ABSTRACT

Indonesia is the fourth largest cassava producer in the world, with an annual production of 19,046,000 tons, accounting for 6.52% of the global cassava production. This significant opportunity is utilized by Sukapura Village, located in the Bandung Regency, to establish Micro, Small, and Medium Enterprises (MSMEs) that focus on producing processed cassava chips. However, there is a challenge of unmet demand for cassava chips from November 2022 to February 2023. Based on the identified factors causing the unmet demand, the issue is attributed to the machine factor, specifically the existing tools used in the seasoning mixing and sealing processes, which have long cycle times and limited capacity.Therefore, this research focuses on designing tools for the cassava chip production process, specifically for seasoning mixing and packaging sealing. The design of these tools is conducted using the Quality Function Deployment (QFD) method, which connects customer requirements with technical specifications of the tools. Additionally, an anthropometric approach is employed to ensure that the designed tools are suitable for the physical characteristics of the users. Through the implementation of QFD and the anthropometric approach, the design of seasoning mixing tools and a hand sealer tool that meet user requirements is achieved. These tools incorporate a more modern working system and have increased capacity. The proposed tools greatly assist in the cassava chip production process, particularly in the seasoning mixing and packaging sealing stages. The designed tools also come with operation guidelines and are accompanied by training on their usage and maintenance. The proposed tools have been proven to reduce the cycle time by 536,8 seconds or 9 minutes in producing one package of cassava chips. Furthermore, they have increased the production capacity by 260 packages of cassava chips per day.

Keyword: Capacity of Production, Cycle Time, Quality Function Deployment, Anthropometry