NIRMALI GOGOI

ADDRESS FOR CORRESPONDENCE

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ACADEMIC QUALIFICATION

2016-2017	Post -Doctoral Research Department of Biochemistry and MolecularBiology Oklahoma State University, USA
2005	Ph. D. Dibrugarh University, Dibrugarh Thesis title: METHANE EMISSION ESTIMATION FROM DIFFERENTRICE AGROECOSYSTEMS OF ASSAM
1999	MSc. In Agricultural Science (Crop Physiology) Assam Agricultural University Jorhat, Assam, India

FELLOWSHIP/ SCHOLARSHIP AWARDED

1. Raman Fellowship for Post- Doctoral Research toUSA (2015-2016).
2. University merit scholarship from 1997 to 1999,during post-graduation study.
3. National merit scholarship from 1989 to 1996 during Higher secondary onwards till graduation.

FIELD OF INTEREST

1. Environmental Physiology of Plants (StressPhysiology)
2. Green House Gas Emission and Carbon Sequestrationfrom Agro-Ecosystem and Forest Ecosystem.

WORKING EXPERIENCE

1. Worked as Senior Research Fellow in Assam Agricultural University Jorhat in a Department of Science and Technology (DST) funded Project fromDec.1999 to August 2003.
2. Worked as Technical Assistant in the Department ofEnvironmental Science, Tezpur University from April 2004 to March 2009.
3. Worked as Assistant Professor in the Department ofEnvironmental Science, Tezpur University, Assam fromMarch 2009 till March, 2020.
4. Worked as Associate Professor from March 2021 till date.

Ph.D. RESEARCH SUPERVISION

Completed: **09**
Submitted: **0**
Ongoing : **07**

Sl. No.	Title of the Thesis	Name of the PhD. Awardee	Year
1	Studies on some physiological and biochemical parameters associated with drought tolerance of pulses grown in Assam	Bhaswatee Baroowa	2015
2	High temperature Responses on growth and development of potato crop (*Solanum tuberosum* L.): Mitigation strategies for sustainable yield	Sreyashi Paul	2017
3	Studies on dynamics of carbon sequestration and its enhancement from upland Agro-ecosystems of Assam	Banashree Sarma	2017
4	Improvement of Drought stress in Mung bean (*Vigna radiate* L.) Genotypes: A molecular approach	Nandita Bharadwaj	2019
5.	Analysis of Greenhouse gas methane and nitrous oxide emission in relation to global warming potential and carbon storage from rice ecosystem	Dipti Gorh	2020
6.	Bioavailability of heavy metals in acidic sandy loam soils of Assam: Influence of soil amendments	Nijara Baruah	2022
7	Impact of moisture deficit stress on nitrogen and phosphorus mineralization: Role of soil amendments	Subham Mondal	2023
8	Role of soil properties on ecosystem carbon flux in a semi evergreen forest of north east India	Palakshi Bora	2023
9	Biochar to mitigate GHGs emission from acidic sandy loam soil of Assam: Role of feedstock and production techniques	Juri Chetia	2024

M.SC. PROJECT SUPERVISION

Completed: **39**
Ongoing: **3**

Courses Taught	
ES-551	Fundamentals of Environmental Science
ES-558	Environmental Biology
ES-567	Environmental Plant Physiology and Biochemistry
ES-571	Climate Change and Its Impacts
EN-552	Climate Change Mitigation and Energy Management
ES-721	Soil and Nutrient interfaces
MR-401	Climate Change: Issues, Management and Mitigation
ESMD-201	Understanding Climate Change

LIST OF PUBLICATIONS

A) Original Research Papers: -

1. Chetia,J.;Gogoi,N. and Baruah,D. (2024). Potential Use of Conventionally Produced Low Technology Tea Pruning Litter Biochar as Soil Amendment: A Comparative Study, International j. Env. Sc. DOI:10.1007/s41742-024-00680-9.

2. Debburman,P., Projesh,Ag.,Chakraborty,S.,Tiwari,Y.K.;Sarma,D. and Gogoi,N. (2024) Simulating the ecosystem-atmosphere carbon, water and energy fluxes at a subtropical Indian forest using an ecosystem model.Ecological Modeling. DOI:10.1016/j.ecolmodel.2024.110637.

3. Mondal,S.Gogoi,N. and Nath,D.J.(2023) Combating Drought Stress Anomalies in Grain Quality of Phaseolus vulgaris : Role of Soil Amendments;Communi.soil sci. plant Analy. DOI http://dx.doi.org/10.1080/00103624.2023.2295278.

