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Increasing Oil Palm Industry Profit, Malaysian Gross National Income and Government Tax Revenue with Breakthrough DNA Tests

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The sequencing and assembly of the oil palm genome, by a team led by the Malaysian Palm Oil Board (MPOB), rapidly resulted in the discovery of the SHELL gene which controls the tenera, dura or pisifera fruit-form phenotype of oil palm, a major contributor to mesocarp oil yield. This milestone allowed development of genetic tests capable of predicting fruit-form phenotype at the prenursery stage. Here, we explain a proposed cost effective strategy for staged SHELL genetic testing and discuss the economic impacts of implementing SHELL testing for molecular precision agriculture in the oil palm industry.

Keywords: SHELL test, non-tenera contamination, oil palm genome, economic impact.

