

ABSTRACT

Indonesia is an agrarian country where the majority of the population engages in planting, whether as a profession or a hobby. In the planting process, fertilizers are used to enhance crop quality. For a long time, inorganic fertilizers have been preferred by the public because they provide good results in a short period. However, the negative impacts of using inorganic fertilizers have begun to be felt, leading many to switch to organic fertilizers. Consequently, the production of organic fertilizers has become increasingly important.

Telkom University has an area that can utilize leaf waste generated daily on campus to produce compost fertilizer. The compost production process at Telkom University is still largely done manually with simple tools, especially during the packaging process. This situation forces workers into non-ergonomic postures, which could potentially increase the risk of Musculoskeletal Disorders (MSDs). This study aims to design a packaging tool using the Ergonomic Function Deployment (EFD) method, with the goal of reducing the risk of injury and MSDs, as well as increasing the efficiency of compost fertilizer production at Telkom University.

The study resulted in the design of a packaging tool in the form of a screw conveyor machine, along with several complementary suggestions such as a work table and chair. The use of this tool can reduce the Rapid Upper Limb Analysis (RULA) score from 6 to 2, and accelerate the packaging process from 55 seconds to 4 seconds.

Keyword : *Ergonomic Function Deployment, Musculoskeletal Disorders, Packaging process, Ergonomic, Screw Conveyor, Rapid Upper Limb Assessment.*