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Growth, flowering and fruiting pattern of cardamom {*Elettaria cardamomum* (Maton)} in low elevation

Recently cardamon, Electtaria cardamomum (maton was introduced to inter-crop with the rubber plantations in low country wet zone of Sri Lanka. Since cardamom is a new

crop to this climatic region, information on growth, flowering and fruiting in relation to the weather pattern would be helpful to develop a new cropping system.

The study was conducted using the selected cardamom lines at Ratnapura, Kegalle and Kalutara districts since 1996. Thirty-six cardamom bushes were randomly selected to collect information on numbers of pseudostems, panicles, flowers and capsules. Weather data were recorded daily.

It is evident that there is a positive correlation between weather pattern and crop development. It was observed that 2nd and 4th quarters of the year were the wettest (>1250mm) period while 1st quarter was the driest(<250mm). In relation to that number of pseudostems were reduced by 13-35% in the 1st quarter irrespective of the cardamom selection and the location, while new shoot development was at the peak (45%) in the 3rd quarter. Rains in the 2nd quarter enhance the panicle development and continued to be producing panicles in the 3rd and 4th quarter of the year. Similarly more number of flowers (10-20/clump/day) were observed during the 2nd and 3rd quarters. Highest yield (>150 capsules/clump) were harvested in the 4th quarter while lack of rain in the 1st Quarter effect the yield severely in the 2nd quarter where no yield was harvested. This shows that comparatively dry 1st quarter has a considerable effect on shoot and panicle growth of cardamom in low elevations and this could be overcome by improving soil moisture status using supplementary irrigation during the dry period.