

# SENSORY EVALUATION AND CONSUMER ACCEPTABILITY OF HIGH BETA CAROTENE SWEETPOTATO BY PREGNANT WOMEN AND CHILDREN <2 YEARS IN WESTERN KENYA

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## ABSTRACT

Consumers in the study comprised pregnant mothers ( $n = 79$ ) and children below 2 years ( $n = 72$ ). Mothers gave acceptability scores for how they perceived their children's acceptance. All respondents were selected from health facilities. Sweetpotato attributes assessed were attractiveness of the flesh color of the boiled root (Root appearance), acceptance of root texture and texture characteristic from very watery to very dry, acceptance of fibrousness level and perception of fibrousness level of root, taste/flavor of the root, reasons for rating and perception of additional characteristics and overall opinion on the acceptability of this variety. The preferred preparation method for SP was boiling in both districts. Results: Attractiveness of flesh color, in Bungoma the scores of the three varieties were very close together, whereas in Busia the local check was scored highest. The acceptance of the root texture of the local check in the two districts was higher than of the two new varieties (local check: 4.00, Kabode: 3.27, Vita: 3.00). For the local check and Kabode these differences indicated statistical significance (local check:  $p=0.000$ ; Kabode:  $p=0.002$ ). More watery variety is less appreciated. The characterization of the fibrousness level showed different trends by district: For the local check the difference indicated statistical significance ( $p=0.018$ ). The local check was perceived as not fibrous in Bungoma compared to a little fibrous in Busia. In Busia, Kabode was perceived as the least fibrous variety, whereas in Bungoma the local check was the least fibrous and Vita was perceived as less fibrous than Kabode. Comparing the scores of the three varieties per district, in Bungoma the preferred variety in terms of taste/flavor was Kabode, followed by the local check and Vita. In Busia, it was the local check, followed by Vita and then Kabode with the scores of the latter two being close together. Overall all three varieties were acceptable to pregnant women since the average scores were higher than 3 (local check: 4.13, Vita: 3.23, Kabode: 3.52). Close to half of the women scored Vita and Kabode as 4 or 5 (like or like very much). 85% of the pregnant women liked or liked very much the local check. The overall acceptability of the local check was clearly better than of the two new varieties, which is expected since the local varieties were already known and consumed. Between the two new varieties, Kabode was scored on average higher than Vita.

Keywords: sweetpotato; *Ipomea batatas*;  $\beta$ -carotene; vitamin A; sensory evaluation; consumer acceptability