

Subject: NEWS BULLETIN FROM PEAKfreshUSA

In September 2012, PEAKfresh®USA conducted a study engaging the Horticulture and Crop Science Department at Cal Poly State University, San Luis Obispo and the U.S. Department of Agriculture "USDA". The study entitled "Comparison of the Efficacy of the PEAKfresh® and Tectrol® Systems for Maintaining Strawberry Quality" and USDA Inspection Certificates for Commercially accepted standards for grading of fresh produce.

Seven (7) Pallets of Tectrol® and seven (7) pallets of PEAKfresh® randomly placed in a freight trailer shipped from Castroville, CA to The NYC Produce Terminal at Hunts Point in, in the Bronx and the results are the following:

v "Berries in the PEAKfresh® treated pallets had a lower average temperature during shipment than the Tectrol® treated pallets, contrary to findings performed of an Independent study in 2009 by the University of California, Davis and the University of Florida".

v. "Berries in the Tectrol® after transport, none of the 7 Tectrol® treated pallets had maintained a modified atmosphere and carbon dioxide levels had reduced to an average of 0.77%". When initially tested prior to shipping the Tectrol® treated pallets contained an average of 12.80% therefore concluding that CO₂ levels were less at arrival. The CO₂ and O₂ method used to measure were small Illinois Instruments (Johnsburg, IL) with self sticking package septa placed on 3 levels of each pallet.

v. Berries in PEAKfresh® and the Tectrol® treated pallets "Analyses of color (*L, *a, *b values) and weight (as both absolute loss and percentage loss) could not detect any differences (at the 1% significance level) between the berries shipped with the Tectrol® or PEAKfresh® systems"

v. "Berries in the PEAKfresh® treated pallets became softer on average than the berries in the Tectrol® treated pallets during cross country shipment. There is not a definitive answer as to why the berries treated with Peakfresh® became softer. The **Cal Poly team did not take pulp temperatures prior to conducting firmness testing and did not measure decay levels during the final analysis at the NYC Produce Terminal at Hunts Point in the Bronx.** Ambient temperatures confirmed by Paksense temperature monitors and test witnesses confirm that the Tectrol® treated berries were tested at lower temperatures and approximately 4 hours prior than the PEAKfresh® treated berries. Pulp temperatures should have been taken prior to firmness testing at destination to establish a baseline for each treatment. It is believed that higher pulp temperatures will effect firmness measurements.
<http://www.tandfonline.com/doi/abs/10.1080/090647102320260035> Further testing will need to be done to reach a definitive conclusion.

The USDA inspection certificates did not coincide with the Cal Poly finding regarding firmness. The USDA did record pulp temperatures in Castroville, CA. prior to shipping and also at Hunts Point in the Bronx. Berries were maintained at the same temperature in the same room when tests were conducted in Castroville. The USDA inspector inspected product at time of arrival at Hunts Point. Pulp temperatures at time of USDA were recorded.

The USDA inspection certificates results concluded that both pallet systems performed the same during cross country shipping however, the berries in the PEAKfresh® pallet system Grading: MEETS U.S. NO. 1. while the Tectrol® treated: FAILS TO GRADE U.S. NO. 1 ACCOUNT CONDITION, (DECAY), IN A FEW SAMPLES

This study enforces that PEAKfresh's objective is to demonstrate that our system for prolonging shelf-life and ensuring that fruits and vegetables arrive to market safe and fresh is equally efficacious as the leading 40 plus year old CO₂ brand that employs use of CO₂.

We further believe that our system has advantages that growers, shippers and receivers of fresh produce should be aware of:

** Non sealed gas-free system provides energy savings - no special equipment required for installation, fewer employees and less time for installation.*

**Our Pallet Cover system design is superior to sealed-system alternatives because it wicks moisture to the floor when product is exposed to every day lapses in the cold chain.*

** Responsible and recyclable Unsealed MAP solution to prolong shelf life.*

This study together with the USDA Inspection Certificates can be found on our website: Direct link: http://peakfreshusa.com/en/wp-content/uploads/2013/04/PeakFreshReport3_7-final-2..pdf

Feel free to call Greg Ganzerla direct for any questions. Toll free: 877-537-3748

1Comparison of the Efficacy of the PEAKfresh® and Tectrol® Systems for Maintaining Strawberry Quality.

Dr. J. Wyatt Brown,¹ Dr. John H. Walker,² Jim Green¹ and Andrew Kok¹
Cal Poly State University, September 2012

2Comparison of Pallet Cover Systems to Maintain Strawberry Fruit Quality During Transport, HortTechnology, August 2012, pp.493 & 499

Ganzerla & Associates, Inc. dba PEAKfreshUSA is a corporation organized existing under the laws of the State of California, headquartered at 26786 Vista Terrace, Lake Forest, CA 92630 USA. PRIVATE COMMUNICATION: This message may contain confidential information intended only for the use of the addressee named above. If you are not the intended recipient of this message you are hereby notified that any use, dissemination, distribution or reproduction of this message is prohibited. If you receive this message in error please notify sender immediately.