IDENTIFYING AND RECTIFYING COMPLACENCY IN THE SOUTH AFRICAN AVOCADO COLD CHAIN

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The South African Avocado industry is facing ever increasing competition in its current markets. Increasing quality expectations along with flat prices and volatile currency exchange rates drive the profitability equation downwards. In order to try and reduce costs without compromising quality, an in depth analysis was conducted on the cold chain to see where there were challenges. This commenced at the pack-house and extended through the pre-cooling operation, consolidation, road transport loading and unloading, to the point of loading into the shipping containers. No analysis was conducted into the links of the cold chain en route to market (during the sea voyage and beyond). The analysis showed that in many links of the cold chain the fruit is subject to temperature abuse. This takes the form of the fruit on occasion being pre-cooled to pulp temperatures lower than the stipulated set point. This can only occur when the delivery air temperature in the pre-cooling store is set excessively low in an attempt to cool the fruit quickly in order to free up the space for further intakes. In many other cases the fruit pulp temperature is several degrees above set point due to insufficient time spent in the pre-cooler or poor pre-cooling protocols.

Then the loading of the fruit into refrigerated road trailers at temperatures above and below set point is made. The road trailers are unable to maintain the fruit at set point and there is invariably an up to 2°C increase in fruit pulp temperature during the 40 hour road trip to the port. These conditions result in the need to pre-cool the fruit in the port before loading into containers. All the above lead to the industry resorting to expensive technology such as controlled atmosphere to maintain fruit firmness during the sea voyage. The analysis shows that there is opportunity to tighten up the cold chain with concomitant benefits to quality and reduction in input costs.