## *ABSTRACT*

*Experiments were conducted to evaluate the use of coir dust as a soil ameliorant in coconut cultivation. The preliminary laboratory studies were aimed at the properties of coir dust and its effects on moisture storage and conservation and nutrient balance.*

*Water holding capacity of different ratios of coir dust : sand mixtures were determined under laboratory conditions.*

*Nitrogen availability of coir dust were determined mixing it with nitrogenous fertilizer (urea - 46%). Total and available nitrogen were measured at time intervals during an incubation period of 57 days. Total and available nitrogen were determined by the micro-Kjeldahl method.*

*Using Brachiaria miliiformis L. the rate of dry matter production under glass house conditions of different ratios of urea and coir dust were determined. It was found that maximum availability of nitrogen and dry matter production was obtained on the $36^{th}$ day of incubation period.*

*Statistical analysis of data were carried out by an analysis of variance, regression and correlation.*

*These studies revealed that gravimetric moisture content of coir dust at field capacity was 1112 ± 18% and the water holding capacity for different ratios of coir dust : sand mixtures the optimum ratio is about 5% V/V.*

*Incubation studies on nitrogen availability of coir dust indicated the "optimum" ratio of urea : coir dust to be 2% W/W.*

*Rate of plant growth study showed maximum vegetative dry matter in 2% urea W/W and 180,000 kg/ha coir dust. However, controls (coir dust) treatment showed maximum root dry weight.*

*Results of these studies showed that coir dust could be utilized as a cultural practice for soil moisture storage and conservation.*