

ABSTRACT

**Production of Dehydrated
Sweet Potato Flakes
From Caribbean Varieties.**

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The food industry in the Caribbean is plagued by several ills: high postharvest losses of indigenous crops (especially root and tuber crops), inadequate marketing systems which contribute to seasons of glut and scarcity, high, and increasing, food import bills, and food processing companies which depend heavily on importation of raw materials. One means of redressing these ills is to extend the shelf life of local crops via processing.

In this project, producing dehydrated flakes from Caribbean varieties of sweet potato was investigated, with the view of elucidating optimum peeling, cooking and processing conditions. The peeling methods looked at were hand peeling, lye peeling, brine peeling, steam peeling (different pressures/times), baking and boiling. The cooking methods looked at were cooking in steam, oven baking and boiling in water. For both processes, each method was assessed for effectiveness and appropriateness. The processing conditions looked at were the Inherent Enzyme Activation (IEA) and the Commercial Enzyme Addition (CEA) methods. The effect of temperature on the IEA method, the effect of enzyme treated proportion on the CEA method and the effect of sugar addition were also investigated. The characteristics preferred in sweet potato and the acceptability of the flakes made were also determined, in a consumer survey.

Steam peeling (10psi/3min; 15psi/1min) and steam (0psi/20-30min) or water (100°C/20-30min) cooking were found to be good conditions for these processes. The optimum temperature for IEA was found to be 76°C, the optimum proportion for CEA was found to be 50%, and adding up to 20% sugar was found to produce good quality flakes. The results of the consumer survey indicated that consumers prefer pale yellow, sweet, moist sweet potatoes. The flakes made from Caribbean varieties were acceptable in all respects analysed - colour, taste, mouthfeel, and in overall acceptability.