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Baru almonds from different regions of the Brazilian Savanna: Implications on physical and nutritional characteristics

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ABSTRACT

While some reports show that physical characteristics of the baru fruits (*Dipteryx alata* Vog.) differ within and among the Brazilian Savanna regions, a study shows that there are differences in the nutritional composition of baru almonds from different trees from the same Savanna area. It is unknown, however, whether the Savanna ' s region influences the nutritional quality of this native almond. Thus, we evaluated the influence of East, Southeast and West regions of the Brazilian Savanna on physical characteristics, nutrient composition and protein quality of the baru almond. Chemical composition and amino acid profile were analyzed, and Amino Acid Score (AAS), Net Protein Ratio (NPR), and Protein Digestibility–Corrected Amino Acid Score (PDCAAS) were estimated. The physical characteristics significantly differed within but not among regions. The protein (310 g kg^{-1}), lipid (410 g · kg^{-1}), fiber (120 g · kg^{-1}) and calcium (1,300 mg · kg^{-1}) contents of baru almonds were high, with significant differences among regions for insoluble fiber content (94.3 - 128.3 g · kg^{-1}) and amino acid profile (AAS = 77% - 89%). The relative NPR (RNPR) values were similar among regions (mean value of RNPR = 71%), and the PDCAAS values ranged from 65 to 73%. The region of the Brazilian Savanna influences the fiber and amino acid profiles, but not the total content of nutrients, the protein quality and the physical characteristics of the native baru almonds. The baru almond is a potential food as source of complementary protein for healthy diets and as a nutritious raw material for various food systems.

KEYWORDS

Dipteryx Alata Vog.; Edible Seeds; Nuts; Savanna; Nutritive Value; Amino Acids

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