

Performance of Tenera oil palm population derived from crosses between deli Dura and Pisifera from different sources on inland soils.

ABSTRACT

FELDA Agricultural Sdn Bhd (FASSB) has been exploiting various germplasm and advanced materials to broaden the narrow genetic base of its breeding population since 1968. The utilisation of these materials has resulted in more than 200 progeny test trials. From a total of 25 progenies analysed in this study, performance tended to group the teneras, according to their pisifera sources. Cluster analysis shows that the pisifera Dumpy AVROS and La Me were closely related populations in terms of performance while the pisifera Yangambi was the most different pisifera group. The highest bunch weight production was dominated by all the DxP (Yangambi) progenies for the young mature, mature and eight-year mean periods at 130.42, 217.00 and 175.34 kg palm⁻¹ yr⁻¹, respectively. In addition, DxP (Yangambi) progenies also scored highest for oil to bunch ratio at 29.50%, which differed significantly from the other pisifera sources. The highest bunch index and bunch dry matter were also attained by DxP (Yangambi) progenies at 0.41 and 12.65 t ha⁻¹ yr⁻¹, respectively. The highly significant differences indicated in the bunch yield, bunch components, vegetative and physiological traits from the analysis of variance revealed the existence of genetic variability among these traits which may allow for further improvement and exploitation.

Keyword: Tenera; Pisifera; Breeding population; Genetic variability; Oil palm progeny; Cluster analysis.