
Abstract No. 18

Paper Title **Effects of Phenolics on the Sensory Properties of Sorghum Grain**

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ABSTRACT

Despite the fact that condensed tannins are potentially important antioxidants, there is a general belief that tannins in sorghum confer objectionable sensory attributes. The objective of this study was to determine the sensory attributes and acceptability of sorghums containing different levels of total phenolic compounds.

A trained sensory panel (n = 12) described and quantified the sensory attributes of sorghum whole-grain rice and sorghum bran infusions (bran-in-boiling water) of different sorghums (3 - condensed-tannin containing and 3 - tannin-free). Furthermore, 200 consumers (> 18 years) participated in sorghum rice acceptance tests of four sorghums: 'high' (1) and 'medium' (1) condensed-tannin containing and tannin-free (2).

Surprisingly, the bitterness, astringency, and other sensory attributes of NS 5511 ('medium' condensed-tannin containing sorghum) were similar to PAN 8564 (tannin-free sorghum) even though NS 5511 had more than twice the total phenol content. The bran infusions of the 'high' condensed-tannin containing sorghums were darker, clearer, more bitter and more astringent than those of the tannin-free sorghums, which were perceived as sweeter and cloudy. The attributes of the sorghum rice of the 'high' condensed-tannin containing sorghum was less acceptable than all the other sorghums. NS 5511 ('medium' condensed-tannin sorghum) was as acceptable as the tannin-free sorghums (PAN 8564 and Phofu).

These results suggest that not all sorghums containing condensed-tannins have objectionable sensory attributes. A sorghum containing 'medium' levels of condensed tannins was as acceptable as the tannin-free sorghums.