

INDYANA



*India
and the
Netherlands
are now
partners in the
fight against
terrorism*



40 % of the country's fruits and vegetables perish due to lack of **cold-storage facilities.**

LARIVE INTERNATIONAL GUIDES CUSTOMERS AND BUSINESS PARTNERS IN DEVELOPING, IMPLEMENTING AND REALISING THEIR GOALS IN HIGH-GROWTH MARKETS, BASED ON UNIQUE BUSINESS INTELLIGENCE, A NETWORK WITH DEEP ROOTED LOCAL PRESENCE IN INDIA. JAYITA DATTA TALKS TO MS. DAVINIA LAMME, PARTNER - LARIVE INTERNATIONAL

Q Your project Foodtechindia on food waste reduction and creating sustainability on food chain in southern part of India is really a commendable one. Tell us something more about this project?

The main objective of the FoodTechIndia project is to reduce food wastage in India through the implementation of an integrated supply and cold chain infrastructure for fruits and vegetables. Also, the project will be focused on enabling sustainable inclusive economic growth among local small scale farmers.

Q To achieve this we have set up an operational plan, with the following activities:

- We will cooperate with local farmers to set-up polyhouses, assisted by international and local cultivation specialists in Karnataka;
- We will train farmers in agricultural and more general topics.
- We will build collection points for the farmers to bring their produce so that it can be stored properly. To cool these collection points, we will use adiabatic cooling, which is an innovative technology using solar power.

- We will implement a sorting, processing, and packaging line to enable us to add value to the products that will be grown by the farmers we will involve.

- We will set up a (refrigerated) logistical chain for the products, farm-to-fork;

- We will implement a track and trace system from the local farmer to the retailer, to be able to continuously improve efficiency within the supply and cold chain;

- Provide direct access to market through close cooperation with a leading food retailer.

The project will specifically focus on development of entrepreneurship, especially amongst female farmers, due to the 'feminization of agriculture', a global trend that is also seen in India, whereby more and more women take over the work on the land from men.

The FoodTechIndia project consists of a consortium of Dutch and Indian partners. These partners are: (1) High quality seed supplier Rijk Zwaan, (2) Knowledge institute TNO, providing a technical solutions for sustainable decentralized cold storage based on solar energy, (3) Broekman Logistics India, a one stop logistics service provider, and (4) Future Consumer Enterprise Limited, an Indian retail group, (5) The Art of Living, an Indian NGO, (6) Larive International, project initiator and coordinator and (7) The Ministry of Foreign Affairs of the Netherlands.



The strength of the consortium lies in its integral approach ('chain approach') towards fruit & vegetables cultivation, harvesting, logistics, storage, cooling, processing, packaging and distribution to the consumer.

Q What are the opportunities/potential you see in the food supply-chain in India.

The opportunities and potential are huge because of the following.

India produces more than 250 MT of food every year, which in principle is enough to feed its population. However, the country is ranked 65 out of 79 countries according to the Global Hunger Index (2012) and more than 250 million people are not able to secure their minimum dietary energy requirement.

One of India's major challenges is to reduce agricultural food wastage along the entire supply & cold chain and ensuring access to sufficient, nutritious food for the most vulnerable population — rural farmers, landless labourers, women and children.

India is one of the biggest food wasters in the world — wasting INR 440 billion worth of fruits, vegetables and grains every year. According to the Central Institute of Post Harvest Engineering and Technology (CIPHET), approximately 40 % of the country's fruits and vegetables, worth INR 133 billion (EUR 1,8 billion), go to waste annually. India wastes more fruits and vegetables than any other food product in India.

This food wastage represents a missed opportunity to improve Indian food security, but also to mitigate negative environmental impacts and resources used in the food chain. In countries such as India, food wastage mainly occurs at early stages of the supply & cold chain and can be traced back to financial, managerial and technical constraints in harvesting techniques as well as storage and cooling facilities. To summarize, in India, food losses and wastages are mainly due to:

- Lack of on-farm technology and training;
- Inefficient methods of picking, packaging and transporting fruits and vegetables;
- Lack of a cold chain; a (temperature) controlled supply chain required to maintain freshness and quality of produce;
- Lack of links to well-organized supply & cold chains. Indian farmers miss opportunities to market their fresh produce and increase their incomes.

To specify, food wastage occurs at every stage of the supply and cold chain, from farmer, to retailer to consumer. However, post-harvesting at farm level is the critical starting point in the supply chain. At farm level, wastage arises mainly due to poor harvesting, storage and pre-packaging and lack of knowledge and experience. Current inefficiencies in this segment represent one of the largest contributing factors to food insecurity in India, not only negatively impacting the available volumes of food for consumption enormously, but also directly affecting the lives of millions of small scale farming families every year, due to lack of inclusive economic growth.

Minimizing food wastage during storage and transport is also a key challenge for India. It is estimated that nearly 40 % of the country's fruits and vegetables perish due to lack of cold-storage facilities. Thousands of tons of food rot in warehouses that are not, or not adequately, equipped to safely store food. According to Emerson, as of 2012, India had only 6,300 cold storage facilities, with a capacity of 30.11 million MT. Of this, 60% are located in the states Uttar Pradesh, Gujarat, West Bengal and Punjab. The remaining 24 states, the bulk of the country, remain underserved including Karnataka. For instance, in 2010, Karnataka required 2,404 of cold storage but has a capacity of 0,0487 leading to a cold storage gap of 1,917 million MT.

Q While the project is mainly focused on food wastage reduction, you have also embarked on focusing on women farmers by rightfully identifying the "feminization of agriculture". Tell us more about it.

In developing countries in particular, the agrarian transition is deeply gendered. The rapid rise in industry and services as well as urbanization, involving both a change in migratory patterns and agrarian transitions, the two often combined, follows gender lines. Men migrate first, for longer periods and to further destinations, in part because of social norms concerning gender roles, and in part because of their higher levels of education, on average, that allow them to seek off-farm employment. Because they face fewer mobility and time constraints than women, men are more likely to abandon agricultural work at home and seek waged employment on large farms, or income-generating activities in other sectors. This results in what has been referred to in recent years as the "feminization of agriculture".

Rural women often manage complex households and pursue multiple livelihood strategies. Their activities typically include producing agricultural crops, tending animals, processing and preparing food, working for wages in agricultural or other rural enterprises, collecting fuel and water, engaging in trade and marketing, caring for family members and maintaining their homes.

Because of this, women are generally less able than men to participate in economic opportunities because they face a work burden that men do not. This additional work burden is unpaid and limits women's capacity to engage in income-earning activities, which often require a minimum fixed time before being profitable. Furthermore, the nature of tasks, such as caring for children and elderly household members, requires women to stay near the home, thus limiting options to work for a wage. Time scarcity forces many women to start-up cottage industries, such as handicrafts, which are often characterized by low returns and limited potential for expansion. All of this results in an underperforming agricultural sector in many (developing) countries, with all the consequences related to this.