

Inflorescence morphology and physiological maturity of Hom Kiew Kom, Sam Doen and Thep Panom bananas

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Abstract

The objective of this research was to study the morphological characters of inflorescence (shape, bract curling, bract color, male flower color and stigma color) in chromosomal triploids namely Hom Kiew Kom (*Musa* AAA group), Sam Doen (*Musa* AAB group) and Thep Panom (*Musa* ABB group). The fruit at physiological maturity was assessed based on the standard maturity for banana according to fullness of fingers (no angularity, >90-100% mature) plus number of days from inflorescence removal, and, then harvest, the fruit hands were allowed to be ripe at ambient condition ($30\pm 2^{\circ}\text{C}$, $65\pm 2\%$ RH). Banana fruits at physiological maturity and fully ripe stages (the peel all yellow) were evaluated to determine the physico-chemical quality (crown weight, fruit width, fruit length, peel color, firmness and total soluble solids). The results showed that the inflorescences shape of Hom Kiew Kom and Thep Panom were broadly ovate with obtuse apex, whereas that of Sam Doen was lanceolate with acute apex. The bracts of three cultivars were covered with natural wax, curled up and rolled back. Bract color was reddish brown to reddish purple. Male flower colors were creamy-yellow (Hom Kiew Kom), yellow (Sam Doen) and pink (Thep Panom) with yellow stigma. Sam Doen banana had 58 days to reach to physiological maturity, which was earlier than Hom Kiew Kom (82 days) and Thep Panom (124 days). After stored at room temperature ($30\pm 2^{\circ}\text{C}$), Hom Kiew Kom and Sam Doen took 3 days for fruit ripening, whereas Thep Panom took 7 days. Total soluble solids increased 7-10 times at the fully ripe stage and was highest in Thep Panom (32%), followed by Hom Kiew Kom (27%) and Sam Doen (20%), respectively. In contrast, fruit firmness decreased 6-10 times at the fully ripe stage depended on the cultivars.