4. Baruah, N. & Gogoi, N. (2023). Contrasting impact of soil amendments on bioavailability, mobility and speciation of zinc in an acidic sandy loam soil. South African Journal of Botany. 154. 309-318. 10.1016/j.sajb.2023.01.043.

5. Bhuyan P, Borah, S. Bhuyan, B. Hazarika, S. & Gogoi, N. Gogoi, A. & Gogoi, P. (2023). Fe3S4/biochar catalysed heterogeneous Fenton oxidation of organic contaminants: Hydrogen peroxide activation and biochar enhanced reduction of Fe (III) to Fe (II). Separation and Purification Technology. 312. 123387. 10.1016/j.seppur.2023.123387.

6. P Borah, N Gogoi, SP Mahanta (2023) Seasonal behaviour of carbon mineralisation kinetics, microbial biomass carbon and enzyme activities in three natural ecosystems of Kaziranga National Park, Assam, North East India. Soil sci.Plant Nutr. DOI: https://doi.org/10.1007/s42729-023-01402-4

7. A Sarkar, N Gogoi, S Roy Bisphenol-A incite dose-dependent dissimilitude in the growth pattern, physiology, oxidative status, and metabolite profile of Azolla filiculoides, - Environmental Science and Pollution Research, 2022.

8. Mondal, Subham, Sarma, Banashree, Narzari, Rumi, Gogoi, Lina, Kataki, Rupam, Garg, Ankit & Gogoi, Nirmali. (2022). Role of pyrolysis temperature on application dose of rice straw biochar as soil amendment. Environmental Sustainability. DOI 10.1007/s42398-022-00217-w.

9. Chakraborty, S.; Deb Burman, P.K. ,Sinha, N., Sarma, D. Metya, A, Nurkute, C. Gogoi, N. Bora,A., Saha ,S. Maji, D.K. Parua and S. Bera (2022) Linkage between precipitation isotopes and biosphere-atmosphere interaction observed in northeast India. npj Climate and Atmospheric Science DOI 10.1038/s41612-022-00231-z.

10. Deb Burman, P.K., Chakraborty, S. El-Madany, T.S., Ramasubramanian, R., Gogoi, N., Gnanamoorthy, P., Charuta Murkute, S, Nagarajan, R., Karipot, A. (2022) A comparative study of ecohydrologies of a tropical mangrove and a broadleaf deciduous forest using eddy covariance measurement, Meteorology and Atmospheric Physics, 134:1, 1-22.

11. Sarma, D., Deb Burman, P.K., Chakraborty, S. Gogoi, N., Bora, A., Metya, A., Datye, A., Murkute, C. Karipot, A.(2022) Quantifying the net ecosystem exchange at a semi-deciduous forest in northeast India from intra-seasonal to the seasonal time scale. Agricultural and Forest Meteorology, 314, 108786.

12. Metya, A., Chakraborty, S., Bhattacharya, S.K, A., Datye, A., Deb Burman, P.K., Dasgupta, P., Sarma, D., Gogoi, N., Bora, A.(2021) Isotopic and Concentration Analyses of CO2 and CH4 in Association With the Eddy-Covariance Based Measurements in a Tropical Forest of Northeast India. Earth and Space Science,8:6, e2020EA001504.

13. Sharma, A., Das, S., Bora, A., Mondal, S.C.,Gogoi, N., Dwivedi, S.K. (2021)Phycoremediation of water of Ellenga beel polluted with paper mill effluent using Chlorella ellipsoidea and Desmodesmus opoliensis,Bioremediation Journal, 1:11

14. Chandra Obul Reddy Puli, Yun Zheng, Yong-Fang Li, Guru Jagadeeswaran, Angbaji Suo, Bingbing

Jiang, Pradeep Sharma, Robert Mann, Govindan Ganesan, Nirmali Gogoi, Asha Srinivasan, Aparna Kakani, Vijaya Gopal Kakani, Abdelali Barakat, Ramanjulu Sunkar, MicroRNA profiles in Sorghum exposed to individual drought or heat or their combination. Journal of Plant Biochemistry and Biotechnology, 30:4,848-861 (2021)

15. Mondal, S.C., Gogoi, N, Nath, DJ and Gayan, A. (2021) Soil amendments for improving grain quality ofgrass pea (*Lathyrus sativus* L.) under drought, JSFA Report https://doi.org/10.1002/jsf2.26.

