

Finite element analysis of new type of chassis for system of rice intensification (SRI) cultivation: A case study

Abstract

The new design agriculture chassis was successfully developed to support System of Rice Intensification (SRI) cultivation practices in Malaysia. The design of the chassis is able to carry small size petrol engine, sprocket and chain drive system. Future mechanism for weeder and transplanter can be attached at the rear of the chassis. FEA is divided into three main parts i.e chassis, wheel and handle. FEA results are based on safety factor value (FOS). FOS for the wheel during movement is the lowest which equal to 1.1. Since the load applied for FEA is approximately doubled than actual condition, the value of this FOS is considered sufficiently safe.

Keywords; Agriculture Chassis; System of Rice Intensification (SRI); Factor of Safety (FOS)