

## Investigative Study of Consumer Perceptions to the Quality and Safety Attributes of 'Fresh' versus 'Frozen' Cassava (*Manihot esculenta* Crantz): A Case for Agro-Processing in Trinidad and Tobago, West Indies

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**Abstract :** Cassava (*Manihot esculenta*, Crantz) which is also known as 'yucca' or 'manioc' has been acknowledged as a millennium crop which has been utilized for food security purposes. The crop provides considerable amount of energy. The aim of the study was to assess consumer groups of both 'fresh' and 'frozen' in terms of their perceptions toward the quality and safety attributes of frozen cassava. The questionnaire included four sections: consumer demographics, consumer perceptions on quality attributes of 'frozen' cassava, consumer knowledge, awareness and attitudes toward food safety of 'frozen' cassava and consumer suggestions toward the improvement of frozen cassava. A face-to-face questionnaire was administered to 200 consumers of cassava between April and May 2016. The criteria for inclusion in the survey were that they must be 15 years and over and consumer of cassava. The sections of the questionnaire included demographics of respondents, consumer perception on quality and safety attributes of cassava and suggestions for the improvement of the value-added product. The data was analysed by descriptive and chi-square using SPSS as well as qualitative information was captured. Only 17% of respondents purchased frozen cassava and this was significantly ( $P < 0.05$ ) associated to income. Some (15%) of fresh cassava purchasers had never heard of frozen cassava products and 7.5% perceived that these products were unhealthy for consumption. More than half (51.3%) of the consumers (all from the 'fresh' cassava group) believed that there were 'no toxins' within cassava. The 'frozen' cassava products were valued for convenience but purchasers were least satisfied with 'value for money' (50%), 'product safety' (50%) and 'colour' (52.9%). Cassava purchasers demonstrated highest dissatisfaction levels with the quality attribute: value for money (6.6%, 11.8%) respectively. The most predominant area outlined by respondents for frozen cassava improvement was promotion /advertising/education (23%). The 'frozen' cassava purchasers were 'least satisfied' thus most concern that clean knives and clean surface would not be used agro- processing. Fresh cassava purchasers were comparatively more knowledgeable on the potential existence of naturally occurring toxins in cassava, however with 1% respondents being able to specifically identify the toxin as 'cyanide'. Dangerous preservatives (31%), poor hygiene (30%) and chemicals from the packaging (11%) were identified as some sources of contamination of 'frozen' cassava. Purchasers of frozen cassava indicated that the information on packaging label was unclear ( $P < 0.01$ ) when compared to 'fresh' cassava consumers.

**Keywords :** consumer satisfaction, convenience, cyanide toxin, product safety, price, label

**Conference Title :** ICFSIMF 2017 : International Conference on Food Science, Ingredients and Modified Foods

**Conference Location :** Kuala Lumpur, Malaysia

**Conference Dates :** August 24-25, 2017