

## REVIEW ON POMEGRANATE DESEEDER

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### 1. Introduction

Here we have introduce device which is based on scientific principle of machine . it is cheap simple and maintenance free that is produced as result of project work .

The existing with of pomegranate deseeding in agricultural industry consist of remove the seed by hand which is totally manually and not effective as well as time-consuming ,as far as cost aspect as concerned to require the deseeding equipment



serves as cheaper as compared to human labour. the operating of this device is law a is require only single person to as compared to manual method. Its maintenance cost is about negligible as its require only periodic lubrications.

basically there are machines for de seeding pomegranate but they are costly enough so that small scale farmers cant afford it . To overcome this, we thought of a machine for same purpose with min. cost as far as possible. This machine with designed cantilever beam remove the seed through the tapping action on pomegranate with certain period of time and the seed are peels of the harder shell

of pomegranate as well as inner side .so that there is no damage done to seeds inside pomegranate .

### **1.1 Advantages:**

1. The machine is in compact size.
2. The power consumption is low.
3. Less time consuming.
4. Maintenance cost is less.
5. Any size of pomegranate can be De-seeded.
6. Simple in Design and Fabrication.
7. No need of any safety device.
8. Benefit for small and medium scale farmers.
9. There is no damage of the seeds and remove inner layer of pomegranate

### **1.2 Disadvantages:**

1. In this machine seeds are not completely out .
2. More time need to remove all seeds

### **1.3 Applications:**

1. This device is used for domestic purposes as well as small industry.

## **2. RELEVANCE**

The objective of this review to develop a machine which helps to reduce the human effort and cost of the machine and also suitable for small scale industries. Simple machine construction and better features developing a machine in compact size which peels the shells of pomegranate and collect the seeds. The edible fruit is a berry, intermediate in size between a lemon and a grapefruit, 5-12 cm (2.0-4.7 in) in diameter with a rounded shape and thick, reddish skin. The number of seeds in a pomegranate can vary from 200 to about 1400. The cultivation of pomegranate. The tart and juicy arils, the edible seeds that come from the fruit's "shell," contain a big helping of nutrition. The processing of pomegranate is harvesting, cut in half and

then manually deseed. In industries the pomegranate is peeled with rotating arms which damage some amount of seed. For domestic purposes the manual peeler are there which are time consuming.

### **3. LITERATURE REVIEW**

3.1.K. Gomathi et al<sup>1</sup>: This paper focuses on Pomegranate deseeding with electronic operated beam which hammering out on the fruit and extract the seed. This machine used for industrial purposes only. The one person is required to run this machine.

3.2.Jose blasco et al<sup>2</sup>: A team of investigators from Valencia has developed a machine that separates automatically the seeds from the rind and pith of the pomegranate. The mechanism uses a computer vision system to distinguish and sort the different parts of this fruit.

3.3.Uddhab bharali<sup>3</sup> : He is inventor from Assam designed machine for pomegranate deseeding which is for industrial purposes only. This machine based on mechanism in which rotating beams in container hit the fruit and extract seeds some losses of seeds are there but its capacity is more (55kg per hr )

#### **3.4 Concluding remark from literature review:**

This shows that many author have reported the pomegranate deseeding and peeling design and also analysed it for different loading condition. now the pomegranate deseeding machines are available which damage the seeds and manually operated. there is no machine which is compact in size and work without damage the seeds.

#### **4. PROPOSED WORK**

the proposed work aims to develop a machine which helps to reduce the human effort and cost of the machine also suitable for small scale industries and farmers . simple machine construction and better future developing a machine in compact size which peels the pomegranate in less time and without damage the seed .

#### **REFERENCES**

1. Faculty of mechanical engineering, "PSG Tech, Design data book", published by Kalaikathirachchagam, 2011 revised edition  
Rajput. R.K, Strength of materials, Published by S. Chand & Company LTD. Fifth edition
2. Theraja. B.I., "Electrical machines", Published by S. Chand & Company LTD. Fifth edition 2010
3. [Http:// www.robokits.co.in](http://www.robokits.co.in) for components specification
4. [Http:// www.ualberta.com](http://www.ualberta.com) for Solid works model references[6] K. Gomathi1, B. Elango2, M. Gokul Kumar 2, B. BalaMuraliSakthivel2, B. Saravanan 2 "automatic pomegranate de seeding machine"vol 4 ,issue 5, May 2015 ISSN(online) 2319-8753