

The origin and domestication of *Aquilaria*, an important agarwood-producing genus

ABSTRACT

The *Aquilaria* (Thymelaeaceae) tree is a well-known important agarwood-producing genus, which is endemic to the Indomalesia region. The genus is currently protected under CITES regulation and the IUCN Red List due to its heavy declination in the natural population in various sourcing countries. Derived from its precious non-wood fragrant products, the genus was given different names throughout the history until it was finalized in 1783. To date, there are 21 recognized *Aquilaria* species recorded, of which 13 are reportedly fragrant resin producers, and the status of the remaining eight *Aquilaria* species is yet to be investigated. *Aquilaria* is heavily exploited in the wild due to the destructive agarwood harvesting technique that requires hacking of the wood parts to induce agarwood production. Various conservation efforts have been carried out to avoid further destruction toward its gene pool. This includes introducing the species for cultivation and planting the trees in large plantations or home gardens, which further provide a sustainable agarwood production in the industry and indirectly contribute to the local economy. At present, an accurate classification of *Aquilaria* species is yet to be achieved; misidentification happens frequently, either genuinely because of lack of information and training or intentionally for business gains. In conclusion, a proper taxonomy and classification system are essential for conserving *Aquilaria* species genetic diversity and for identifying species origin of agarwood products aimed at international trade control.

Keyword: Home garden; Reproductive part; Angiosperm phylogeny group; Trade control; Young sapling