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Evaluation of some wood quality measures of eight-year-old *Melia azedarach* trees

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Abstract: This study investigated the wood quality of 8-year-old *Melia azedarach* trees grown in Saudi Arabia. The wood quality of the trees was studied in terms of fibre length, specific gravity, and heartwood/sapwood area. The sampled trees were felled, their stem height and diameter were measured, and discs were cut from the stem base and breast height of each tree. Fibre length and specific gravity at breast height were determined, as well as the area and proportion of heartwood and sapwood at both base- and breast-height cross sections. The results showed that the fibre length of *Melia azedarach* wood varied between trees and ranged between 0.742 and 0.797 mm. It increased from pith to bark, ranging between 0.62 and 0.92 mm. Specific gravity did not vary among trees, but increased from pith to bark and ranged between 0.366 and 0.432. The proportion of heartwood accounted for about 70% at the base, but decreased to 63.32% at breast height. There was a significant variation in the proportion of sapwood between the base and breast height, as well as between trees. The area of sapwood in the breast-height cross section of *Melia azedarach* trees was 84.3 cm², compared with 102.3 cm² at the base; however, the proportion of sapwood was greater at breast height level.

Key words: *Melia azedarach* L., fibre length, specific gravity, heartwood/sapwood ratio

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