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Mucuna bracteata – Biomass, Litter and Production

Nutrient

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The rate of dry litter production of four-year-old Mucuna bracteata cover under full sun was found to be equivalent to 13.0 mt per hectare per year on undulating terrain in inland soil of West Kalimantan. The nutrients from the litter mulch are equivalent to 8.3 kg per palm per year of fertilisers (5.1 kg urea + 0.8 kg RP + 1.0 kg MOP + 1.4 kg kieserite) at a palm density of 138 per hectare. One hundred percent Mucuna bracteata cover still persisted under eight-year-old palm stand, but the total biomass was 40 per cent less than Mucuna bracteata in the open. However, the nutrient levels of green parts of Mucuna bracteata under shade were higher than in the open.

When the Mucuna bracteata cover was slashed at six-monthly intervals, the rate of biomass returned to the soil was 17.7 mt per hectare per year, 36 per cent higher than the litter produced of undisturbed Mucuna bracteata. The nutrients from the slashed biomass were equivalent to 10.5 kg per palm per year (6.0 kg urea + 1 kg RP + 1.8 kg MOP + 1.7 kg keserite).

Keywords: Biomass, litter, green manure, Mucuna bracteata, legume cover crop