MULTI HYBRID AGRO ROBUST THERESHER MACHINE

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College : VSM's Somashekhar R. Kothiwale Institute Of Technology, Nipani, Belagaavi
Branch : Department Of Mechanical Engineering
Guide(S) : Prof. Kailas S Pathade.
Students : Mr. Tushar A Chougule
Mr. Vinayak A Mane
Mr. Mahesh M Malagennavar
Mr. Chandrashekar R Dodamani

Keywords:

Thresher, Hybrid, Dynamic, Agriculture, Mechanism, Solar energy, Cost effective design, Multi crop Processing, Sustainable farming

Introduction:

In today's industrial world man's innovative ideas has taken him towards all directions concerning about the production and safety in industrial establishments. Some instruments are of shear excellence where as others are the result of long research and persistent work, but it is not the amount of time and money spend in the invention of device or the sophistication of it operation is important, but its convenience, utility and operational efficiency that are important in considering the device. The existing methods of corn husking in agriculture industry consist of breaking the grains by hand the pieces , both of which are not effective and time consuming expose. Safety being a prime consideration, an innovative idea such as this would go long way in solving this simple but serious problem

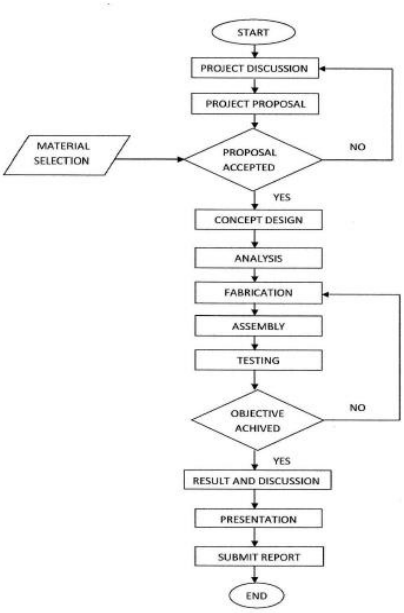
Objectives:

- To make a device which is suitable economically for husking processing taking into consideration the cost factor this device is suitable for threshing processing for common people
- Taking safety as prime consideration: This device is safer in all respects.

- This device is multi operation which can conduct various operation and this machine can be used whole
- To built a machine which can be easily operated by all the people.
- The main purpose of the machine is to eliminate the human efforts
- This device is multi operation which can conduct various operation and this machine can be used whole year. To utilization the force or the energy which is useless or unknown.

- To develop a device this can make work simple

Methodology:



This machine completely works on both motor and pedal as the mechanism used in sewing machine in this machine we can conduct various operations as mention in the application below we have prepared this machine in order that farmer can use this machine for whole year and no season wise the specialty of this machine is that it can conduct various operation in this machine we have made a special arrangement of mechanism by which the drum rotate as we have used 2 pulleys one big and one small in order to decrease the speed of the output shaft the mechanism is shown in block diagram below.

Result: The groundnut, Corn,Wheat,Paddy and sunflower seed removed are of nearly 500 kg per day

The battery once charged run the machine for 5 hours.

The force applied by a person by leg is about 200N is sufficient to operate the pedal for 6 hours daily and get output 200 kg per day

Conclusion:

We have taken up this project as real challenge, as we were not experience in the mechanical field. We started our work on this project facing new hurdles initially.

The manoeuvrability of the device is quite good and the handling is quite simple. For commercial purpose one can improve the efficiency of the device effectively by increasing the size of the device.

Project Outcome:

We feel the project that we have done has a good future scope in sector. The main constraint of this device is the high initial cost but has low operating costs.

Savings resulting from the use of this device will make it pay for itself with in short period of time & it can be a great companion in any field dealing with rusted and unused metals.

The device affords plenty of scope for modifications, further improvements & operational efficiency, which should make it commercially available & attractive. If taken up for commercial production and marketed properly.

Industry Relevance:

This project is highly relevant to a person having little land for farming. The variety of crops is grown by farmer in a year and the machine is seasonally used not regularly. So the project is not relevant to industries.

Working Model vs. Simulation/Study:

The project involved the development of a Physical Working model involving fabrication. Assemble the parts and apply the load and check the working find the output and make if changes if required.

Future Scope:

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