

Quality of cherry 'Sweetheart' from different regions of Portugal and Spain: Cova da Beira, Portalegre and Valle del Jerte

A.C. Agulheiro-Santos¹, A.E. Rato¹, C. Miguel-Pintado², P. Antunes², M. Resende², B. Velardo Micharet³, I.Tapia García³, M.Concepción Ayuso Yuste⁴, M.J. Bernalte García⁴

1. Universidade de Évora, Instituto de Ciências Agrárias e Ambientais Mediterrânicas (ICAAM), Escola de Ciências e Tecnologia 7000 Évora, Portugal
2. Centro de Apoio Tecnológico Agro Alimentar (INTAA) . Zona Industrial de Castelo Branco, Rua A, 6000 – 459 Castelo Branco, Portugal.
3. Technological Institute of Food and Agriculture (INTAEX), Avd. Adolfo Suárez s/n 06007, Badajoz, Spain
4. Agriculture Engineering School, University of Extremadura, Avd. Adolfo Suárez s/n. 06007 Badajoz, Spain.

Abstract

Sweet cherries (*Prunus avium* L.) 'Sweetheart' were harvested at different production regions from Portugal (Cova da Beira and Portalegre) and Spain (Valle de Jerte). Cherries were harvested at their commercial maturation according to the empirical knowledge of external color corresponding to good quality. Fruits were stored and evaluated in order to study their quality on the harvest day and during a period of 21 days, at cold storage (1 °C, 95% RH). The sweet cherry 'Sweetheart' is a well known variety and a highly appreciated one but fruits present a short shelf life. On the other hand the effect of different "terroir" on cherry characteristics should be known and clarified. Fruits from day 0, considered without storage, were kept at 20°C and analyzed. Every week, 3 replicas were randomly picked up and 10 fruits from each one were submitted to several analyses after fruit temperature stabilized at 20°C. Several quality parameters were evaluated: external color (L*, a*, b*), texture, soluble solids content (SSC), titratable acidity (TA) and the ratio between soluble solid contents (SSC) and Titratable acidity (TA). Fruits from different orchards and locations were significantly different according to these parameters. Fruits from Cova da Beira were less firm comparing with other two regions, Valle de Jerte and Portalegre, which may indicate a higher maturation rate at harvest in those fruits. This is in accordance with SSC/titratable acidity rate suggesting a late harvest in Cova da Beira comparing with other two orchards, however fruits from Cova da Beira exhibit a poor color at harvest. These results clearly showed a lower correlation between SSC and firmness considering fruits origin.