16. Debburman, P.; Launiainen, S.; Mukherjee, S.; Chakraborty, S., Gogoi, N.; Murkute, C.; Lohani,P.; Sarma, D. and Kumar, K. (2021) Ecosystem-atmosphere carbon and water exchanges of subtropical evergreenand deciduous forests in India, Forest Ecology and Management 491(4):119371.

17. Chetia, J., **Gogoi, N.**, Gogoi, R., & Yasmin, F. (2021). Impact of heavy metals on physiological health of lichens growing in differently polluted areas of central Assam, North East India. *Plant Physiology Reports*, 1-10.

18. Boro, R. M., Baruah, N., & **Gogoi, N.** (2021). Impact of Biochar and Lime on Phytoavailability of Pband Cd in a Contaminated Soil. *Tropical Agricultural Research*, *32*(2), 125-134.

19. Chetia, J., **Gogoi, N.,** Baruah, D.C., Fouassier, N., Sippel, F. (2021) Potential use of bioenergy power plant residue biochar in mitigating N2O emission from acidic sandy loam soils: a comparative study. *Environmental sustainability*, https://doi.org/10.1007/s42398-021-00169-7.

20. Metya, A.; Datye, A.; Chakraborty, S. Tiwari, Y.K., Sarma, D. Bora,A. and Gogoi,N.(2021). Diurnal andseasonal variability of CO2 and CH4 concentration in a semi urban environment of Western India. Scientific Reports.

21. Baruah, N.; Gogoi N. and Farooq, M.(2020) Influence of Biochar and soil organic amendments on bioavailability and immobilization of copper and lead to common cocklebur in acidic sandy loam soil. *Journal of Environmental Chemical Engineering*.

22. Gogoi.L.; **Gogoi,N**.;Borkotoki,B.; Kataki,R.(2020)Efficacy of biochar on seed germination and early growth of forest tree species in semi evergreen moist deciduous forest. *Forests Trees andLivelihoods* DOI: 10.1080/14728028.2020.1790432.

23. Gogoi.L.; Narzary,R.;**Gogoi,N**.;Borkotoki,B.; Kataki,R.(2020)Effect of biochar on soil respiration from a semievergreen moist deciduous forest soil. *International Journal of Geosynthetic and Ground Engineering*. DOI: 10.1007/s40891-020-00214-1.

24. Chakraborty, S. Metya, A., Datye, A. Debburman, P., Dasgupta, P., Sarma, D., **Gogoi,N**., and Bora, A. (2020).Isotopic and concentration analyses of CO2 and CH4 in association with the eddycovariance based measurements in a tropical forest of north east India. *Journal of Geophysical Research Atmospheres*. DOI: 10.1002/essoar.10502721.1**.**

25. Bora, M.J., Bordoloi, S., Kumar,H., Gogoi,N., Zhu,H., Sarmah, A.K., Sreeja,P., Sreedeep, S., and Mei, G. (2020). Influence of biochar from animal and plant origin on the compressive strength characteristics of the degraded landfill surface soil. *International Journal of Damage Mechanics*. DOI: 10.1177/1056789520925524.

26. Sarma Baruah, M., Gogoi. N., K.P. Sarma (2020). Tolerance mechanism of cadmium in Ceratopteris pteridoides: Translocation and subcellular distribution. *Ecotoxicology and Environmental Safty*; July 2020. DOI: 10.1016/j.ecoenv.2020.110599 .

27. Baruah, N., Mondal, S.C., Farooq, M., Gogoi, N*. (2019) Influence of Heavy Metals on Seed Germination and Seedling Growth of Wheat, Pea, and Tomato. *Water, Air, & Soil Pollution* 230(12), 273.

28. Gopal, P., Nadimpalli, G., Saikia, R. Sankari, H., Ratnam, R., **Gogoi N**., Garg, A., Buragohain, P., and Kataki, R. Optimization of pyrolyzer design to produce maximum bio- oil from *Saccharum ravannae* L.:an integrated approach using experimental data artificial intelligence. *BiomassConv.Bioref.* **9,** 727–736(2019).https://doi.org/10.1007/s13399-019-00397-2.

29. Bharadwaj, N., Barthakur, S., Biswas, A. D., Das, M. K., Kour, M., Ramteke, A. and **Gogoi, N.** (2019) Transcript expression profiling in two contrasting cultivars and molecularcloning of a SKP-1 like gene, a component of SCF-ubiquitin proteasome system from mung bean Vigna radiate L. *Scientific reports*, 9(1): 8103,. doi: 10.1038/s41598-019-44034.

