

B-90: Preliminary studies on immature nutfall in coconut with special reference to insect pests and diseases

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The objective of this experiment was to identify, categorize and evaluate the causes of immature nutfall in coconut. Twenty healthy palms were selected for the study and one inflorescence was chosen per palm. Soon after the opening of inflorescence a net basket was hung just below the opened inflorescence. Fallen nuts were collected at weekly intervals over a 6 month period. Each nut was carefully examined and categorized as nuts damaged due to insect pests, pests other than insects, disease and physiological reasons. Three major factors, viz. diseases, pest damage and mechanical causes were identified as predominant causal agents for nut shedding. Diseased nuts were identified by the light brown to dark brown patches on the epicarp, mainly in the perianth region. Isolation was performed on discolored tissues of diseased nuts. *Fusarium* sp and *Phytophthora* sp were recorded in these nuts. Insect attacks were identified by their feeding signs. Insects associated with nuts were identified as mealy bugs (*Dysmicoccus* sp) scale insects (*Aspidiotus destructor*), mites, *Meridolus* sp and *Cyclodes omma*. This damage was comparatively high in the first 4 months after fruit set. Older nuts mainly shed due to rat and bat damage. Nut shedding due to physiological reasons was identified by the healthy appearance and the characteristic uniform browning of the nuts.

Nut shedding due to pest damage was low (13%) when compared with that due to physiological reasons (52%). Results indicated that the nut shedding due to fungal attack is an important factor (33%) in immature nutfall in coconut.