

Phenological characteristics of reproduction and seed formation in *Durio zibethinus* Murray

ABSTRACT

Phenological characteristics during the reproductive processes of flower budding, flowering, fruiting and seed formation were investigated in a *Durio zibethinus* Murray tree growing in an experimental field of Universiti Putra Malaysia (UPM) in Selangor, Peninsular Malaysia. The survival curve showed that the relative fall rate of reproductive organs was lower at the mixed stages of flower budding, flowering and fruiting than at the early fruiting stage. The fall of flower buds commenced after the flower budding was completed. However, the falls of flowers and fruits occurred within a few days after the formation of flowering and fruiting. The periods of flower budding, flowering and fruiting were 34, 19 and 28 days, respectively. The fruit weight growth was approximated by a logistic equation, where the intrinsic growth rate varied from 0.419 to 0.794 week⁻¹. The forming seeds germinated or possessed germination ability at the fruit growth stage where the fruit weight reached the asymptote of the logistic growth curve. Total numbers of emerged flower buds, flowers and fruits over the whole reproductive period were 1629, 1467 and 1412 per tree, respectively. The percentage of fruits with germination ability was estimated to be 1.2% of the number of fruiting ones.

Keyword: *Durio zibethinus* Murray; Fruit growth; Germination ability; Reproductive processes; Survival curve