30. S.C. Mondal, B.Sarma, M. Farooq, D.J. Nath, **Gogoi, N***.(2019) Cadmium bioavailability inacidic soils under bean cultivation: Role of soil additives. *International Journal of Environmental Science and Technology* (1-8)**.**

31. Sarma, B., Farooq, M., **Gogoi, N***., Borkotoki, B., Kataki, R., Garg, A. (2018) Soil organic carbon dynamics in wheat-Green gram crop rotation amended with vermicompost and biochar in combination with inorganic fertilizers: A comparative study. *Journal of CleanerProduction* 201, 471-480**.**

32. Sarma, D., Baruah, K.K., Baruah, R, **Gogoi, N***., Bora, A., Chakraborty, S., and Karipot, A.(2018)Carbon dioxide, water vapour and energy fluxes over a semi-evergreen forest in Assam, Northeast India. *Journal of Earth System Science* 127:94.

33. Sarma, B., **Gogoi, N***. Bharali, M., Mali, P. (2018) Field evaluation of soil and wheat responsesto combined application of hardwood biochar and inorganic fertilizers in acidic sandy loam soil. *Experimental Agriculture* 54 (4), 507-519.

34. Saikia, R., Baruah, B., Kalita, D., Pant, K.K., **Gogoi, N**., Kataki, R. (2018) Pyrolysis and kinetic analyses of a perennial grass (Saccharum ravannae L.) from north-east India: Optimization through response surface methodology and product characterization. *Bioresource technology* 253, 304-314.

35. Bharadwaj, N., **Gogoi, N.,** Borthakur, S., Basumatary, N., (2018). Morpho-physiologicalresponses in different mungbean genotypes under Drought stress. *Research Journal of Recent Sciences*. ISSN 2277-2502.

36. Gaur, D., Baruah, K.K. and **Gogoi, N. (**2018). Analysis of Greenhouse Gas (Methane and Nitrous Oxide) emission and global warm-ing potential from rice fields: with referenceto biological mitigation of climate change. *SDRP journal of Earth Sciences and Environmental Studies*. Vol 3:2.DOI: 10.25177/JESES.3.2.3.

37. Buragohain, S., Sarma, B., Nath, D.J., **Gogoi, N*.** Meena, R.S., Lal, R. (2018) Effect of 10 years of biofertiliser use on soil quality and rice yield on an Inceptisol in Assam, India. Soil Research 56 (1), 49-58.

38. Sarma, B., Borkotoki, B., **Gogoi N** and Kataki, R. (2017) Responses of Soil Enzymes and Carbon Mineralization to Applied Organic Amendments: A Short-term Study in Acidic Sandy Loam Soil. *Journal of the Indian Society of Soil Science* **65(3)**, 283-289**.**

39. Sarma, B., and **Gogoi N.***, (2017). Nitrogen Management for Sustainable Soil Organic CarbonIncrease in Inceptisols Under Wheat Cultivation. Communications in Soil Science and Plant Analysis DOI10.1080/00103624.2017.1373785.

40. Sarma, B., **Gogoi N***, Bharali, M., and Mali, P. (2017). Field evaluation of soil and wheat responses to combined application of hardwood biochar and inorganic fertilizers in acidic sandy loam soil. Experimental Agriculture https://doi.org/ 10.1017/S0014479717000205.

41. Bharadwaj, N., Barthakur, S. and **Gogoi N.** (2017) Physiological responses of osmopriming and hormonal treatments in two contrasting mungbean (Vigna radiata) cultivars. Current Science 112 (12), 25.

42. Paul, S., Das, M.K., Baishya, P., Ramteke, A., Farooq, M., Baroowa, B., Sunkar, R., **Gogoi N.,*** (2017) Effects of high temperature on yield associated parameters on vascular bundle development in five potato cultivars. Scientia Horticulturae 225, 134–140.

43. Bharali, A. Baruah, K.K. and **Gogoi N.** (2017). Potential option for mitigating methane emissionfrom tropical paddy rice through selection of suitable rice varieties. *Crop and Pesture Science.* http://dx.doi.org/10.1071/CP16228.

