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Physiological Evaluations of Selected Clonal Oil Palm on Shallow Peat in Teluk Intan, Perak

MOHD ROSLAN MD NOOR, SAMSUL KAMAL ROSLI, HASNOL OTHMAN, MOHD HANIFF
HARUN AND AHMAD TERMIZI HASHIM

*Biological Research Division, Malaysian Palm Oil Board, 6 Persiaran Institusi, Bandar Baru Bangi, 43000 Kajang, Selangor
Darul Ehsan, Malaysia*

A physiological evaluation was done on selected clonal oil palms derived from different starting materials namely "L236 Normal", from normal cultures; "L236 Mantle", from mantle fruiting palms; "L238 Suspension", from liquid suspension cultures and "L238 Solid", from solid agar cultures. As a comparison, standard cross materials were used. Gas exchange measurements and other physiological parameter were done on leaflets of frond 17. Highest CO₂ assimilation rate was seen in the "LS238 Suspension" derived palms. "LS238 Solid" derived palms are considered as the best water saver based on WUE. In terms of light response curve, "L236 Normal" palms showed the highest assimilation with A_{max} of about 8 μmol/m²/s. All palms showed Mg foliar contents exceeding the minimum Mg foliar quantity needed. Cu deficiency was noted in the "L236 Mantle" and "L236 Normal" derived palms. All palms had minimum B foliar contents, with the lowest content in "LS238 Solid" and thus was 40 per cent lower than DxP palms

Keywords: *Oil palm, clonal oil palm, peat, WUE, physiological evaluation.*

