WorldCargo news
JUNE 2009

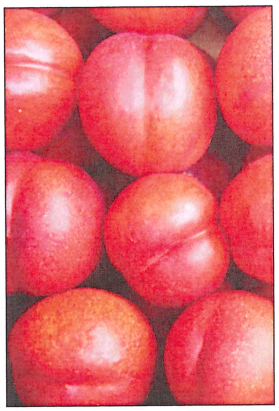
Ozone-enhanced atmosphere protects stone fruit in transit

California-based Purfresh Inc has released the results of a comparative analysis that shows that its Purfresh Transport ozone-enhanced atmosphere system effectively safeguards stone fruit during shipment.

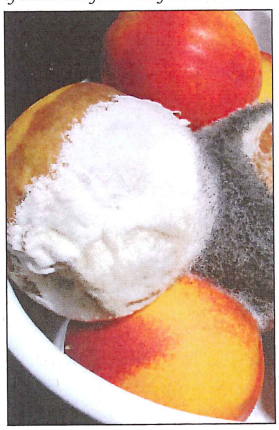
In side-by-side comparison of nectarine shipments, Purfresh's active atmosphere outperformed traditional gas injection controlled atmosphere (CA) systems, indicating significant advantages in preserving produce quality as evidenced by measurable differences in firmness, weight and sugar content, the company said.

In the Purfresh study, Kay Pearl nectarines were transported in reefer containers from California to Taiwan, a 14-day voyage. The post-trip evaluation of the fruit surface and reefer environment revealed that Purfresh Transport outperformed the CA treatment on net weight loss, fruit pressure, Brix content and microbial counts.

"By maintaining the freshness of the produce during transit, Purfresh Transport extends the shelf life of the fruit, minimises waste and repack, and reduces costly waste-related claims processing," the company said.



The Purfresh system proved effective in preventing premature ripening and mould formation in a trial shipment of nectarines from California to Taiwan



"As the global food supply chain comes under new pressures from international and domestic regulations, shippers and retailers alike are searching for simple, cost-effective methods to ensure safety and maintain quality of fresh perishables during transport," said David Cope, president and CEO of Purfresh. "The science behind our transport solution is designed to help ensure safe transit over long distances, sustain and increase revenue from each container and support the growing demand for reduced chemical usage in processing and shipping."

According to Purfresh, the global market for stone fruit has grown steadily for the past five years, with production increasing by 6% in 2008 over the previous year. Despite market growth, the industry continues to be plagued by losses of 10-30% due to ripening and turning in transit.

Importers and exporters have traditionally turned to CA technologies and fungicide treatments to maintain the quality of stone fruit during transport. CA technology has been shown to slow respiration, Purfresh says, but the science does little to prevent decay. Alternatively, fungicides can be effective in combating moulds, but they leave residues on the fruit that are undesirable to consumers and resistance to such treatments is increasing.

The "plug-and-play" Purfresh Transport technology, which can integrate with any standard reefer container, is based on active atmosphere technology that delivers continuous, low concentration doses of gaseous ozone into refrigerated containers to provide the unique combination of ripening control, decay prevention and enhanced food safety. The ozone then reverts back to pure oxygen, leaving behind no residue.

To manage the container's atmosphere throughout the voyage, Purfresh Transport actively monitors and adjusts to changes in the organic load of the cargo from causes such as microbial load, VOCs, and ethylene levels, as well as changes in environmental conditions, such as temperature and relative humidity.

"Purfresh Transport delivers a long anticipated remedy to some of the most daunting challenges facing the produce shipping industry," said Vince Balakian, owner of Fruit Patch Sales LLC, in Dinuba, California "Nectarines are particularly delicate commodities, sensitive to temperature, decay and many other variables that plague stone fruit transit. The Purfresh system enhances our control, simplifies logistics and preserves our premium quality shipments."

The Purfresh Transport system is available for use on new or existing reefer containers and is offered to shippers as a premium, per-trip surcharge. ❑