

## Evaluation of selected Kenyan potato cultivars for processing into potato crisps

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### ABSTRACT

There has been tremendous increase in the demand and consumption of potato crisps as snack in Kenya. This has however, not been paralleled by development of appropriate raw materials. Many potato varieties and clones have been developed through breeding, but these have not been adequately evaluated for crisps processing. This study was therefore designed to evaluate the newly developed potato cultivars for processing into quality crisps. Twenty four potato cultivars including eighteen varieties and six clones were evaluated for some physico-chemical properties and crisps processing potential. Most cultivars with the exception of six of them including Roslin Tana, Desiree, Roslin Eburu, Nyayo, Tigoni Long and Kihoro had acceptable physical characteristics for processing. The specific gravity of the cultivars varied from 1.074 to 1.098 and dry matter contents from 19.50 % to 24.20 %. Reducing sugar levels significantly ( $P \leq 0.05$ ) varied among the cultivars and ranged between 0.07 % and 0.4 %. In addition to Dutch Robyjn which is currently used for processing potato crisps in Kenya, the varieties Tigoni and Kenya Baraka, and the clones 393371.58, 392657.8, 391691.96 and 393385.39 were also similarly suitable for processing into potato crisps. They had desired physical characteristics with low levels of reducing sugars, and were highly rated by sensory panelists. Promoting these cultivars will increase the number of processing varieties for the rapidly expanding processing industry, and thus safeguard availability and quality.

**Key words:** potato crisps, snacks, crisps colour, Dutch Robyjn