

**Title** Genetic improvement of fruit quality traits in starfruit (*Averrhoa carambola*) hybrids  
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### **Abstract**

Fruit quality performance of 12 selected starfruit F<sub>1</sub> hybrids from hybridisation programme were evaluated in MARDI Kluang Station, Johor. Four commercial and registered clones (B10, B17, B11 and B02) that were used as parents were also planted as control. Fruit quality traits recorded were fruit weight, fruit length, fruit width, wing width, wing length, total soluble solid (TSS) and number of seeds per fruit. Result showed six fruit quality traits were highly significant difference among treatments and one trait was significant difference among treatments. But there were no significant differences between replication. There is no wide variation of the fruit quality traits in hybrids except number of seed per fruit (CV- 38.04%) as starfruit is cross-pollinated crops. Among the treatments, hybrid 1711-24 show highest TSS and medium fruit size as compare to parents. Based on preliminary water content (juiciness) analysis, hybrids 1711-24 (88.7g) has comparable juice content with parent B17 (84.6g) that has lowest juice, meaning it will have good eating quality since starfruit contain too much water. Vitamin C content was highest in hybrid 1711-24 (32.2mg) as compared to parents. Overall, the hybrids show significant improvement of fruit quality traits as compare to parents and hybrids 1711-24 has potentials to become commercial clones because it has higher TSS and vitamin C, less water content but smaller in fruit size that is good for packaging for export market.