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RESEARCH PAPER

Effect of nutrient management on leaf chlorophyll and productivity of yellowing affected arecanut (*Areca catechu* L.)

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Abstract : Among various factors associated with yellowing of arecanut, soil health and balanced nutrition are profoundly important. Field experiment was conducted in sixteen year old irrigated arecanut (*Areca catechu* L.) plantation in farmer's field during 2004-2006 to study the effect of application of sulphur, magnesium, silicon, zinc, boron and varying levels of calcium, potassium and organic manure on leaf chlorophyll and yield of yellowing affected arecanut. Prevailing farmer's practise and recommended practice were taken as controls. The experiment was laid out in randomized block design with five replications. Observations taken on leaf chlorophyll content, yellowing index, kernel weight and fruit number were analysed. Magnesium sulphate application significantly increased leaf chlorophyll-a by 221 per cent, chlorophyll-b by 200 per cent and total chlorophyll by 201 per cent than the pre-experiment contents and thus significantly lowered yellowing index by 77 per cent. Applications of sulphur together with potassium markedly increased fruit number resulting in 6 per cent increased kernel yield compared to treatments where higher than recommended rate of potassium alone was applied. The study indicated that application of 150 g lime, a minimum of 15 kg farm yard manure, fertilizer at 100 g N, 40 g P_2O_5 and 200 g K_2O/palm/year applied in two equal splits in February and September by way of including a sulphur containing fertilizer source to supply a minimum of 100 g sulphur, 60 g magnesium sulphate, 20 g zinc sulphate and borax at 20 g/palm/year may be adopted for managing yellowing affected arecanut palms cultivated in irrigated terraced upland toposequence of Western ghat.

Key Words : Arecanut, Boron, Chlorophyll, Magnesium, Yellowing, Zinc

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