

CHAPTER V

CLOSING

This chapter contains the conclusions and suggestions of this study.

5.1 Conclusion

The purpose of this study is designing a material handling facility concept design in facilitating the transfer of citronella harvest on steep slopes. The object of this research is farmer in the Rambatan district who often have a problem in harvesting on steep fields. The resulting design uses the Quality Function Deployment method with a focus on consumer needs and desires.

The chosen design is selected through the screening and scoring stages after getting the technical response and weight through the QFD iteration. After that the design was developed with its specifications. This material handling design has motor engine type specifications, namely Actual Speed 40 rpm, 12V DC, Rated Current 2.5A, min power output 30W, and peak torque up to 16Nm. Material Handling requires 1 battery with a capacity of 5AH, this battery specification is known after we get the selected type of motor. In the use of material handling, a steel pipe 115cm long and 3cm diameter is also needed to support material handling and its load. Furthermore, ergonomic aspects are also considered through which parts of the tool are directly related to the wearer such as trolley handling and load boxes that are adjusted in size to the anthropometry of the human body.

5.2 Suggestion

In future research for commercial purposes, it is recommended to do a more detailed cost calculation on the design so that the product can be marketed.