



Varietal and harvesting time effects on physical characteristics and sensory attributes of boiled fresh yellow maize hybrids

Alamu Emmanuel Oladeji¹, Olaofe Olorunfemi², Maziya-Dixon Bussie^{1*}, Menkir Abebe¹

¹International Institute of Tropical Agriculture (IITA), PMB 5320, Oyo Road, Ibadan, Oyo State, Nigeria

²Ekiti State University, Ado-Ekiti, P.M.B.5363, Ekiti State, Nigeria

*Corresponding author email: b.dixon@cgiar.org

International Institute of Tropical Agriculture (IITA), Carolyn House 26 Dingwall Road, Croydon CR9 3EE, England.

Tel: +234-803-403-5281, Fax: 44-208-711-3786

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ABSTRACT

Objective: The present study evaluated the effect of varieties and harvesting time on the physical characteristics and acceptability of boiled fresh yellow maize hybrids.

Methodology and Results: Freshly harvested cobs from eight biofortified yellow maize hybrids, at three harvesting time (20, 27 and 34 days after pollination (DAP)), were used for the present study. The fresh yellow maize ears at each of the harvesting time were boiled without husk in water at 100°C for averagely 15mins (20DAP), 25mins (27DAP) and 32mins (34DAP) respectively using atmospheric cooking method. Sensory evaluation was carried out on the boiled fresh yellow maize samples within 24 hours after harvesting. The physical characteristics of the fresh maize grains were also determined. Variety and harvesting time had significant effects ($P \leq 0.001$) on most of the physical properties, except porosity. The optimum harvest maturity stage to consume boiled maize hybrids was found to be 20DAP. There was negative but significant correlation between the physical characteristics and the sensory properties except colour that showed positive correlation.

Conclusions and application of findings: Differences in kernel characteristics caused by genetic inheritance and harvesting time can influence the processing, utilization and consumer appreciation of maize. The information from this study could be used by the Maize breeders to further improve the physical characteristics of the maize hybrids and by the maize consumers to know the best harvest time to consume boiled maize hybrids

Keywords: yellow maize, hybrids, harvesting time, boiled, physical characteristics acceptability