

# Methods of computing carbon sequestration rate and above ground biomass carbon content of plants-modern schemes of practical ecology in geographical researches

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## SUMMARY

Plants act as a sink for carbon dioxide (CO<sub>2</sub>) by absorbing carbon during photosynthesis and by storing excess of carbon naturally as biomass in their different parts of the body such as stems, branches, leaves etc. Since the biomass of the plant experiences a continuous growth, the carbon detained by the plant also increases carbon stock. In general the rate of carbon storage increases in young ages of the species and successively declines in their middle ages. In this article an endeavour was taken to highlight two modern methods of practical ecology in geographical researches such as the computation of carbon sequestration rate (CSR) and above ground biomass carbon content (AGBCC) to understand the specific growth of plants. In addition, this article also expresses the results of a small experiment on a relatively young sal tree at the Bankura Christian College premises in Bankura district of West Bengal. Diurnal carbon sequestration rate and above ground biomass carbon content of young sal trees were nearly found half of the total biomass which is quite natural in amount. Here carbon dioxide measured with the help of an automated Vaisala made instrument called, GMP343. Further, above ground biomass stock and carbon of the selected plants measured by taking volume of biomass and specific gravity of the plants. Experimentation of computing carbon sequestration rate and above ground biomass carbon content of plants by a geographer was quite a challenging task. Plant science and practical ecology are the new terminologies presently introduced in bio-geography. Geography the discipline, being a spatial science could analyze the differences in distribution and functions of any geographical phenomena on spatial ground with respect to time. In this context, this article peeps into and scans the relative distinctions with respect to the sequestration rate and biomass carbon content of the young sal plants on spatio-temporal ground. For instance, ambient carbon dioxide of the plants determined at two locations in the study area *i.e.* inside the college premises and in and around the college gate near a busy highway. Results naturally found rich carbon content in case of the plants located near the highway, about 15 ppm more than their counterpart.

**Key Words :** Above ground biomass carbon content, Carbon sequestration rate, Sal tree, Gravimetric method, Specific growth, Practical ecology

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