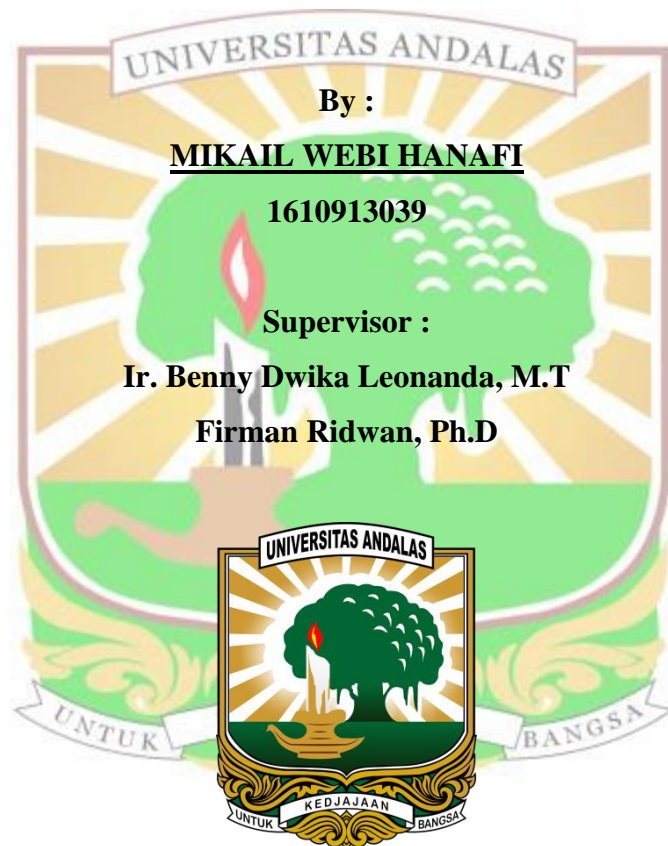


FINAL PROJECT

**DESIGN A TOOL FOR COLLECTING DRIED GRAIN
USING A SWEEPER AND BLOWER SYSTEM**

Submitted to Fulfill Requirement on Bachelor Degree (S1)



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ABSTRACT

Most of the manual work to collect and pack grain from drying out in the field is still done manually. This problem led to an idea to make a tool that makes it easier for workers. This grain collector is made by combining several other machine concepts. Among them are blower machines, sweeping machines, and grain collecting machines that using screw conveyors. This project was designed using various manufacturing processes that had previously been designed. In category, this tool belongs to post-harvest farming tools, by collecting grain through a sweeper, then forwarding it to a collecting funnel which is deliberately tilted at a certain angle to get the most suitable blowing position, and at the same time it is blown by a very strong wind flow, so the grain to be pushed out by itself at the end of the carrier. The main components of this tool are blower, sweeper, collecting funnel, engine, frame, engine speed controller, conveyance pipe, wheels, etc. The operation of this tool is done by manually, but the time is short than the existing tools. The results show significant differences in collecting capacity and working time. Other parameters such as power, efficiency and length of the tool are also taken into calculation. The design was made based on certain assumptions and calculations and the collector was built, tested and evaluated.

Keywords: Blower,sweeper,conveyor,collector,frame,efficiency,etc