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A Study on Tree Diversity in Association with Variability of Ironwood (*Eusideroxylon zwageri*) in Jambi, Indonesia

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Abstract

A study on tree diversity in association with variability of ironwood has been conducted at Senami forest stand in Jambi, Indonesia. Senami is one of natural forest stand that dominated by ironwood (*Eusideroxylon zwageri* T. et B.) species. The researches have been conducted from October 2002 to November 2002 using systematic plot sampling. The field research found that ironwood grows associatively with more than a hundred tree species. At tree stage, species that were recorded are 99. At pole stage, ironwood grows associatively with 90 species. At sapling stage, it grows with 125 species while at seedling stage ironwood grows with 92 species. The most important species for wood production are *Eusideroxylon zwageri*, *Palaquium hasseltii*, *Litsea* spp., *Ochanostachys amentacea*, and *Shorea* spp. All of the species belong to 28 families. The most dominant family is *Lauraceae* followed by *Moraceae*, *Euphorbiaceae*, *Anacardiaceae*, *Caesalpinaceae* and *Burseraceae*. The study also revealed that each ironwood variety grows in some small clusters. It can be found in about 68 % of forest area. The alternatives of cluster composition of ironwood variety are daging, kapur and sirap (4.69 %), daging and sirap (9.38 %), and sirap and tanduk (4.69 %). Sirap is the variety that able to form cluster with any other varieties. The SØRENSEN coefficient index between ironwood communities obtained that the most similar communities are the communities between daging and sirap with index of 0.792, followed by daging and kapur (0.569), sirap and tanduk (0.497), kapur and sirap (0.488), daging and tanduk (0.478), and kapur and tanduk (0.364).

Keywords: Ironwood (*Eusideroxylon zwageri*), tree diversity, variability