44. Narzari, R., Bordoloi, N., Sarma, B., **Gogoi N**., and Kataki, R. (2017). Fabrication of biocharsobtained from valorisation of biowaste and evaluation of its physicochemical properties. *Bioresource Technology*.

45. Sarma, B., Borkotoki, B., Narzari, R., Kataki, R. and **Gogoi N**.* (2017). Organic amendments: Effect on carbon mineralization and crop productivity in acidic soil. *Journal of Cleaner Production* 152, 157-166

46. Bharali, A. Baruah,K.K. and **Gogoi N**. (2016) Changes in organic carbon pool in a tropicalsoilplanted to rice in relation to photosynthesis carbon fixation. *Australian Journal of Crop Science* 10(8), 1197-1206. 10.5.

47. Bharali, A., Baruah, K.K. and **Gogoi N**. (2016) Methane emission from irrigated rice ecosystem: Relationship with carbon fixation, partitioning and soil carbon storage. *Paddy and Water Environment* DOI 10.1007/s10333-016-0541-3.

48. Baruah, S.; Dutta, P.; Pegu, J.; Kaushik, H.; **Gogoi N**.; Puzari, K.C. and Hazarika, G.N. (2016) SEM study on morphological changes in Metarhizium anisopliae infected Aphis craccivora Koch. *Journal of Biological Control* 30(1). 29-33.

49. Paul, S., Bose, I. and **Gogoi, N.*** (2016) Indices and their applicability under high temperature inpotato (Solanum tuberosum L.) cultivars. *Current Science.* Vol.III (7) 1126- 1231.

50. Baroowa, B., **Gogoi N***. and Farooq, M. (2016). Changes in physiological, biochemical and anti-oxidant enzyme activities of green gram (Vigna radiate L.) genotypes under drought. *ActaPhysiologia Plantarum* 38, 219-329.

51. Paul, S. Farooq, M., Bhattacharya, S.S. and **Gogoi N.*** (2016) Management strategies for sustainable yield of potato crop under high temperature. *Archives of Agronomy and CropScience* DOI: 10.1080/03650340.2016.1204542

52. Sarma, B, Borgohain, S. Nath, D.J. and **Gogoi, N**.* (2016) Temporal responses of soil biological characteristics to organic inputs and mineral fertilizers under wheat cultivation in inceptisol. *Archives of Agronomy and SoilScience.* doi.org/10.1080/03650340.2016.1179385

53. Baroowa, B. and **Gogoi N**.* (2016). The effect of osmotic stress on anti-oxidative capacity of black gram (Vigna mungo L.). *Experimental Agriculture* DOI: http://dx.doi.org/10.1017/S0014479716000090.

54. Paul, S. Farooq, M. and **Gogoi N**.*(2016).Influence of high temperature on carbon assimilation, enzymatic antioxidants and tuber yield of different potato (Solanum tuberosumL.) cultivars. *Russian Journal of Plant Physiology* 63(3), 199-205.

55. Baroowa, B. and **Gogoi N*** (2016). Morpho-physiological and yield responses of black gram(Vigna

mungo L.) and green gram (Vigna radiata L.) under drought at different growth stages. *Research Journal of Recent Sciences* 5(2), 1-8.

56. Paul, S. and **Gogoi N***. (2015). Indices and their applicability under high temperature in potato(Solanum tuberosum L.) cultivars. *International Letters of Natural Sciences* 43, 63-68.

57. Baroowa, B. and **Gogoi N***, Paul, S. and Baruah, K.K. (2015). Response of leaf water status, stomata characteristics, photosynthesis and yield in black gram and green gram genotypes tosoil water deficit. *Functional Plant Biology* 42(10), 1010 – 1018.

58. Baroowa, B. and **Gogoi N***. (2015). Changes in plant water status, biochemical attributes and seed quality of black gram and green gram genotypes under drought. *International Letters of Natural Sciences* 42, 1-12.

59. Sarma, B., Bhattacharya, S.S., **Gogoi N***, Paul S. and Baroowa, B. (2015). Impact of N fertilization onC balance and soil quality in Maize –Dhaincha cropping sequence. *Journal of Agricultural Sciences* 60(2), 135-148.

60. Sarma, B. and **Gogoi N***. (2015). Germination and seedling growth of Okra (Abelmoschus esculentus L.) as influenced by organic amendments. Cogent Food and Agriculture 1: 1030906. http://dx.doi.org/10.1080/23311932.2015.1030906.

