

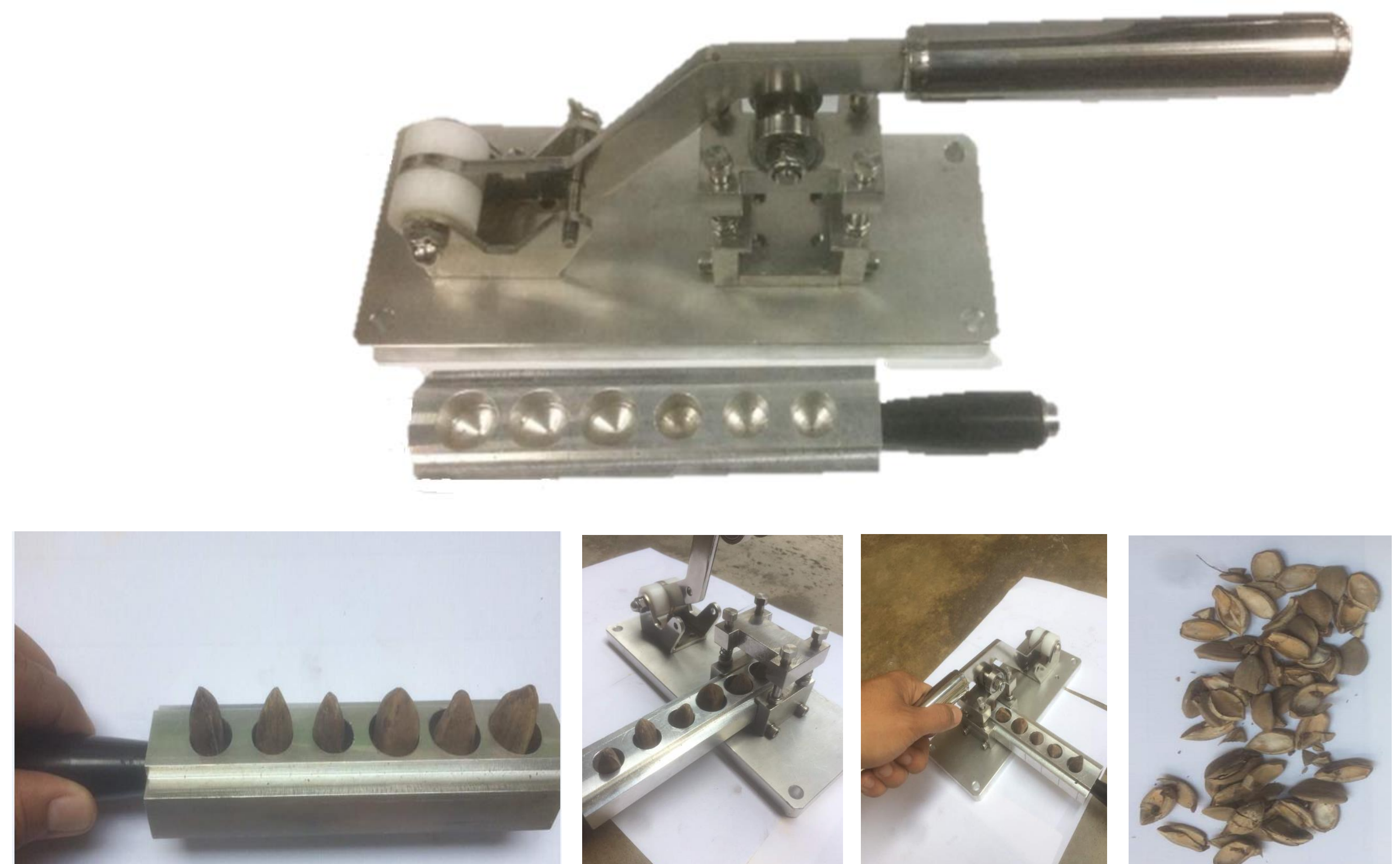


Dabai Nutcracker

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Dabai fruit (upper left), dabai nut (upper right), and cross section of fruit (lower)



BRIEF TECHNOLOGY

A nutcracker design specifically for Dabai nuts by using the compressing mechanism. The nutcracker will separate the kernel from the shell of Dabai nut.

PROBLEM STATEMENT & CURRENT ISSUES

- Currently, dabai nut is still under utilized for its potential nutritional for value added to products.
- It is to be thrown away after consuming its flesh.
- Lacks of tools to crack the dabai nut to get the kernel.
- Traditional method cause slow production and high risk to injuries.
- If the dabai content is broken or damaged, the isolation or separation process of the shell and the kernel will take a long time and the possibility of the kernel can no longer be used.

INVENTIVENESS & NOVELTY

- The nutcracker is invented with a Jig holder with 5 mould spaces design to hold nuts vertically to ease cracking process and greater results. The mould designed to hold nuts 90 degrees.
- Comes in 3 different size based on the diameter of the dabai nuts.
- Design with a handle to crack the nut easier.
- Double bearing is used to avoid the friction to the top die as it can cause damage. It also is being used to improve the accuracy of cracking when the top die is pushed down.
- A Dabai Nutcracker comprising the top die which is the main component in this tool, which acts as a dabai skin breaker when the handle is pressed, the bottom of the top die will decline and break the dabai skin, it is designed to be crater-like shape to maintain the upright position of the dabai during the process of cracking.

USEFULNESS & APPLICATION

- Production Capacity of tool is 1.64 kg/hr compared to conventional method 0.94 kg/hr.
- Production Capacity increase 1.75 times.
- Efficiency of tool is 97.27 %.

IMPACT OF THE PRODUCT / ADVANTAGES

- Save time
- Easy to clean
- Easy to use
- Portable
- Less Risk To Injuries

	Number of nuts fully cracked (g)	Time required (s)	Rate (g/s)	Rate (kg/hr)
Conventional	100	385	0.26	0.94
Dabai Nutcracker	100	220	0.45	1.64

MARKET POTENTIAL

Manufacturer of food processing equipment, industrial nut cracker, commercialize nut cracker

- Small and Medium Industry
- Government agencies such as MARDI and DOA
- Farmer
- Restaurant owner and household user

TRL : 6 – Demonstration in real environment



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