

FABRICATION OF GROUNDNUT CRUSHER

ABSTRACT

Groundnut is grown on small scale farmers in developing countries like India. The average kernel price is approximately twice the price of pod. Lack of groundnut processing machines, especially groundnut Sheller, is a major problem of groundnut production, especially in our country India. A research-work for design, fabricate, and performance evaluation of a groundnut Sheller consisting of feed hopper with a flow rate control device, shelling unit, separating unit and power system. The performance of the machine was evaluated in terms of throughput capacity, shelling efficiency, material efficiency and mechanical damage. Regression models that could be used to express the relationship existing between the Sheller performance indices, pod moisture content and feed rate were establish. This paper describes about the design of various components of groundnut Sheller machine. Hence in this design of various parts are necessary, and design of various parts due to which the design quality of those parts will be improved. Overall, this project involves processes like design, fabrication and assembling of different components etc.

INTRODUCTION

The sole purpose of this paper is to understand the fundamental knowledge of design and mechanism of machine. The design is an environment friendly and uses simple mechanism properties such as shelling system, blowring mechanism and automation separating system etc. In this, some crushing force is needed to crush the groundnut. The design is so done that the knowledge of designing, mechanism and forces are increased. This project consists of designing and fabrication of an automatic groundnut Sheller machine considering various important parameters. In this project, designing & development of a machine to crush or shell groundnut so

the farmers can gain high profit by selling groundnut direct in market. As well as the study of manufacturing was very important in order to carry out this project to ensure that what are needs to do. This project involves the process of designing the different parts of this shelling machine considering forces and ergonomic factor for people to use. This project is mainly about generating a new concept of groundnut shell(crush) that would make easier to bring anywhere and easier to crush groundnut.

KEYWORDS

Groundnut, Sheller Machine, Efficiency