EFFECT OF DEPTH AND FREQUENCY OF IRRIGATION WATER, AND FERTILIZER LEVELS ON GROWTH AND YIELD OF COCONUT

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SUMMARY

An experiment comprising three depths (D_1-20, D_2-40 and D_3-60mm water per irrigation), three frequencies, based on IW/CPE ratio(f_1-1, f_2-0.75 and f_3-0.50) and three levels of fertilizers (M_1-500 g N + 330g P_2O_5 + 750g K_2O + 170g MgO; m_2-750g N+670g P_2O_5 + 1500g K_2O + 170g MgO; and M_3-1000g N + 1000g P_2O_5 + 2250g K_2O + 170g MgO/palm/year) was laid out in a 3^3 factorial confounded design with two replications at CPCRI, Kasaragod in 1968. The fertilizers were applied in two and four splits which formed sub-plot treatments. There were also four side treatments namely, IW - 60mm at IW/CPE ratios of 1.0, 0.75 and 0.50 without fertilizers and m_2 level of fertilizers without irrigation.

The cumulative yield since bearing was significantly influenced by the main effects, viz., depth(D), frequency (f) of irrigation, fertilizer levels(m) and D xf and fxm interactions. Irrigation with 20 mm water at IW/CPE = 1.0 produced highest number of nuts (918) per palm followed by same quantity of water at IW/CPE = 0.75 (872 nuts). IW/CPE

ratio of 1.00 at m_2 level of fertilizers recorded higher production whereas IW/CPE ratio of 0.75 produced higher nuts at m_3 level of fertilizers.