

# Flexfresh – latest technology for shelf life extension

**IN 2014, Indian flexible packaging producer, Uflex, investigated shelf life extension solutions for India's fresh produce industry and with the help of a foreign technology partner devised a fresh technology. Called EMAP (Equilibrium Modified Atmospheric Packaging), it entails maintaining consistent oxygen and carbon dioxide inside the bag during the life of the produce.**

Explains Ashok Chaturvedi, Uflex chairman and MD, 'During initial trials with tropical produce, the technical team noted that traditional polymers used for shelf life extension are unsuitable. Most offer a barrier to either oxygen or water and the team felt it critical to have a polymer that could offer the precise requirements of both. In fact, most existing fresh produce packaging grapples with the problem of condensation inside the bag – a fact established during our market study. We also found that for heavily-perspiring products, MAP doesn't work, as the higher CO<sub>2</sub> inside the bag changes the product's organoleptic properties.'

Uflex's R&D led to the development of Flexfresh to meet these challenges.

While maintaining humidity inside the bag at 98%, Flexfresh keeps the product dry without allowing condensation. This results in very low weight loss of produce as it continues to breathe in hydrated oxygen inside the bag; and experiments on various products showed that the ratio of oxygen to CO<sub>2</sub> was maintained at equilibrium.

Importantly, claims Ashok Chaturvedi, while offering these benefits, Flexfresh film is compostable, meeting international regulations such as EC 1935/2004 and EC 1907/2006 and qualifying for biodegradability under DIN EN 13432 (2000-12).

In India, Noida Packaging has installed and commissioned two respiration meters at its Fresh Produce Research & Innovation Laboratory. Here a team of food technologists and packaging professionals are busy developing Flexfresh across different packaging formats. It's currently available as liner bags in standard 5kg and 10kg sizes, form-fill-seal and flow-wrapping films, and lidding film.

Among early success stories is that of an Indian pomegranate grower. Moisture inside the pomegranate crown was leading to fungal growth and restricting exports from India. Following extensive trials last year, the current season has seen 100-plus containers of pomegranate being exported to some of Europe's leading supermarkets, and excellent quality has been reported.

Uflex is working with several leading retailers around the world to establish the benefits of Flexfresh for potatoes, Brussels sprouts, papaya, grapes, berries, pomegranates, flowers, beans, broccoli, cauliflower, mango, okra, mushroom, cut vegetables and other products.

To learn more about Uflex, visit [www.uflexltd.com](http://www.uflexltd.com).



A box of Indian pomegranates packed in Flexfresh, ready for shipment to overseas markets.