

O₂ Release Calculations for Broad Leaved Mahogany (*Swietenia macrophylla*)

Details of the Tree (Located on St. Marks Road, Outside Koshy's)

- DBH – 170 in
- Height (conservative) 25ft
- 450kg/cum based on wood density
- Net volume added (growth rate) 12750cu in = 552 kg

CO₂ Fixation and O₂ release

- 50% of 552kg (CO₂ fixed as per Kyoto protocol norms) = *276kg of CO₂ fixed yearly*
- Based on molecular weight of C (12) and O₂ (32) and on ideal gas laws (1 mole of gas occupies 22.4L at STP), O₂ production works out to be 45,168 L O₂/Day

Economics

- Current costs of medical oxygen – Rs. 0.28 / L
- 45,168 L (produced) x Rs. 0.28 / L

= Rs. 12,647 of O₂ produced per day

Source:

Personal communication; calculations carried out by Mr. BN Krishna, and previously published in the Economic Times.