

Fertilization and MATAG Coconut Seedlings Growth in Nursery

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In Malaysia, there is limited comprehensive information on nursery stage coconut production and fertilization. Moreover, regarding the MATAG coconut variety, there is no available information on the comparison of fertilization effects in one- or two-stage nurseries. Therefore, detailed fertilization assessment and comparison of the coconut MATAG variety at the nursery stages are vital to ensure the quality and uniformity of coconut seedlings. MATAG seedlings were raised in a nursery and later tested with varying fertilization treatments, either in a one-stage field nursery (planting in seed beds) or two-stage nursery (polybags). The fertilizer treatment only started 60 days after seed nuts were sown in beds, roots of seedlings were cut, and fresh roots were allowed to grow. The treatments included current nursery practices (full foliar fertilizer 100% every 2 weeks as control), while the remaining four treatments consisted of varying NPK fertilizer rates mixed with growth medium (sand) (basal fertilization). Similar experimental treatments were applied for polybag set up. MATAG coconut seedlings of a uniform age were planted in beds and polybags. Eight Mataq seedlings were planted in each bed, while only one seedling was planted per polybag of 20 kg sand. Foliar fertilizer was applied at 14 days intervals. The growth of coconut seedlings was observed for 4 months with measured data on plant height, stem girth, and photosynthetic activity. After four months, no significant differences in growth data were noted between fertilization treatments for MATAG seedlings grown in beds. In contrast, the growth of MATAG seedlings raised in polybags and treated with NPK as basal fertilizer was significantly better than that of the control (foliar fertilizer). The findings of the observed seedling root growth (data not shown) in polybags suggested that raising MATAG seedlings fertilized with NPK as a basal fertilizer in polybags is suitable for seedling production of premium coconut varieties.

Keywords: Coconut seedlings, fertilizer, growth, one and two stage nursery