



Habitat Selection for Lemongrass (*Cymbopogon citrates* Stapf.) Cultivation in Non-Reserve Forests of Southern Western Ghats, Tamil Nadu, India

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Abstract: In Anaimalais of Western Ghats, the two tribal communities, Pulayar and Mudugar are an integral part of ecosystem. These tribes did cultivation of lemongrass and distilled oil. After the declaration of Anaimalais as a protective area for biodiversity conservation, they are not permitted to continue the practice of lemongrass cultivation. However, they are allowed to extract oil from the existing populations, without adapting any cultivation practices. Therefore, when rehabilitating these tribes to other non-reserve forests of adjoining regions, habitats suitable for lemongrass cultivation with good oil quality similar to that of in Anaimalais must be identified. The present study aims to evaluate favourable habitat for lemongrass in Udumalpet Range of Anaimalais, among the areas where the lemongrass oil distillation is under practice by the tribal communities. The results of the study show that among the six sites, Kurumalai and Kulipatti are more favourable for lemongrass growth and oil yield. Correlation and regression analyses showed that the rainfall, relative humidity, pH, Ca and Mg contents of soil and altitude are largely determining the biomass production, oil concentration in biomass and citral percent in oil. Therefore, it is suggested to identify habitats in nearby non-reserved forests with more or less similar climatic conditions, soil pH and nutrients and altitude as in Kurumalai and Kulipatti for practicing agroforestry by lemongrass cultivation and oil distillation for tribal communities.

Keywords: Lemongrass biomass, Oil and citral contents, The Anaimalais
