

ABSTRACT

Oil palm plantations are a fundamental source to produce crude palm oil (CPO) and palm kernel oil (PKO), both of which have high economic value. The harvesting process currently employs simple tools such as the dodos and egrek, which are manually operated by human labor. This often leads to complaints of muscle fatigue and soreness among workers. REBA score calculations indicate a high-risk level with an average score of 12 for the workers' posture. Therefore, changes are necessary to minimize risks, fatigue, and workplace accidents.

This study proposes an improvement in the harvesting tool by introducing a harvesting aid that uses a dry cell motor battery to generate motion, enabling the blade to cut fruit bunches at high speed. This proposed aid is intended to address challenges, alleviate complaints, and enhance the working posture of harvesters using the Quality Function Deployment (QFD) method. To validate the performance of the proposed harvesting aid, a REBA assessment was conducted on the workers' posture. The results showed a REBA score of 3, indicating a low risk level. Consequently, the workers' posture became more ergonomic.

Keywords: *oil palm plantations, dodos and egrek, QFD, REBA*