PRODUCTION AND PHYSICOCHEMICAL CHARACTERIZATION OF BANANA VERDE BIOMASS

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Banana (\textit{Musa Cavendish}) is a very important fruit for world agriculture. Green banana (BV) is an excellent source of resistant starch (AR), a natural component also found in foods such as some grain (sorghum) and raw potatoes. Brazil discards almost 60\% of banana production that does not meet the standards considered appropriate for commercialization. Much of the production is lost on the plantation itself, because, depending on the harvest, the price is negligible and does not always compensate for its harvest. Another part, such as green fruits, gets lost in storage sheds and is discarded because they are out of the established market standard. Therefore, the green fruit is considered a waste and is discarded. One way to consume BV is through its biomass. Green banana biomass (BBV) is obtained by processing BV under pressure and high temperature. The main objective of the work was to produce and perform the physicochemical characterization of BBV with higher RA content. Five BBVs were produced (BBV12, BBV14, BBV16, BBV18 and BBV20) and had their AR content determined. The highest levels of RA (BBV12) were analyzed to determine chemical composition, color, texture, phenolic compounds, pH, acidity, Brix, Brix / acidity ratio, characterization by Raman spectroscopy, infrared (IR) spectroscopy and thermogravimetry (TG). These parameters were also analyzed in the heat pretreatment product (BV in natura) for comparison. The heat treatment influenced the RA content in the different BBV produced, and the prolonged processing time caused a drastic reduction in its levels.