

# REAMIT Networking Symposium

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# Can technology help building trusted relationships in agri- businesses?

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## What to focus in global food supply chain?

- Developed nations are focussing on achieving greenness through government policies and structured programmes
- Developing countries like India and China have just started focussing on green sustainability through individual programmes. These initiatives have been witnessed in the production processes and logistics as transportation is contributing to a huge amount of carbon emission (Ramanathan et al., 2014).

# What is Green supply chain for Agri-products in India?



**Food miles:** How much distance the food travelled before it reaches the end user/consumed?

**Carbon footprint:** Measure of carbon emitted during its production, processing and distribution

**Green Logistics:** It refers to the systematic measurement, analysis, and, ultimately, mitigation of the environmental impact of logistics activities

**Short food supply chain:** Locally grown and locally consumed!!



## What is the status of global agri-business of 21<sup>st</sup> century?

- Aware of green supply chain
- Perishability
- Traceability
- Food safety and security regulations
- Food quality



## Why global movement of agri-products?

- Supply is not proportionate to the demand in geographical locations
- This necessitates food to travel from countries like India and China to UK and European countries
- Growth of some food variety is specific to geographical location such as rice and wheat
- Peoples' movement across the globe (food consumption) creates demand for different varieties of food
- Food mile is considered seriously to maintain green supply chain



# Fruits and Vegetable Market



## Fresh fruits and vegetables market

- Madurai is one of the main markets for the entire southern Tamil Nadu and neighbouring Kerala.
- Madurai central market (Mattuthavani) having 521 permanent shops and 1200 retailers shop.
- Managed by Madurai Corporation.
- Per day more than 500 – 700 tonnes of vegetables are sold
- Vegetables and fruits are distribute to all over the Madurai
- 33% - 47% of F&V are wasted every day.





## Agri-produce distribution in South India

- South India is self sufficient in Fresh F&V production
- Exporting the excess supply is not a normal practice
- As supply and demand are fluctuating, the wastage is counted as high as 47% in the whole supply chain
- Some initiatives are considered by local entrepreneurs especially in hotel sector
  - For example ‘Hotel-TC’ is producing fresh F&Vs in their own land and **composting the wasted products (self-sufficient)**
  - Producing **methane** using anaerobic digester
  - **Energy** from their own operations is being used for running the business

## Avoiding waste

- Sensor is attached to bins in the market
- Simple mobile app to know the capacity of the bins to sell in secondary market
- Develop trust in this new practice
- Cost is expected to be less than a £1 per day per bin of 50 litres capacity



## Trust creating activities: Cultivation practice of Brinjal/eggplant

- From 8 weeks to 14 weeks
- Can be throughout the year
- Seed and fertilizers given by the company
- Watering is **automated**
- Monitoring growth through **cameras (not sensors)**



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Thanks you !!

Any Questions?

# Basic requirements in agri-business – A critical view

- Asian countries are exporting Agri-products to developed nations in Europe, USA, Australia and Canada
- Both perishable and long-life products are exported in a highly sustainable way using green production and distribution channels –
  - Is it sustainable than short food channel?
  - Can we make global agri-food travel sustainable both environmentally and socially?
- In this era of digitalisation, companies are competing on various grounds both locally, globally, online and offline.
- To avoid waste - Global companies to have profound understanding of customer choice, preferences, purchase and final demand.
- Green supply chain creates a strong association from source to consumption (Spielman, 2007).
- Green supply chain is the key to create innovative avenues to production, storage, distribution and retailing of produced items.