RESEARCH ARTICLE

UNDERSTORY DYNAMICS IN DIFFERENT SITES OF SARGUJA FOREST DIVISION (CHHATTISGARH), INDIA

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Abstract: The rapid growth and development in urban area through industrialization leads rapid socio-economic deviations throughout the world, especially in Asian region which exert substantial impact over agricultural, forestry and other inter-related ecosystems. The increasing population also intensifies the global wood demand and these scenarios were more drastic in the developing countries due to demand and supply gap. These gaps can be overcome through the application of plantation forestry. In this connection we studied five vegetation stands (i.e., Teak, Sal, Mangium, Eucalyptus and Bamboo) of the Sarguja forest division in Chhattisgarh, India to assess the understory vegetation stratum, associated floral diversity and litter biomass through stratified random sampling technique. Total 6 herb species distributed into 4 families and 9 shrub species of 8 families were recorded across the sites. The total density of herb ranged from 72000-244000 individual ha^{-1} across the site being highest under teak plantation and lowest under bamboo stand. The shrub density ragned from 50-640 individual ha^{-1} in different sites being highest under teak stand and least in bamboo stand. The Shannon index for herb layer was lowest under bamboo stand and higher under mangium stand. In case of shrub the lowest value of Shannon index was recorded for sal stand and highest under both mangium and eucalyptus stand. The total forest floor biomass varied from 0.86-3.01 t/ha being lowest in bamboo stand and highest under sal stand. The information related to understory vegetation and its dynamics is essential towards management of vegetation stand.

Keywords: Herb, Diversity, Forest floor biomass, Plantation, Shrub

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