Material

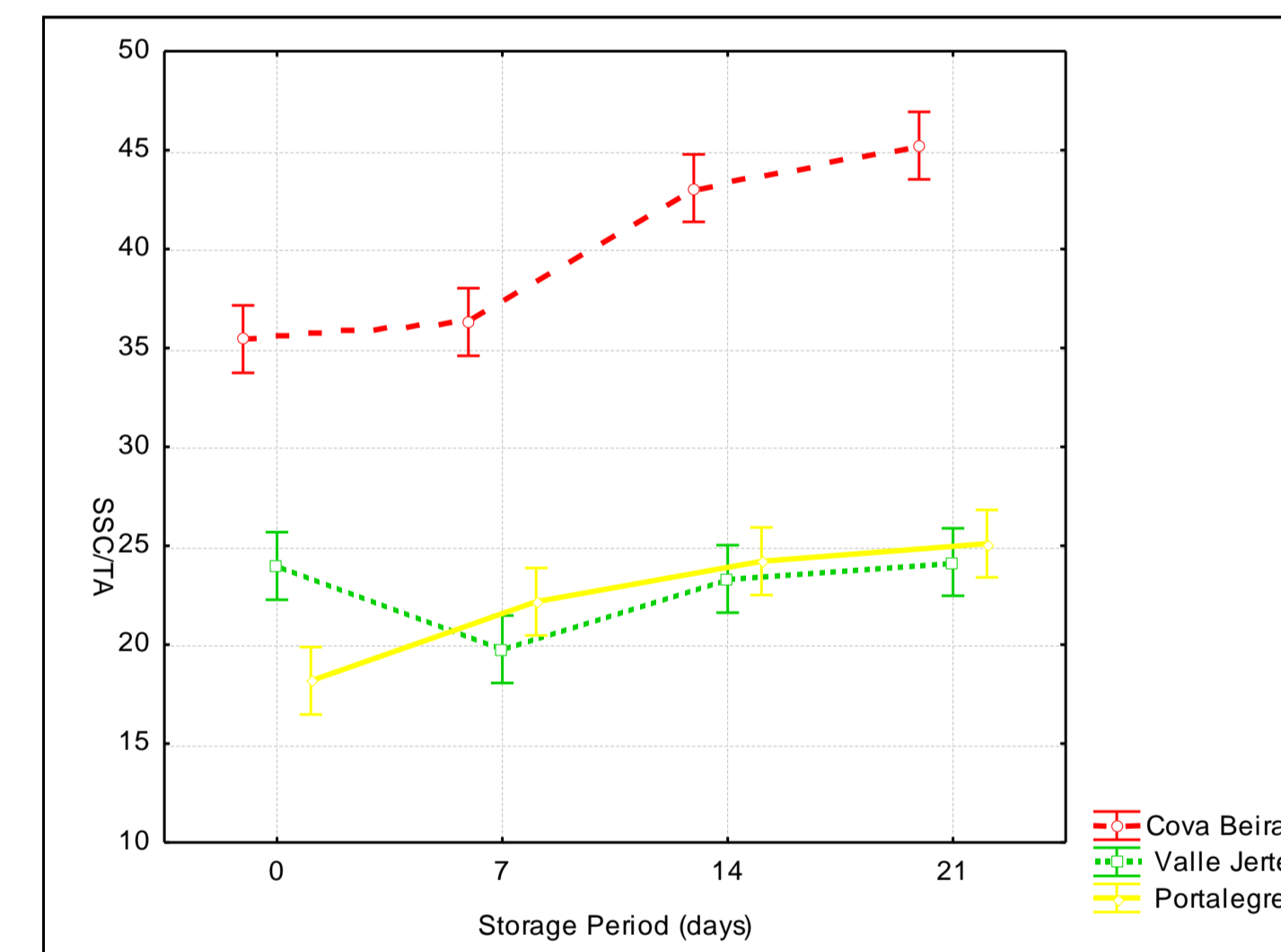
