

**INFLUENCE OF CLIMATE AND WEATHER ON THE NUT
YIELD OF COCONUT (*Cocos nucifera*)**

By
T S G Peiris

**Division of Biometry
Coconut Research Institute
Lunuwila
Sri Lanka**



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SUMMARY



Coconut is one of the most important and valuable tree crops in Sri Lanka as a part of diet and as a source of export earning. It is grown exclusively for nut production in Sri Lanka and the main kernel products of coconuts are copra, desiccated coconut, coconut oil and poonac. The coconut palm generally comes into flower in about the 5-6th year, if water, light and nutrient conditions are favourable and it produces twelve bunches at the rate of one per month. Development from the flower primordium to the harvest of mature nuts (drupe) takes 44 months of which the primordium takes about 32 months to emerge ('non-visual cycle'), and the last 12 months represent the period taken from the opening of the spathe to harvest of mature nuts ('visual cycle').

Coconut in Sri Lanka is harvested during January/February, March/April, May/June, July/August, September/October, and November/December. Within a location of uniform soil and management, the nut yield of coconut has a large variation among picks and among years due to the climate variabilities. However, extensive attention has not been carried out to understand the effects of climate and weather on the nut yield of coconut and on the phenology of the crop development (Prasada Rao, 1991).

The importance of these studies is enormous. The knowledge gathered by the previous work on the effects of climate and weather on nut yield of coconut is not sufficient to determine the important climatic variables, to explain the yield variability within years, to quantify the effects of climatic variables etc. No studies have been carried out to find the effects of climatic variables simultaneously either on pick-wise yield or total annual yield. The studies in Sri Lanka were carried out to find the effects of rainfall on the total annual yield. Thus, in this study the effects of eight climatic variables simultaneously on both pick-wise and annual yield are studied to address some of the gaps mentioned above.