

APPENDIX

Table: C: N ratio of the studied ecosystems of Kaziranga National Park across three seasons. Each value \pm standard deviation (SD) is the mean of three replicates.

| Ecosystem | Pre-Monsoon | Monsoon | Post-Monsoon |
|------------------|--------------------|-------------------|---------------------|
| GLT | 19.5 \pm 0.31def | 18.3 \pm 0.05c | 19.1 \pm 0.12d |
| GLS | 19.8 \pm 0.12fg | 18.6 \pm 0.17c | 19.6 \pm 0.18ef |
| FLT | 20.2 \pm 0.20gh | 19.1 \pm 0.15d | 19.7 \pm 0.30f |
| FLS | 20.5 \pm 0.73h | 19.2 \pm 0.09de | 19.6 \pm 0.12ef |
| WL | 18.4 \pm 0.33c | 16.8 \pm 0.05a | 17.2 \pm 0.35b |

Mean values in the same column sharing the same letters do not differ significantly according to the Duncan's multiple range test at $p < 0.05$. GL-Grassland, FL- Forestland and WL -Wetland ecosystem of Kaziranga National Park.

LIST OF PUBLICATIONS

Research Article:

Borah, P., Gogoi, N., & Mahanta, S. P. (2023). Seasonal Variation in Carbon Mineralization Kinetics, Microbial Biomass Carbon and Enzyme Activities in the Soils of Three Natural Ecosystems of Kaziranga National Park, Assam, North East India. *Journal of Soil Science and Plant Nutrition*, 1-12. <https://doi.org/10.1007/s42729-023-01402-4>

Borah, P., Gogoi, N., Asad, S. A., Rabha, A. J., & Farooq, M. (2022). An Insight into Plant Growth-Promoting Rhizobacteria-Mediated Mitigation of Stresses in Plant. *Journal of Plant Growth Regulation*, 20:1-28. <https://doi.org/10.1007/s00344-022-10787-y>

Book Chapter:

Borah, P., Baruah, N., Gogoi, L., Borkotoki, B., Gogoi, N., & Kataki, R. (2020). Biochar: A New Environmental Paradigm in Management of Agricultural Soils and Mitigation of GHG Emission. In *Biochar Applications in Agriculture and Environment Management* (pp. 223-258). Springer, Cham.

**PAPERS PRESENTED IN SEMINAR, CONFERENCE, SYMPOSIUM AND
ANNUAL CONGRESS**

National

National Conference on “Current Perspectives of Environmental Science and Technology”
1 March, 2022, Department of Environmental Science, Tezpur University (Title:
Soil carbon mineralization under different soil textural groups of Assam).

International

International Plant Physiology Virtual symposium on “Physiological Interventions for
Climate Smart Agriculture” (IPPVS-2021), 11-12 March, 2021, ICAR- Sugarcane
Breeding Institute, Coimbatore, Indian Society of Plant Physiology (ISPP), New
Delhi, Society for Sugarcane Research and Development (SSRD), Coimbatore &
NAAS Chapter, Coimbatore (Title: Effect of moisture stress on soil nutrient
availability and yield performance of late sown toria in acid soils).