

Development of a mechanization selection system for oil palm plantations with alternative planting patterns

ABSTRACT

This article describes a study on the conceptual design and development of the most efficient mechanization selection system for oil palm plantations with alternative planting patterns. The study was conducted by extrapolating various planting patterns based on the existing triangular pattern and comparing these with machine information based on a constant mechanization package made for a large and rather flat area. The comparison of machines was conducted in earlier studies based on a combination of various plantation operations like fertilizer application, weeding, harvesting, in-field collection and loose fruit collection. The results obtained suggest that the most efficient planting pattern is the triangular planting pattern. The findings from this study will help to determine the efficiency of each machine besides optimizing the cost of implementing the package.

Keyword: Oil palm; Mechanization selection system; Planting pattern