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Differential ex-situ seed germination and seedling survival of selected Dipterocarpaceae species from Brunei Darussalam

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The Dipterocarpaceae family is an important tree family dominating the lowland forests of Borneo, where their populations are threatened by deforestation and land use changes. Through an *ex-situ* conservation project at the Universiti Brunei Darussalam Botanical Research Centre, selected dipterocarp species were collected as seeds (*Dipterocarpus borneensis* and *Dryobalanops rappa*) and seedlings (*Cotylelobium burckii*, *Hopea pentanervia*, *Hopea vacciniifolia*, *Shorea laxa* and *Shorea scaberrima*) during a small dipterocarp masting period in May 2021, from mixed dipterocarp and heath forest locations in Brunei Darussalam. Seed germination and seedling survival were recorded monthly over a seven-month period. *Dryobalanops rappa* showed significantly higher percentage seed germination than *Dipterocarpus borneensis*. For the seedlings, *Hopea pentanervia*, *Hopea vacciniifolia* and *Cotylelobium burckii* recorded high mean percentage survival exceeding 70% throughout the seven-months census period. In contrast, mean percentage survival of *Shorea laxa* and *Shorea scaberrima* seedlings were lowest, with final mean percentage survival below 50% by December 2021. These findings suggest that *Dryobalanops rappa*, *Hopea pentanervia*, *Hopea vacciniifolia* and *Cotylelobium burckii* have the potential to be used as candidates for reforestation projects because of their high seed germination and seedling survival.