

SESSION 6

GOOD PRACTICES AND PRODUCTIVITY ENHANCEMENTS

FLORAL BIOLOGY, SYNCARP DEVELOPMENT AND ARIL QUALITY OF JACKFRUIT

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ABSTRACT

Jackfruit (*Artocarpus heterophyllus* L.) is a gigantic fruit with a Malaysian per capita consumption of 1.5 kg/year. A study was carried out to understand floral biology, syncarp (fruit) development and aril quality of jackfruit cv. Tekam Yellow syncarp harvested at different weeks after anthesis (WAA). Jackfruit is a monoecious tree and both male and female inflorescences are found on the same tree. Generally, the male inflorescence of jackfruit fell off starting from day 36 to 53 after emergence with mold covering its surface. During anthesis, the surface of male inflorescence was densely covered with yellow-coloured anthers. Once anther dehisced, the pollen grains were released from anther over a mean period of three days before the empty pollen sac wilted and abscised. However, female inflorescence took 92 to 130 days after emergence to mature with stigmatic receptivity can be identified by fleshy, straight and milky-white stigmas. The shape of stigma is spatulate or ligulate and slightly curved. The receptivity of a stigma lasted about 5 to 7 days and after anthesis, stigma started to wither and bend with hyphae growing on its surface. The syncarp of jackfruit took 13 WAA before its growth curve reached plateau. The aril of syncarp harvested at 14 WAA was higher in soluble solids content than those harvested at 12 WAA. Similarly, the aril of syncarp harvested at 14 and 15 WAA was higher in β -carotene content than those harvested at 12 WAA.

Keywords: anthesis, carotene, inflorescence, pollen, stigma