

## ***PADDY CLEANING AND PACKING***



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### ***ABOUT THE PROJECT :***

Paddy is a major crop which governs the agricultural sector of India. Paddy processing involves many labor intensive processes before it is converted to the final product of rice. The scarcity of labor and the high cost involved in laborious processes, topped by the dependance of paddy cultivation on weather has reduced profits from the sector drastically. Various mechanisation attempts have been made throughout the world in different stages of production. But all these attempts have been restricted to the individual processes making it a batch processing venture. As a step towards continuous processing of paddy, an attempt to combine the cleaning and packing process was done in the first phase of the project.

In the first phase of the project, a machine which cleans the paddy by removing the unwanted paddy was designed and developed inhouse. This machine consisted of a blower and shaker arrangement along with two conveyors - a screw conveyor and a bucket conveyor. A stitching machine was incorporated into this system to pack the cleaned paddy.

However, the demand for packed and cleaned paddy is not prevalent in the market and hence in the second phase, it is planned to combine a dehusking machine to convert the paddy into rice and also to develop a controller mechanism for converting all the batch processes to continuous mode. Once the controller is also implemented, the input for the system would be unclean paddy and output would be packed rice.

### ***OBJECTIVES :***

Moving on to the second phase, the following are the objectives of the project.

1. Purchase of a paddy dehusking machine for converting paddy to rice.
2. Fabrication of a conveyor arrangement from the cleaning machine to the dehusking unit.
3. Fabrication of conveyor from the dehusking unit to the packing unit.
4. Controller mechanisms using pneumatic controls for all the units for coordination
5. Finishing of the packing unit with the required pneumatic controls.

### ***OUTCOME :***

The automation and conversion of paddy batch processing to continuous processing is a requirement of the population of India, which depends on paddy cultivation. An attempt was made to develop a machine for cleaning and packing of paddy in the first phase of the project. In the second phase of the project, it is proposed to incorporate a dehusking machine along with the other machinery and convert the batch processing into continuous processing so that manual intervention is minimized in the process of converting paddy to rice.