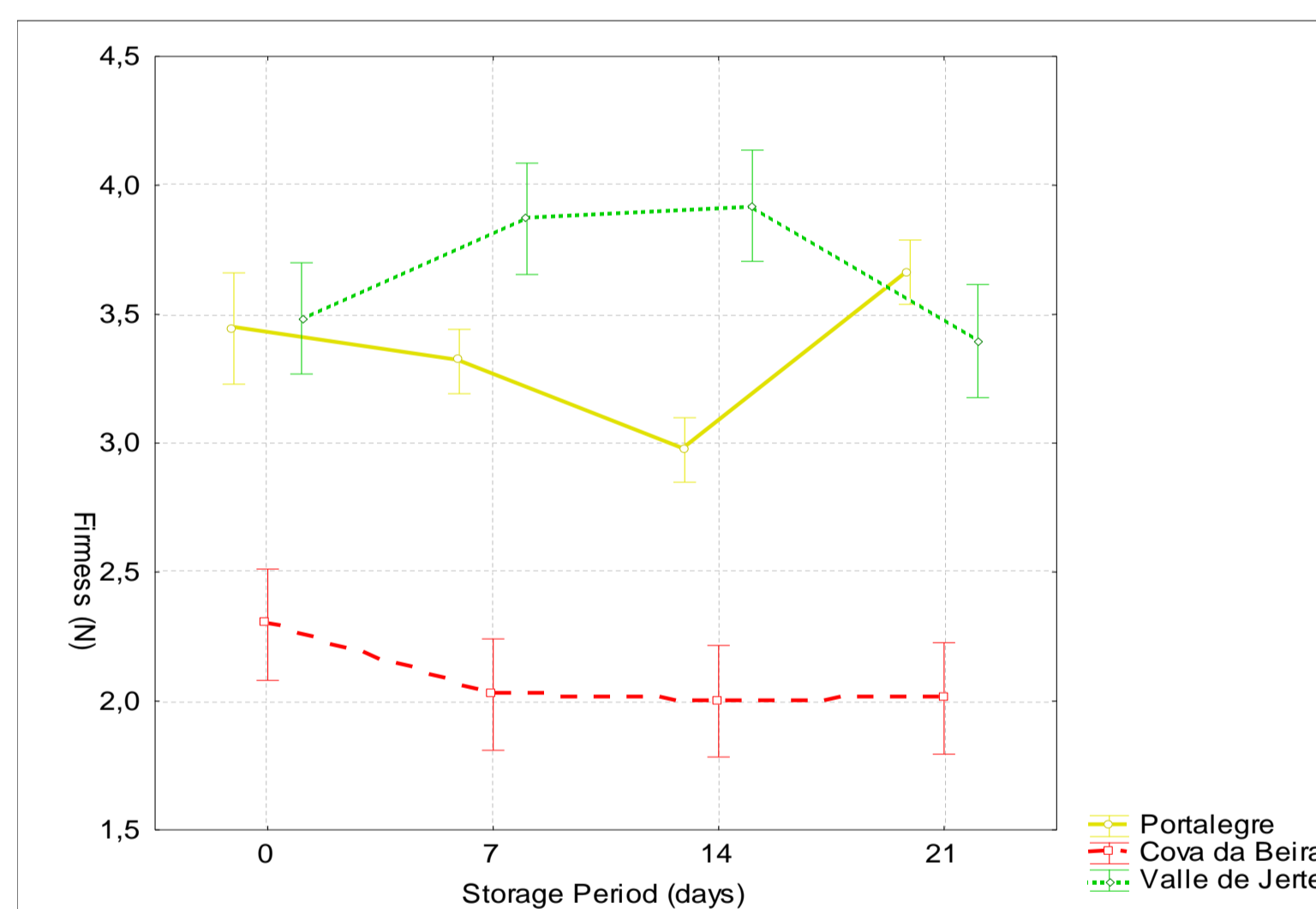
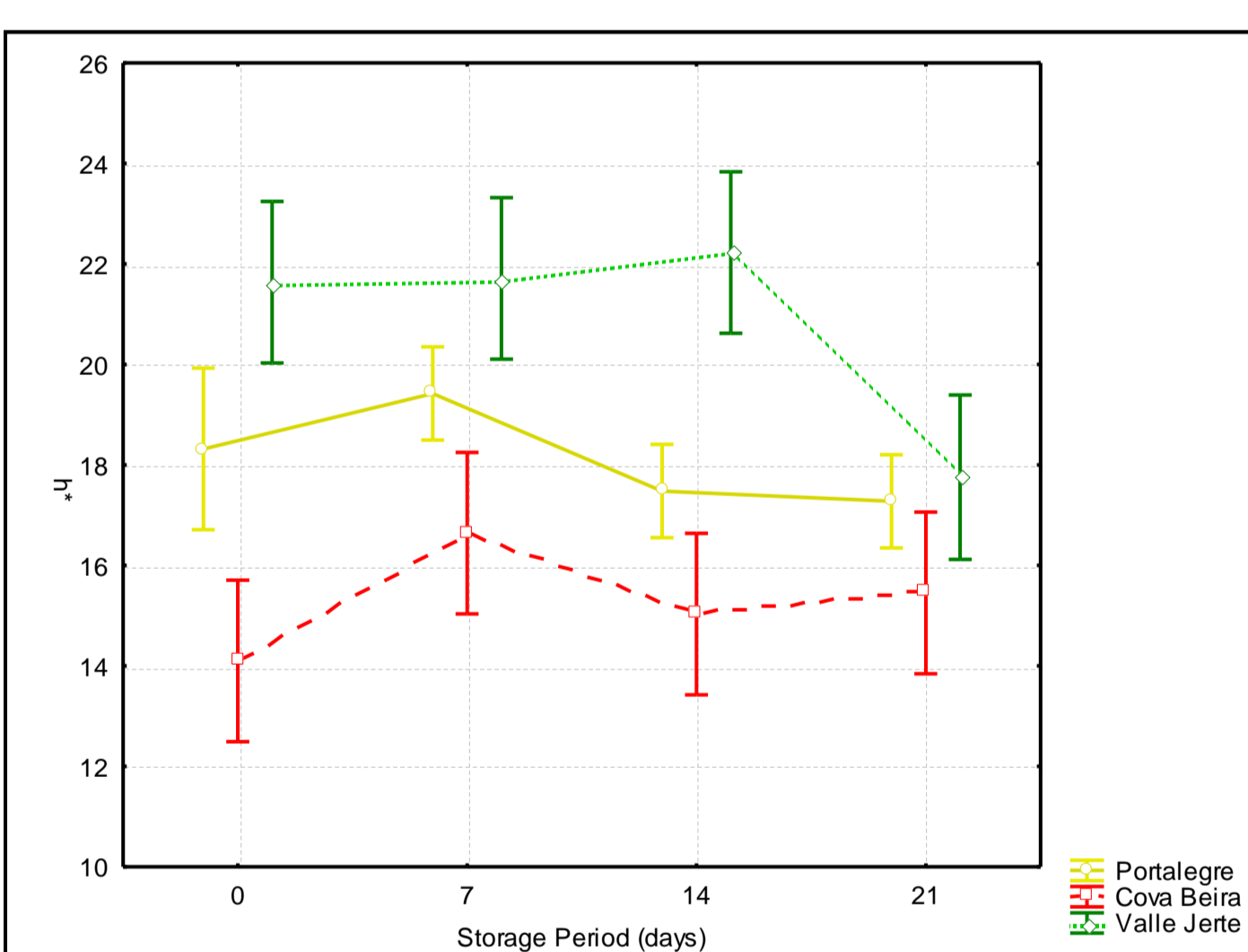


