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Meeting local markets with sustainably processed foods – the dried mango flakes of Kitui county, Kenya

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Abstract

The mango production sector in Kenya is affected by many inefficiencies and limited market opportunities. Lack of infrastructures, low access to global markets, inadequate market information and poor linkages coupled with the high seasonality and perishability of the fruit often lead to oversupply, heavy post-harvest losses, high price fluctuations and low profit margins for farm small holders. To tackle these challenges, the joint European-African STEP-UP research project has contributed to the upgrading of small-scale mango farm enterprises through the provision of technologies access and trainings on jointly defined market value addition strategies. Among the strategies identified, the processing through solar drying and commercialisation of locally produced mango flakes is expected to bring higher profit margins to local farmers while reducing production wastes. After two season of mango drying activities conducted between October 2019 and April 2021, a series of product consumer testing and sensory evaluations involving a total of 330 panellists was carried out in Germany and Kenya to determine the best market strategy for export and local market. The German survey has shown that the extrinsic attributes of the product are affecting the perception of intrinsic attributes for consumers with specific purchasing habit and values (enhancing their willingness to pay) indicating that German mango market can constitute a source of high profit margins for Kenyan farmers if the strategy is tailored to meet extrinsic attributes and sustainability preferences. Results from a second survey in Kenya on 6 varieties treated with 3 compounds revealed that honey treated mango flakes were preferred by the 31 semi-trained panellists, but this treatment was not affecting the sensorial scores of high value grafted mango varieties. Then, a third comparative survey to the German study was carried out in Kenya. Findings show that consumers display higher degrees of liking for provided mango flakes varieties, and their mango flakes consumption habits positively affect their evaluation of different sensorial attributes. Yet, individual values and perception of extrinsic attributes does not affect their low willingness to pay

that is why local producers should focus on lower value varieties treated with honey for the local mango flakes market.

Keywords: Consumer preferences, intrinsic and extrinsic attributes, marketing strategies, online surveys, post harvest losses, processing, value addition, willingness to pay