

Title Quality, bioactive compounds and antioxidant activity of cashew apples from precocious dwarf cashew clones CCP-09, CCP-76 and BRS-189

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Abstract

Brazil is one of the world's largest producers of tropical fruit and is a major exporter of cashew nuts (*Anacardium occidentale*). The cashew fruit consists of two parts: the true fruit (cashew nut) and the false fruit (cashew apple or peduncle). The latter is marketed in natura or processed into juice, sweets and ice-cream, among others. Recently published studies have confirmed the health benefits of fruit consumption, particularly fruits with high levels of bioactive compounds and antioxidant activity. The objective of this study was to evaluate the quality, bioactive compounds and antioxidant activity of cashew apples from commercially available precocious dwarf clones (CCP-09, CCP-76 and BRS-189) developed by Embrapa Tropical Agroindustry (Fortaleza, Brazil). The fruit was weighed (nut, apple and total weight) and the apples were evaluated for color, diameter, length, firmness, soluble solids (SS), total soluble sugars, reducing sugars, total titratable acidity (TTA), pH, SS/TTA, total pectin, flavonoids, anthocyanins, carotenoids, total extractable polyphenols and antioxidant activity (by the ABTS method). Weighing over 120 g on the average, CCP-76 and BRS-189 may be regarded as commercially valuable cashew apples (type 4 or 5). BRS-189 is distinguished by its bright red color and high levels of bioactive compounds (vitamin C, anthocyanins, flavonoids, carotenoids and polyphenols) and total antioxidant activity.