Visvesvaraya Technological University

BELGAUM, KARNATAKA

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ಬೆಳಗಾವಿ, ಕರ್ನಾಟಕ

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PROJECT REPORT

OF

A KSCST SPONSORED PROJECT

ON

"FOOT OPERATED SUGARCANE SEED SCOOPING MACHINE"

Submitted to Visvesvaraya Technological University in partial fulfillment of the requirement for the award of Bachelor of Engineering degree in Mechanical Engineering.

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ABSTRACT

India is the second largest producer of sugarcane in the world, yet it stands fourteen in the sugar exporters list. These facts tell the need for technological improvement in the field of agriculture.

The traditional practices of sugarcane plantation use the complete stem cut into pieces for their plantations. But studies have shown that only the nodal part containing the seeds is sufficient for a healthy growth of the plant.

FOOT OPERATED SUGARCANE SEED SCOOPING MACHINE is simple and economical machines which can be used by the farmers to cut and extract the nodal region contain the seeds. These seeds can be planted in the nursery; the healthy saplings can be selected and planted in the farm.

The method of extracting the seeds and planting saves up to 70% of the cane for crushing.

The machine uses the impact force of the falling weights; the weights are connected to the blade. A spring is provided to lift the weights back.

The mechanism of the machine is made keeping in mind that only one man is sufficient to operate it. Since the machine is foot operated, the operator's hands are free to hold the whole sugarcane and handle it to scoop the seed. The mechanism is made so simple and having very less number of moving parts hence the manufacturing cost of the machine can also be considerably reduced.

The place of use of the machine is not restricted as it is manually operated. Also the efforts needed to operate the machine are also viable for a single person to apply force and scoop the seed as well. The machine is also made maintenance free to a major extent.

Improved design of the machine will be an automated machine which can align the sugarcane by itself by using digital details of the difference in diameter of the node and cause the cut around the node