



STONE FRUIT

THE CHALLENGES OF TRANSPORTING STONE FRUIT

Stone fruit is a very valuable and sensitive commodity that is subject to gray mold (*Botrytis*), Rhizopus rot, and internal breakdown from the moment it is harvested. Estimates for post-harvest losses run as high as 10%–30% annually. To maintain fruit quality during transport, gas-injection controlled atmosphere (CA) technologies and fungicide treatments have been employed. Traditional CA methods slow respiration, but they do little to prevent decay. Alternatively, fungicides can be effective in combating molds, but they leave residues on the fruit that are undesirable to consumers, and resistance is increasing to such treatments. These shortcomings—combined with extended time to market and consumer demands for safe, chemical-free perishables—have prompted the industry to seek alternatives for maintaining fruit quality when leveraging ocean transportation.



THE VALUE OF PURFRESH TRANSPORT

Consistently outperforming alternatives in side-by-side comparisons, Purfresh® Transport promotes higher-quality arrivals by maintaining freshness and extending the shelf life of conventional and organic produce during ocean transport. Engineered as an active cargo protection system, Purfresh delivers where traditional atmosphere management systems and antimicrobials fall short by actively monitoring and managing the environment inside the reefer container throughout the voyage. Offering the unparalleled combination of superior ripening control with 100% residue-free decay prevention and enhanced food safety, Purfresh Transport is an ideal solution for shipping decay-prone or ethylene-sensitive produce. With Purfresh Transport, the value adds up quickly:

- Prolonging shelf life increases value for the consignee as well as the retailer.
- Minimizing waste increases returns and reduces claims processing costs.
- Maintaining freshness over longer distances enables the use of ocean transport to reach and develop new markets.

HIGHLIGHTS

Maintains post-harvest freshness, taste, firmness, and smell

Extends shelf life

Controls ripening by consuming and regulating ethylene

Controls *Botrytis* and Rhizopus rot

- Kills surface and airborne microorganisms
- Stops nesting
- Shuts down sporulation
- Leaves no residue

Oxidizes airborne and surface bacteria and viruses

Outperforms CA and MA

USDA and FDA approved

Certified organic

Meets directives to reduce chemical residues

Enhances food safety

Available on-trip load monitoring

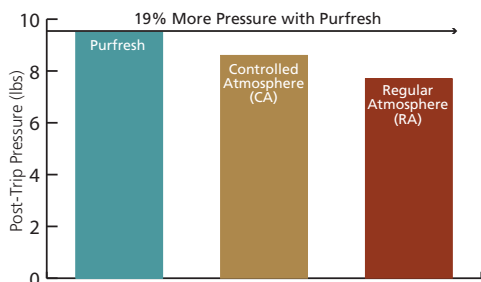
The Value Adds Up



- Ripening Control
- Reduced Waste
- Increased Shelf Life
- Avoided Claims Processing
- Reduced Grade Degradation
- Reduced Repack
- Increased Marketability

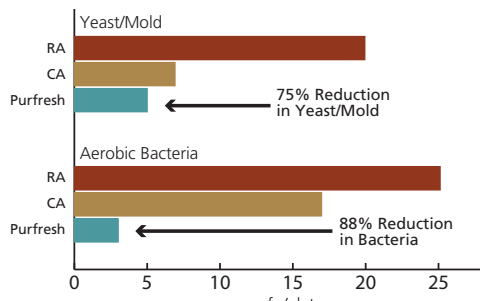
INCREASED VALUE \$\$

FRUIT FIRMNESS



Source: Customer nectarine shipment from California to Taiwan, 2008.

MICROBIAL POPULATIONS IN STONE FRUIT DURING TRANSPORT

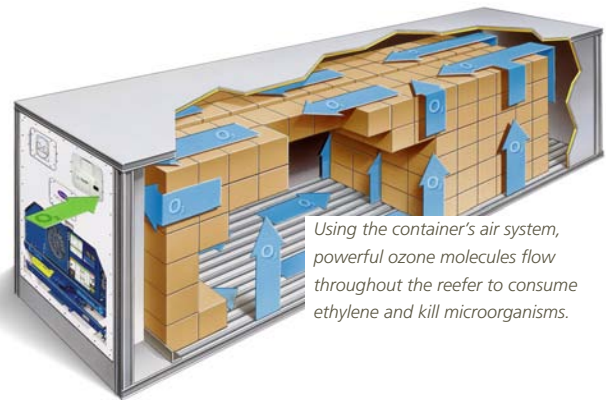
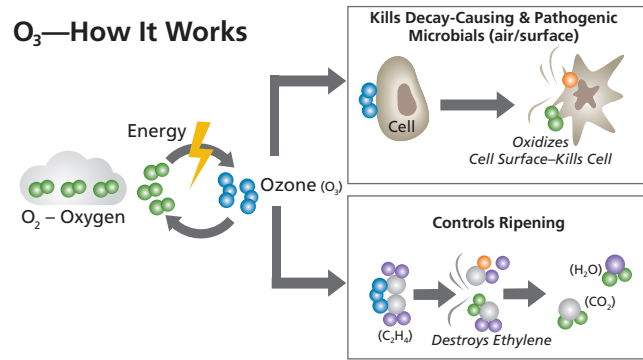




HOW DOES IT WORK?

Purfresh Transport—scientifically engineered as an active cargo protection system—is the only solution proven effective to control ripening, reduce decay, and enhance food safety without the use of chemicals. Its patent-pending technology uses an active form of oxygen—commonly referred to as ozone—to kill molds, yeasts, bacteria, and viruses in the air and on surfaces, as well as to consume and regulate ethylene levels. Certified organic and approved by the USDA and FDA, ozone acts as a powerful, residue-free disinfectant that immediately reverts back to oxygen, leaving the product’s taste, texture, and smell characteristics in their natural state.

To maximize efficacy, the Purfresh technology easily integrates with the container’s refrigeration unit to precisely control and evenly distribute the ozone molecules throughout the cargo. In addition, the system actively monitors and adjusts the ozone levels throughout the voyage based on changes in the condition of the cargo or the atmosphere. Proven and cost-effective, Purfresh Transport delivers what no other solution can—a chemical-free approach to extending shelf life, minimizing waste, and maintaining the quality of fresh produce during long-range ocean transport.



COMPARE THE VALUE FOR STONE FRUIT

	PURFRESH TRANSPORT	OTHER APPROACHES
REDUCES DECAY/KILLS BACTERIA, YEASTS, & MOLDS	Yes	No
CONTROLS RIPENING	Yes	Yes
KILLS MICROBIAL POPULATIONS TO ENHANCE FOOD SAFETY	Yes	No
DISINFECTS CONTAINER (MICROBES & ODOR)	Yes	No
CONTAINER AVAILABILITY	Works with new and old containers	Require leakproof containers, which have limited availability

Purfresh, Inc.
47211 Bayside Parkway
Fremont, CA 94538

877-668-0303 (toll free U.S.)
510-580-0700 (main)
510-580-0701 (fax)

www.purfresh.com
info@purfresh.com

