Relationship between extractable chlorophyll content and SPAD values in three varieties of Kacip Fatimah under greenhouse conditions

ABSTRACT

Relationship between extractable chlorophyll and relative chlorophyll values obtained using Soil Plant Analytical Development (SPAD)-502 meter were determined in three varieties of Labisia pumila (alata, pumila, lanceolata) under greenhouse conditions using fresh weight basis. The experiment was arranged as a complete randomized design replicated three times with each experimental unit containing five plants. There were no significant differences ($P \geq 0.05$) for all the three varieties in their chlorophyll a, b and total. Best fit relationship was found to be linear in chlorophyll a, b and total ($P \leq 0.01$) with ascending slope as SPAD values intensified. Chlorophyll b was higher than chlorophyll a in all the varieties indicating species as shade-loving plants. The chlorophyll content of L. pumila leaves can be conveniently determined using SPAD-502 chlorophyll meter, a technique providing simple, rapid, and nondestructive method to estimate leaf chlorophyll content which could also be an indicator of leaf nitrogen (N) status.

Keyword: Chlorophyll a and b; Indirect plant nutrient status; Nondestructive chlorophyll estimation; Shade loving species