

VISVESVARAYA TECHNOLOGICAL UNIVERSITY.

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**Project Report
On**

“MANUALLY OPERATED ARCANUT CUTTING MACHINE”

(Sponsored by KSCST, IISc, Bangalore)

Submitted in partial fulfillment of requirements for the award of degree of

**BACHELOR OF ENGINEERING
IN
MECHANICAL ENGINEERING**

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SYNOPSIS

Arecanut is an extensively cultivated tropical palm, the nuts of which form a popular masticatory in India. For cutting the nuts in rural areas, people use the knife. Such a process looks easy, in reality it is a laborious and Dangerous task. Cutting the nuts by hand requires more time. Skilled areca nut cutters have become scarce and farmers are finding it difficult to harvest the nuts.

There are many equipments/machines in the market to help the farmers in this regard. But they are not successful as the price of equipment is very high. 3 to 5 nuts can be cut by hand in one minute using knife, therefore it requires more time and more man muscle power, and hence many innovative ideas have been developed to reduce the muscle power and prevent damages and improve the fast cutting.

Following are observations that are emerged from our systematic study of cutting process.

- **Size and shape of the kernel (processed areca nut) :**
The size and shape of the kernel plays very important role in mechanized cutting process.
- **Process time for cutting:**
Process time for cutting using pyramid shape cutter is very important parameter for process efficiency.
- **Manual force requirement for cutting process.**

The above mentioned factors were studied by carrying out the experiment on available machinery.