



INNOVATION DRIVEN AGRIFOOD BUSINESS

Abstract Book

21 MARÇO 2023
Centro de Congressos
Super Bock Arena
Porto-Portugal



Colaborado por



Nutritional characteristics and minerals of Lardosa cowpea landraces: a strategic legume species for the future

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Cowpeas have been cultivated at least since the 8th century BC. [1; 2]. This grain legume (*Vigna unguiculata* L. Walp.), one of Africa's natural food gifts to the world, is characterized by its high nutritional value, ability to fix nitrogen and great tolerance to drought. The tolerance of this legume to low fertility soils, high temperatures and scarce water regimes makes this one of the most resistant crops to adverse edaphoclimatic conditions. It is certainly a very important culture in southern European countries like Portugal.

For this study, three types of cowpea landraces, “black face”, “green face” and “rice” were analysed. Coming from the region of Lardosa, a parish in the municipality of Castelo Branco, these beans are used for both human and animal consumption. Cowpeas, cooked in boiling water, were nutritionally characterized. Besides, the minerals were determined in cowpea grains, in the soaking water and in their cooking water. Sodium, copper, iron, manganese, zinc, phosphorus, calcium, magnesium and potassium were measured.

Overall, the Lardosa cowpea grains ranged between 63.8 - 66.1% moisture, 1.47 - 2.45% fibre, 8.22 - 9.46% protein, 0.69 - 0.78% ash and 22.43 - 22.95% carbohydrates. Energy values varied from 571 kJ (134 kcal) to 599 kJ (141 kcal) per 100 g. The pH and acidity range of values were 7.16 - 7.25 and 0.95 - 1.02 mEq/100 g of sample, respectively.

The performed analysis showed the nutritional potential of the three cowpea landraces, contributing to a greater knowledge of these agro-food resources that will probably become one of the foods to take into account in the near future, given their capacity to thrive in the face of climate changes.

Acknowledgments: Cultivar-Rede de competências para o desenvolvimento sustentável e inovação no setor Agroalimentar (CENTRO-01-0145-FEDER-000020).

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