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Applications of Molecular Markers for Oil Palm Crop Improvement

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Although current oil palm breeding practices have been very successful in producing improved high yielding varieties, recent developments in the field of molecular biology can be employed to enhance plant breeding efforts and to speed up cultivar development. The sequencing of the oil palm genomes are providing new opportunities for oil palm crop improvement. Current challenges include understanding how genetic variation translates into phenotypic performance in the field. Felda Agricultural Services Sdn Bhd (FASSB), being a premier oil palm seed producer in the country, aims to take advantage of new genomic tools to fast track its oil palm improvement programme. FAASSB has been steadily developing the fundamental requirements and tools for implementation of marker assisted selection in its breeding programme. In this paper, FAASSB aims to show some of the implementation that is taking place in its laboratory and also some new efforts that are currently being pursued.

Keywords: Molecular markers, QTL analysis, genomic selection, marker assisted selection.

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