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| | Cova da Beira (Portugal) is a region that has the IGP1 "Cereja da Cova da Beira", which management is done by Agricultural Cooperative Fruit Growers Cova da Beira, CRL (Cooperativa Agrícola de Fruticultores da Cova da Beira, CRL) and he Private Office of Testing and Certification is CERCOBE (Organismo Privado de Controlo e Certificação é a CERCOBE). This year (2012) the volume of cherry received by the cooperative, was 370.43 tons, the maximum of the recent history of Cerfundão. |
| | In Alentejo (Portugal), the cherry has "DOP2 -" Cereja de S. Julião – Portalegre" and the management of that is done by APAFNA - Grouping of Agricultural Producers and Forest Northern Alentejo (Agrupamento de Produtores Agrícolas e Florestais do Norte Alentejano) and the Private Office of Testing and Certification is the AADP. The producers are old and the properties very small. |
| | Protected Designation of Origin (DOP) "Cereza del Jerte", geographical area of production is north of the Cañares (Spain), fundamentally in the valle of the river Jerte. The main varieties are 'Ambrunés', 'Pico Negro', 'Pico Limón Negro' and 'Pico Colorado' corresponding to cherries without peduncle generically known as "Picotas". Another variety with peduncle produced at that region is 'Navalinda'. In the year of 2010 the area for cherry production was 10600 ha and the production 28000 tons. |

Objectives

The sweet cherry 'Sweetheart' presented a short shelf life but is highly appreciated by consumers and the effect of different "terroir" on their characteristics should be known and clarified. The aim of this work was to study the effect of origin on quality and maintenance of the properties of 'Sweetheart' sweet cherry cultivar, harvested in the above cited production regions during refrigerated storage.

Results



Discussion

Postposition questions for the mature evaluation at harvest :

Are these cherries (from Cova da Beira) with higher values of SSC more mature? Or can we consider the hypothesis that different weather conditions and agronomical practices can really induced an increase in the solid soluble content in less mature fruits? It was clear that cherries harvested in these three different regions are distinct at harvest day. However color measurements in fruits from Cova da Beira were unexpectedly less colored. It should be emphasized that cherries were harvested when producers considered them on their commercial ripe stage, using fruit color as the maturity index.

Whatever are the answers to these questions the truth is that maybe external color is not a very trustful mature index parameter by itself. It should be studied prior to harvest decision for different conditions and, if possible, corroborated with values of SSC.

Final statement

In different production regions even for the same variety it should be defined the standard colour for an adequate definition of commercial maturity.

Acknowledgments

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