

Virescens Oil Palm – A Poorer Cousin of Nigrescens Oil Palm?

YOPY DEDYWIRYANTO, MANJIT SIDHU, SRI PURWANTI AND TAN JOON SHEONG

Over the last few years, there has been renewed interest in the virescens fruit type because of the prominent colour change in its fruit bunches from green to orange on ripening. This allows for more accurate judging of bunch ripeness based on colour and also provides better visibility of ripening bunches on taller palms. Commercial planting of virescens palms is to date, unknown in Malaysia, but in Indonesia, there are a number of seed producers who have commercially released D x P seeds of Nigerian parentage that produce an almost even mix of nigrescens and virescens palms, as their parental palms are heterozygous and not homozygous for the virescens trait.

The release of virescens seed in Indonesia has not been received enthusiastically by private palm oil millers and smallholders. There is an erroneous belief by private palm oil millers that virescens bunches have low oil content, often rejecting them or offering discounted prices, which in turn has discouraged growers from purchasing and planting seed that may give rise to virescens palms. In view of the controversy and lack of published data comparing the yield and oil content between virescens and nigrescens fruit types, data from seven Gen-2 D x P trials which included 81 crosses of Nigerian paternal parentage, that gave rise to virescens palms, was re-examined. The results of the re-examination are reported here.

Out of the 81 crosses evaluated, 32 crosses belonged to the commercially planted Topaz 3 and 4 series. Results from bunch component analysis of a total of 825 virescens and 1,051 nigrescens bunches, confirmed that there were no significant differences between the two fruit types, for the main bunch components that contribute to oil content. Fruit/bunch, mesocarp/fruit and oil/wet mesocarp ratios were similar in both fruit types. Oil content was equally high in both virescens and nigrescens bunches, ranging from 34.4 per cent in Topaz Series 3 to 35.7 per cent in Series 4.

In all seven trials, there were no significant differences recorded in both fresh fruit bunches (FFB) and crude palm oil (CPO) yield over a six-year period between the virescens and nigrescens varieties. Both varieties recorded high average FFB yields ranging from 35.1–35.7 tonnes per hectare for the Series 3 crosses and 37.1–38.2 tonnes per hectare for the Series 4 crosses, from the third to sixth year of harvesting. Likewise, CPO yields ranged from 10.3–10.5 tonnes per hectare and 11.3–11.6 tonnes per hectare for the Series 3 and 4 crosses, respectively, over the same time period.

The results also confirmed that the fears of smallholders and private oil millers were unfounded, as both the FFB and CPO yields of the virescens and nigrescens varieties had equally high yield potential. In addition, due to the equally high oil content in their bunches, planting a mixed population of nigrescens and virescens palms, or even a pure population of the latter, would have no negative impact on mill extraction rates.

Keywords: FFB yield, nigrescens, oil content, oil palm, virescens.