PRODUCT DESIGN IN FOOD INDUSTRY. APPLICATION OF QFD METHODOLOGY FOR IMPROVEMENT OF CHOCOLATE QUALITY

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Abstract

Quality Function Development (QFD) is a systematic approach specific to quality management that facilitates product development by ensuring consumer requirements meeting "customer voice", these being taken into account from the design phase, then during the entire technological process, being reflected in the quality characteristics of the finished product. The purpose of this study was to apply the QFD methodology (House of Quality, HoQ) to improve the quality of products in the food industry, taking into account the technological process of chocolate (designing a new product that meets the requirements of consumers), thus providing a synthetic model. The working method consisted in the participation of a number of 200 chocolate consumers, aged between 20-24 years, who provided the list of consumer requirements, prioritizing and weighting them based on a standardized score from 1 to 5 points. The following stages were represented by the transposition of consumers' voice in quantifiable technical requirements, their correlation using predefined symbols, establishing the direction of improving the quality of the new product, assessing current competition and determination of target values. Following the analysis, the most important consumer requirements for chocolate were: the taste of cocoa (25%), the flavor (25%), the fine texture (20%), the small amount of sugar (15%) and an affordable price (15%). Thus, in order to meet consumer requirements, the replacement of sugar with coconut nectar sugar or dates powder as alternative sweetener led to a healthy product, but which will have a higher price compared to the products currently available on the market. However, applying the level II/ III of QFD methodology the low cost was provided by mitigation of price of raw material's.

Key words: House of Quality, chocolate, improvement, sugar.