

Time of harvesting and its effect on the quality of flour from four cassava varieties

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Abstract. Four varieties of cassava (*Afisiafi*, *Tek bankye*, *Abasafitaa* and *Gblemoduade*) were harvested each month from 9 to 15 months after planting and processed into flour. The yield of flour and some of its physicochemical properties were studied to determine how they were affected by harvesting time and varietal difference. The properties of flour studied were: moisture, ash, crude protein, crude fibre, pH, swelling power, solubility, starch yield, amylose content and pasting characteristics. *Afisiafi* and *Tek bankye* both had their peak flour yields (23% and 22.4% respectively) at 13 months after planting while *Abasafitaa* and *Gblemoduade* had their peak flour yields (23.4% and 20% respectively) at 12 months after planting. Both *Afisiafi* and *Tek bankye* had flour yields increasing uniformly from 11 to 13 months after planting after which they fell while *Abasafitaa* and *Gblemoduade* had their flour yields increasing from 9 through 12 months after planting after which they fell. Moisture content ranged between 6.3% and 14.6%, while ash content was between 0.70% and 2.21%. All flour samples had pH ranging between 5.07 and 6.65 indicating unfermented flour of high quality. All the varieties had a minimum crude protein content of 0.22%; *Afisiafi* and *Tek bankye* had maximum values of 1.53% and 1.68% respectively at 9 months after planting while *Abasafitaa* and *Gblemoduade* had maximum values of 1.68% and 1.53% respectively at 15 months after planting. Starch yield was between 53.60% and 76.01% while solubility ranged between 7.81% and 18.80%. Age significantly affected ($p < 0.05$) flour yield, crude protein, ash and moisture, while pH, crude fibre, amylose and swelling power were neither affected significantly ($p > 0.05$) by age nor variety. Starch yield of flour, solubility, ash content and pasting characteristics were all significantly affected ($p < 0.05$) by variety. *Afisiafi* and *Tek bankye* had higher peak viscosities than *Abasafitaa* and *Gblemoduade*. Both hot paste stability and hot paste breakdown were highest for *Gblemoduade* and lowest for *Abasafitaa*. *Afisiafi* and *Tek bankye* had higher retrogradation while that of *Abasafitaa* and *Gblemoduade* were close to zero.