CONSUMER INPUT AND PRODUCT CONCEPT TESTING
IN DEVELOPING DRIED FRUIT SNACK PROTOTYPE
FOR MALAYSIAN MARKET

Thesis presented in partial fulfilment of the requirement for the degree of Master of Technology in Product Development at Massey University
New Zealand

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1996
Dedicated to my beloved:

parents,

Haji Ibrahim Omar and Hajjah Zakiyatun Nizam M. Samin

and sister, Nurul 'Ain Ibrahim
ABSTRACT

The input of the consumer when developing a dried snack fruit for the Malaysian market using the product development process was studied. A consumer panel made up of Malaysian students was used in each step of the product development process in this study.

Preliminary consumer research was carried out using the focus group and the survey method. The results indicated that the two ethnic groups, Malay and Chinese, within the Malaysian student community could be treated as a homogenous group as they had similar attitude and behaviour characteristics towards the dried snack fruit product. Both student groups had been studying in New Zealand for less than two years.

In the idea generation stage, the consumer panel generated 41 product ideas for the dried snack fruit using the nominal group technique. The 41 product ideas were reduced to three using a series of scoring techniques for screening. At this stage, consumer input was used to determine the market acceptability of the three possible products.

These three product ideas with a benchmark were tested in concept product testing using the target consumer panel to evaluate consumer acceptability. Two different forms, concept description and concept prototypes, of concept testing using two different techniques, the focus group technique and the survey method, were tested in order to determine any significant effects they had on consumer acceptability. It was found that the concept prototypes had a significant effect on the consumers' preferences for product concept appearance, attractiveness and, buying intention. The two different techniques however, did not have a significant effect on the consumer acceptability of the product concepts. Of the two techniques, the focus
group required less time for data collection compared to the survey technique, but the focus group was more expensive to run.

By using the ECHIP programme and the line scale with floating ideals, which was the input of the consumers in the sensory evaluation stage, an optimum product formulation for the dried fruit snack was obtained. The prototype consisted of six types of fruit namely, apple (0.25), kiwifruit (0.25), banana (0.175), pineapple (0.13) strawberry (0.125) and jackfruit (0.07) with their natural flavours. The prototype was tested on the target consumer using in-house tests in order to determine the acceptability potential of the prototype. The results showed that the idea of developing the dried fruit snack with their natural flavours was acceptable among the Malaysian students. Freeze drying was found to be the most preferred drying process for the dried snack fruit product. The acceptable package size of the product by consumer panel was 40gm.

Consumer input played a major role in the product development process in this project and it gave direction in the development of the dried snack fruit product for the Malaysian market. Consumer input was found to be vital during the preliminary consumer research, idea generation, concept testing, product formulation stages, and the final product testing phase in this study.
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