ESTIMATION OF FLORET NUMBER IN FICUS RECEMOSA USING MULTI LAYER PERCEPTRON AND LINEAR REGRESSION

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The genus Ficus (Moraceae) comprises about 900 fig species of which 750 species constitute the most distinctive of the wide spread genera of tropical plants. Ficus produces a specific inflorescence known as "syconium" which is characteristic to the genus. The fruit (syconium or fig) and reproduction systems of species in the genus Ficus are unique. Ficus species can only be pollinated by their associated wasps. After pollination the syconia grow rapidly and produce seeds.

The viable seed number and floret number in a fruit are important traits in studies of fruit development, as well as in psytopathological researches. The direct measurements of these traits are difficult and time consuming. Therefore, the present study is conducted to investigate the relationship between the floret number, fruit size and fruit weight in Ficus species using *Ficus recemosa*. This relationship between floret number and fruit traits can be used as an indicator to identify the changes in figs due to climate changes and the vegetation disturbance. The influence of fruit traits upon floret number has examined by measuring fruit length, fruit diameter, fruit weight, number of seeds per fruit and number of galls per fruit. Ecologically survival of these keystone fig species is very important. The present study is also important to forecasting about the local extinction of these keystone fig species.

Ficus recemosa is selected for study and the study site is located in Trincomalee district in dry zone of Sri Lanka with moderate vegetation cover. Regression analysis and neural network are used to assess relationships among the floret number and fruit traits in *Ficus recemosa*.