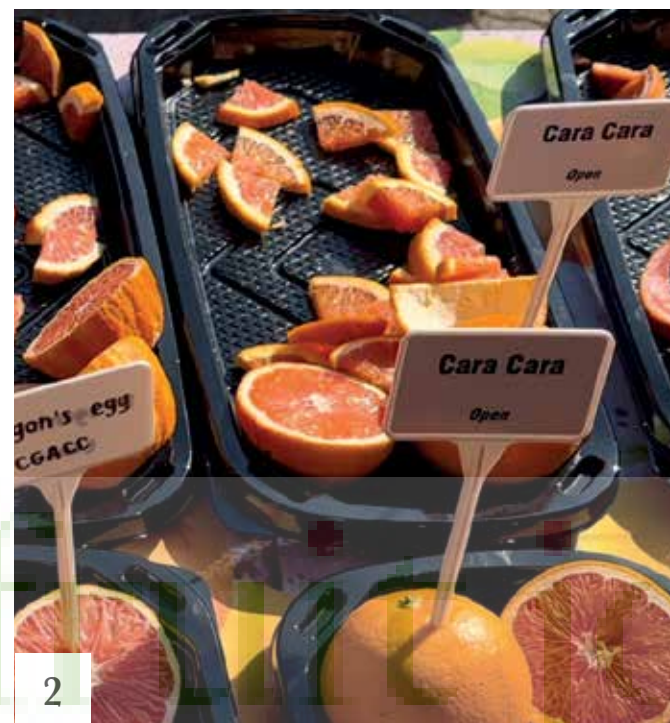




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Red, ripe and sweet fruit

At the time of writing, the main citrus producing area of Turkey had just been hit by a devastating earthquake, with a series of massive aftershocks. By Jon Roberts



Jon Roberts



Suddenly, our own challenges pale in comparison to the aftermath of the deadly earthquake in Turkey. Our thoughts and prayers go out to the citrus community and organisers in Turkey who hosted the South African delegation at the International Citrus Conference.

Good news and encouraging signs seem to be running against the wind in our current turbulent world, but sometimes positive things are right before our eyes and come from unexpected sources.

Being part of an industry that is looking for the “new” thing in terms of cultivars, I was taking stock of all the recent exposure to cultivar information from the CRI Citrus Symposium and the International Citrus Conference. Visual footage of the CRI Symposium fruit display and tasting shows distinct partiality: orange-pigmented citrus samples (including Valencias and Navels) had been left untouched, while their red-pigmented counterparts proved very popular

amongst tasters. The same applied to most red-pigmented whole fruit samples.

This was especially interesting in that the orange-coloured cultivars – including Mandarins and oranges – had far more cultivar varieties on offer. A current census of plantings reflects this as well, with the vast majority of oranges and Mandarins planted being orange pigmented. Bear in mind, the majority of citrus being planted by farmers is orange pigmented, while the majority of citrus they were tasting in a cultivar fruit display was red pigmented. And when comparisons were made to photos taken of previous fruit displays, a similar pattern was found.

So, was it the colour, flavour, curiosity or were the farmers bored of orange-pigmented varieties? Without comment sheets to analyse this more accurately, it's not possible to be a 100% sure.

However, research by Spence C. et al., (On tasty colours and colourful tastes. Assessing, explaining, and utilising cross-modal correspondences between colours and basic tastes.) shows that red is associated with sweetness. Their research suggests that there is an “association of green and red to sour and sweet,

respectively, that comes from our brains having picked up on the environmental regularity that many fruits do indeed transition from green – unripe and sour – through to ripe, red, and sweet”.

This ties up with the preference of citrus industry participants at the CRI Symposium certainly being more interested in tasting red-pigmented fruit. So, is there an anomaly here? If farmers themselves are more interested in eating red-pigmented fruit, should they not be thinking of planting more for the consumer? Are we too set in our ways that oranges can only be orange?

It is certainly something that will be evaluated in consumer trials with our cultivars this season.

The author recalled during a fruit display in South Korea in 2015 at the South Korean Citrus Festival – just after South Africa was allowed to start selling grapefruit there – that he was cutting fruit for public tasting with Paul Hardman of the CGA. They had Midnight Valencia and Star Ruby grapefruit, which were kindly donated by Komati Fruits. Interestingly, there was not much demand for the orange-pigmented Valencia. Star Ruby grapefruit, on the other

hand (a new introduction), was a whole different story. With the South African citrus stand being the most popular, the moms and kids could not get enough. A plant breeder from Florida, Dr Fred Gmitter, who bred Florida 914, [a sweet Star Ruby hybrid that Citrus Growers' Association Cultivar Company (CGACC) has imported to SA], was observing the cutting for tasting. In his great New Jersey accent, he commented, laughing, that we would need a lot more hands and a bigger knife if we were cutting up 914, and I believe he was right. If the grapefruit was sweet, we would have been swamped even more. As it was, we cut half a tonne in two days, our little kitchen paring knife broke under the pressure and Paul had to go shopping for another, while I continued cutting for the growing queue with the broken one. It was clear that red-pigmented fruit attracted the most interest

1. Jon Roberts in Korea cutting Star Ruby 2. Red pigmented cultivars 3. Red lina cultivar compared to Palmer

there, which happens to be a focus of their breeding programme in South Korea now.

It's important to test whether there is sustained demand or merely a fad. A recurring theme every year in the many television versions of Master Chef is for contestants to prove to the judges that a new food type may be different, “but is it better”?

Previous articles have focused on the health benefits of red-pigmented varieties having a higher percentage of antioxidants, as well as the health advantages of the Florida 914 Star Ruby hybrid that is not only sweeter but safer, with near undetectable amounts of furanocoumarin that makes it safe to eat with medications such as Statins for cholesterol. So, there is quite a good argument for cultivars that are not only new and distinct, but also visually appealing to the consumer, tastes better and is nutritious.

Though, this does not mean that red fruit will replace the more common orange-pigmented cultivars. However, there is undeniably a significant increase of interest in red-pigmented cultivars from the consumer and farmers alike. To consider planting some red-pigmented cultivars to diversify a producer's offering, especially where a flattening demand is seen for many of the older mainstream orange-pigmented cultivars, might be something to look at.

The CGACC has a range of early to late red-pigmented cultivars entering evaluation and some being released commercially. 

If farmers themselves are more interested in eating red-pigmented fruit, should they not be planting more for the consumer?