of Science Technology and Research (Min. ST&R). The guest of honour was H.E. David McKinnon, High Commissioner for Canada in Sri Lanka. Others present included the Secretary to the Min. ST&R, The Chairman and Director General, ITI, Mr Rizvi Zaheed, Hayleys Agriculture and his team, the Chairman, National Science Foundation, Sri Lanka, representative of the Chairman Sri Lanka Export Development Board, representatives from the Dialog mobile service provider, the Registrar of Pesticides, representing the Dir. Gen., of Agriculture, President of the Lanka Fruit and Vegetable Producers, Processors and Exporters Association, leading large scale mango, papaya and pineapple growers, several export and fruit processing company representatives, senior officials from the ITI, the multi-disciplinary ITI research team and our partner from CEPA. The press was also well represented and a total of 100 persons were present on this occasion. The Managing Director Hayles, the two Pls' of the project, the High Commissioner for Canada, The Minister and for ST&R and the Secretary to the Ministry addressed the gathering and the new video clip on the project was viewed. The new products were jointly uncovered for display by the Hon. Minister and H.E., the High Commissioner. Samples of the products were distributed to the President of the Lanka Fruit and Vegetable Producers Processors and Exporters Association and to two leading mango growers. The Project team also took this opportunity to run a presentation on the various stages of the project and related activities, display posters on their research findings and to print and distribute the pamphlets on the same as well as on hexanal, the latter as prepared by our partners from the University of Guelph. The launch ended with a time of fellowship providing a useful opportunity for networking.

<https://youtu.be/E7Azo1McMeU> -



