

Design and Construction of a Red Onion Slicing Machine
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ABSTRACT

Fried onions are a processed product of shallots that require slicing. In small industries, shallot slicing is usually done manually with a knife. This stage is time-consuming and labor-intensive. The manual process is inefficient as it takes a long time. This research aims to improve the effectiveness and efficiency of time and labor by using a shallot slicing machine. The research aims to design a shallot slicing machine with a capacity of 500 grams per slicing process. This machine uses an AC motor with a rotational speed of 2800 rpm. The testing of this machine is divided into four stages, each with different capacities: 500 grams, 1 kg, 1.5 kg, and 2 kg. For 500 grams, the slicing time is 2 minutes and 20 seconds; for 1 kg, it is 7 minutes and 11 seconds; for 1.5 kg, it is 14 minutes and 21 seconds; and for 2 kg, it is 21 minutes and 30 seconds. In this test, the average thickness of the sliced shallots is 1.7 mm, which is ideal for fried onions.

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