

OPTIMIZING THE EFFICIENCY OF THE SHALLOT SLICING MACHINE THROUGH ANALYZING THE THICKNESS AND QUALITY OF THE SLICES

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ABSTRACT

Shallots have high economic value and nutritional content such as vitamin C, fiber and antioxidants. In Indonesia, shallots are a staple ingredient in various dishes because of their distinctive taste and aroma. Manually slicing shallots takes a long time, especially in large quantities. Therefore, a shallot slicing machine was developed using a single phase AC motor to increase time efficiency and thickness uniformity of shallots. To unsure the operational performance of this tool, testing and analysis was carried out regarding several aspects, including the efficiency of onion slicing time and uniformity of thickness levels. Test were carried out by varying the distance between the onion input hopper and the slicing knife at a distance of 3 mm, as well as testing with increasing onion weight to assess the efficiency of the time required. The research results show that the onion slicing machine shows quite efficient performance at light loads, such as 500 grams of onions, with a slicing speed of 0,227 Kg/minute and achieving an efficiency of 45,4% with a time of 2,20 minutes.

Keywords : *Red onion slicer, Slice thickness, Time efficiency.*