
Abstract No. 20

PaperTitle **Effects of Sorghum Type and Milling Process on the Sensory Properties of Sorghum Porridge**

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ABSTRACT

Sorghum is an important cereal grain in Africa, where it is generally consumed as staple in the form of porridge. Efforts to improve commercial milling of sorghum grain require a good understanding of the effects of the sorghum grain type and of milling process on the sensory properties of porridge made from the meal. This subject formed the focus of this study.

Twelve sorghum grain types with diverse physico-chemical properties were milled by hand pounding, roller milling and abrasive decortication, followed by hammer milling, to produce 36 sorghum meals. The meals were cooked into porridges which were subjected to descriptive sensory analysis, judged by 11 trained panelists. Fourteen sensory attributes were derived to discriminate between the samples. Principal component analysis revealed that three principal components explained 73% of the total variation within the data. PC1 accounted for 33% of the variation and described differences in colour, aroma and some textural properties of the porridges. PC2 explained 28% of the variation and revealed differences in most of the textural and some flavour properties. PC3 explained 12% of the variation and revealed differences in bitterness and astringency of the porridges. Light coloured grains with harder endosperm texture produce porridges with the most apparently desirable sensory attributes. Milling process causes more effects on the sensory attributes. Of the three milling processes, abrasive decortication appears advantageous in that it causes the least apparently negative sensory attributes (dark colour, branny aroma, speckiness, astringency, bitterness, rancidity and humus odour) and enhances the apparently desirable attributes of the porridge (light colour, cereal aroma, cohesiveness and stiffness).