

TREE LAYER COMPOSITION AND CARBON CONTENT OF OAK AND PINE IN LOHAGHAT FORESTS OF KUMAUN HIMALAYA

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Abstract: Present study deals with composition of tree species, biomass and carbon content of forests in Lohaghat (Champawat) in Kumaun Himalaya. Total 06 tree species were reported from the study forest sites i.e. *Quercus leucotrichophora*, *Pinus roxburghii*, *Cedrus deodara*, *Myrica esculenta*, *Prunus cerasoides* and *Xanthoxylum alatum*. The *Quercus leucotrichophora* was dominant tree (82.7%) in the study forest site. Oak tree shared maximum basal area (24.96m²ha⁻¹) and important value index (210.72). Total density of trees, seedlings and saplings was 2860 ind ha⁻¹. Of this, tree, seedling and sapling shared 46.5, 21.0 and 32.5 percent. The biomass and carbon content of oak and pine was 128.10 t ha⁻¹ and 72.87 t ha⁻¹, respectively. Of these, oak trees shared 79.19 % biomass and 81.5 % carbon, respectively. The findings of density, basal area, biomass and carbon content depicted that forest is in young stage with less number of tree species, needs a proper management and conservation so that tree layer species composition, biomass and carbon stocks could be increased.

Keywords: Basal area, Biomass, Carbon content, Density, Tree species

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