

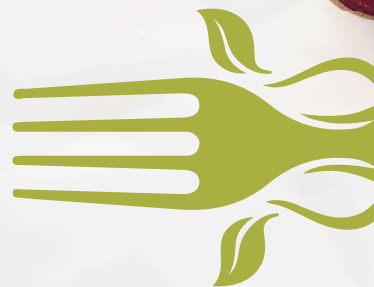


CONGRESS FARM TO FORK

Our food, our health, our future

16-17-18 NOV 23

CINE-TEATRO AVENIDA
CASTELO BRANCO, PORTUGAL



FARM TO FORK STRATEGY

SOIL AND PLANT HEALTH

SEEDS FOR THE FUTURE

ECOSYSTEM SERVICES

FOOD LOSS AND WASTE

URBAN FOOD SYSTEMS

FOOD INNOVATION

FOOD MATRICES

FOOD AND HEALTH

GUT MICROBIOTA



SCAN ME

**NATIONAL AND
EUROPEAN FUNDING**

**OPENING SESSION BY
FOOD AND AGRICULTURE
ORGANIZATION OF THE
UNITED NATIONS (FAO)**

EVENT IN PT/EN

ORGANIZED BY:



OFFICIALLY SUPPORTED BY:



Com o Alto Patrocínio
de Sua Excelência
Under the High Patronage of the
President of the Portuguese Republic



O Presidente da República



CONGRESS FARM TO FORK

Our food, our health, our future

ABSTRACT IV.6

PHYSICO-CHEMICAL AND NUTRITIONAL CHARACTERIZATION OF QUINCE (*CYDONIA OBLONGA*) FROM THE COVA DA BEIRA REGION

VASCONCELOS, V.¹; PAULO, L.¹; LOPES, G.²; MOTA, M.³; BEATO, H.⁴; MARTINS, A.¹; CAMELO, A.¹; RODRIGUES, A.¹; PÍTACAS, I.⁵; RODRIGUES, A.^{1,6}; RESENDE, M.⁷; CRISTÓVÃO, M.¹; ESPÍRITO SANTO, C.^{1,6*}

¹ CATAA - ASSOCIAÇÃO CENTRO DE APOIO TECNOLÓGICO AGRO-ALIMENTAR DE CASTELO BRANCO, CASTELO BRANCO, PORTUGAL

² ESCOLA SUPERIOR AGRÁRIA DO INSTITUTO POLITÉCNICO DE CASTELO BRANCO, CASTELO BRANCO, PORTUGAL

³ CERNAS-IPCB, CASTELO BRANCO, CASTELO BRANCO, PORTUGAL

⁴ CFE - CENTRO DE ECOLOGIA FUNCIONAL, DEPARTAMENTO DE CIÊNCIAS DA VIDA, UNIVERSIDADE DE COIMBRA, PORTUGAL

*E-MAIL: CESPIR@TOSANTO@CATAA.PT

Quince (*Cydonia oblonga*) is a fruit from autumn season, which is composed of 91% pulp, 5% seeds, and 4% peel (Veloso et al. 2020). The quince pulp is yellowish, hard, acidic and astringent, consequently, it is not normally consumed fresh. Therefore, it is commonly used in the preparation of jams and jellies (Regato et al. 2017). Consumption of quince provides health benefits due to its nutritional characteristics, for example, quince is rich in phenolic compounds, which have antioxidant, anti-inflammatory, antimicrobial, anti-ulcerative and anti-carcinogenic properties (Zhang et al. 2019). Despite the health benefits of consuming quince and the ease of growing the quince tree, which is resistant to adverse weather conditions; quince production is often neglected and undervalued. To valorise quince from Portugal, the physicochemical and nutritional properties of four varieties of quince (Maçã, Pêra, Portugal and Galega) from Cova da Beira region were studied.

Regarding the quality/physical-chemistry, weight, size, colour ($L^*a^*b^*$), texture, total soluble solids (TSS), pH and acidity were determined. Considering nutritional analysis, moisture, protein, fat, ash, fibre, sugars, and minerals were evaluated. In general, quinces from Cova da Beira are mainly composed of water (average value 78.5 g/100g-1) and sugar (average value 8.6 g/100g-1). Fructose is the major sugar followed by glucose and sucrose. The sweetest variety was Galega (18,8 °Brix). Portugal variety stands out for the highest amount of potassium (227.4 mg/100g-1) and the brightest skin ($L = 75.8$). Maçã variety presented the highest size (80.6 mm), weight (277.8 g) and the highest values for texture parameters. The variability in the characterization data of quince varieties can be explored to develop new products, which can result in the valorisation of the resource and, consequently may encourage quince cultivation in Portugal.

ACKNOWLEDGMENTS:

This work was funded by National Funds in the scope of CULTIVAR project (CENTRO=0349FEDEF=000020).

REFERENCES:

- Regato, M. D., Guerreiro, I. M. & Regato, J. M. (2017). A cultura do marmeleiro no Alentejo. *Voz do Campo*, 203.
- Veloso, A., Sousa, R. & Semperheira, C. (2020). Mineral composition of the fruits of five quince cultivars in the Portuguese region of Alentejo. *Revista de Ciências Agrárias (Portugal)*, 43 (2), 220-230. <http://dx.doi.org/10.19084/rica.20025>
- Zhang, M., Wang, Z., Mao, Y., Hu, Y., Yang, L., Wang, Y., Zhang, L. & Shen, X. (2019). Effects of quince pollen pollination on fruit qualities and phenolic substance contents of apples. *Scientia Horticulturae*, 256, 108628. <https://doi.org/10.1016/j.scienta.2019.106928>