

Estimation of leaf area index in two abaca (*Musa textiles* Nee) varieties by regression methods

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ABSTRACT

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A rapid, non-destructive and precise method for leaf area (LA) determination in two varieties (Inosa and Laylay) of abaca (*Musa textiles* Nee) was developed from linear measurements. Combining both length (L) and width (W) in the model could predict accurately the actual leaf area of abaca. The regression equations that gave the modest estimation for leaf area were $LA=1733.01+0.58(L \times W)$ ($r=0.87$) for Inosa and, $LA=-106.74+0.81(L \times W)$ ($r=0.99$) for Laylay variety. Total leaf area can be estimated using leaf number 3 (third leaf below the newly expanded leaf) and leaf number 1 (newly expanded leaf) for Inosa and Laylay varieties, respectively.

Keywords: leaf area, linear measurements, *Musa textiles*