

Taste testing and consumer preferences for mango cultivars: a panel analysis

J. Calatrava-Requena, M.C. González-Roa, E. Guirado-Sánchez

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Abstract

Mango surface has been increasing in the coastal area of southeastern main-land Spain, from the pioneering orchards in the eighties to the current surface of about 3,300 ha. At the beginning different cultivars were introduced, namely: 'Sensation', 'Zill', 'Irwin', 'Tolbert', 'Tommy Atkins', 'Osteen', 'Lippens', 'Carmen', 'Otts', 'Manzanillo Núñez', 'Keitt', etc. and the initial production of these cultivars were consumed mainly for high income niche of the Spanish domestic market. Some export initiatives had also started. Test tasting made in 1989: 1991, 1992 and later in 1995 reduced a lot the target cultivars according to current domestic consumer preferences. Nowadays most (75%) of the mango trees growing up in the south east of Spain are 'Osteen' (early-mid season) and 15% are 'Keitt' (late season); the rest (10%) are of various cultivars being 'Kent' and the 'T. Atkins' the two more important. Looking for substitutive to 'Osteen' could help to diversify the supply for both domestic and export market. The paper shows results from two taste testing analysis performed with consumer panels in October 2007 and October 2009 comparing consumer preferences for 'Kent', 'Osteen' and 'Ataulfo'. Tests include tasting preferences and comparison with other fruits. In some cases (panel 2009), due to adequate fruit availability, two different fruits with different degree of maturity have been considered for 'Osteen' and 'Kent', namely: fruit at stage H (mature enough for consumption but firm enough to resist finger pressure), and fruit a stage S (slightly softer than H, just when it starts to soften under finger pressure). Panel tasting test shows a clear preference for 'Kent' at stage S, followed by 'Ataulfo' and 'Kent' H. Other results concerning relative flavor similarities and mango preferences with respect to other fruits competing with mango in the market place have also been achieved.