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Processing of Neglected Crops for Promotion of Food and Nutrition Security: the Case of Natural Guava Fruits in Kenya

DUKE OMAYIO¹, GEORGE ABONG^{'1}, MICHAEL OKOTH¹, CHARLES GACHUIRI², AGNES MWANG'OMBE³

¹ University of Nairobi, Dept. of Food Science, Nutrition and Technology, Kenya

² University of Nairobi, Dept. of Animal Production, Kenya

³ University of Nairobi, Dept. of Plant Science and Crop Protection, Kenya

Abstract

Sub-Saharan Africa is characterised by significantly high rates of micronutrients deficiencies due to limited access and utilisation of fruits as a result of high postharvest losses and minimal adoption of postharvest technologies especially in the rural areas. In Kenya, the guava fruit is a neglected crop and is majorly characterised by naturalized varieties from randomly dispersed seeds despite the favourable climatic conditions for the crop's commercial cultivation. Although the fruit is highly nutritious, its nutritional potential remains extremely underutilised owing to low consumption and limited processing and preservation as natural guava value addition is non-existent. Guava fruits are climacteric and are highly perishable leading to huge losses when in season. Consequently, the annual losses have been estimated to be more than 11,000 tons valued at 1.1 million US dollars contributing to increased poverty and hidden hunger as a result of low income generation due poor marketability and low consumption in households where the fruits grow. The current study has led to the development of natural guava processing and market-testing of nutritious and safe blended nectars with boosted iron, zinc and vitamin A levels. These are affordable guava processing techniques that can be adopted at the household levels in order to produce commercially viable, safe and nutritious natural nectars to tackle malnutrition as well as improve guava farmers' households. Stable products with longer shelf life will increase guava utilisation after the fruits are out of season, minimise post-harvest losses and ensure regular supplies from the production areas to consumers in peri-urban and urban centres while the income generated will improve the food security status of guava farmers' households. However, technical barriers have to be overcome and this will be realised through technology transfer to farmer groups and processors. If adopted, the findings will help in developing policies that will strengthen the guava value chain in Kenya in order to fully exploit the fruits' economic and nutritional potential and promotion of nutritional security and diversity by enhancing the availability of processed local guavas.

Keywords: Fruit, guava, losses, natural, nutrition, processing