61. Baroowa, B. and **Gogoi N***. (2014). Biochemical changes in black gram and green gramgenotypes after imposition of drought stress. *Journal of Food Legumes* 27(4), 350-353.

62. Sarma, B., Devi, P. and **Gogoi N***, Devi, Y.M. (2014). Effects of cobalt induced stress on Triticum aestivum L. crop. *Asian Journal of Agriculture and Biology* 2(2), 137-147.

63. Sahariah, B., Sinha, I., Sharma, P., Goswami, L., Bhattacharyya, P, **Gogoi N** and Bhattacharya, S.S. (2014). Efficacy of bioconversion of paper mill bamboo sludge and limewaste by compostingand vermi conversion technologies. Chemosphere 109, 77-83.

64. Paul, S., **Gogoi N***, Sarma, B. and Baroowa, B. (2014). Biochemical changes in potato underelevated temperature. *Indian Journal of Plant Physiology* 19(1), 36-42.

65. Baroowa, B. and **Gogoi N***. (2013). Biochemical changes in two Vigna spp. during drought and subsequent recovery. *Indian Journal of Plant Physiology* 18(4), 319-325.

66. Goswami, L., Patel, A., Dutta, G., Bhattacharya, P., Gogoi N., and Bhattacharya, S. S. (2013).Hazard remediation and recycling of tea industry and paper mill bottom ash through vermi conversion. *Chemosphere* 92, 708-713.

67. Baroowa, B., Gogoi N*, Paul, S. and Sarma, B. (2012). Morphological responses of pulse(Vigna spp.) crops to soil water deficit. *Journal of Agricultural Sciences* 57(1), 31-40.

68. Baroowa, B. and Gogoi N*. (2012). Effect of induced drought on different growth and biochemical attributes of black gram (Vigna mungo L.) and green gram (Vigna radiate L.). *Journal of Environmental Research and Development* 6(3A), 584-593.

69. Gogoi, N, Baruah, K.K., Gogoi, B. and Gupta, P.K. (2008). Methane emission from two differentrice ecosystems (Ahu and Sali) at lower Brahmaputra valley zone of North East India. *Applied Ecology and Environmental Research* 6(3), 99-112.

70. Gogoi N, Baruah, K.K. and Gupta, P.K. (2008). Selection of rice genotypes for lower methane emissions. *Agronomy for Sustainable Development* (EDP Sc.) 28, 181-186.

71. Gogoi N, Baruah, K.K., Gogoi, B. and Gupta, P.K. (2005). Methane emission characteristics and its relations with plant and soil parameters under irrigated riceecosystem of northeast India. *Chemosphere* 59, 1677-1684.

72. Gogoi N, Baruah, K.K., Gupta, P.K. and Das, K.K. (2003). Physiological parameters of rice(Oryza sativa L.) associated with emission of methane from different agroecosystem. *IndianJournal of Plant Physiology* (special issue) pp.597-601.

73. Neog, B. Gogoi, N. and Baruah, K.K. (2002). Morpho-physiological changes associated with waterloging in rice (Oryza sativa L.). *Indian Journal of Agricultural Sciences*, 72, 402-405.

74. Baruah, K.K., Gogoi N., Gogoi, B., Barman, B. and Gupta, P.K. (2002). In: Non-CO2 greenhouse gases: scientific understanding, control options and policy aspects. Edtrs. Van Ham et al. Millpress (The Netherlands) pp.101-106.

75. Gogoi N., and Baruah, K.K. (2001). Effects of natural gas flare on growth, flowering and yieldof rice (Oryza sativa L.). *Pollution Research* 20 (3), 337-341.

76. Gogoi, N., and Baruah K.K., (2000) Effect of cold hardening and GA3 on growth and yield of' boro' rice. *Indian Journal of Plant Physiology*, 5 (4), 339-343,

77. Gogoi N., and Baruah, K.K. (1999). Effect of cold and chemical hardening on growth, yield and some biochemical characters in boro rice (Oryza sativa L.). *Indian Journal of Plant Physiology* 4, 179-184.

B) Review Article:-

1.Baruah,N,Gogoi,N;Roy,S.Borah,P.;Chetia,J.;Zahra,N.,Ali,N,Gogoi,P and Farooq,M.(2023) Phytotoxic Responses and Plant Tolerance Mechanisms to Cadmium Toxicity,Journal of Soil Science and Plant nutrition DOI: 10.1007/s42729-023-01525-8.

2. Borah,P.;**Gogoi,N**.;Asad,S.A.;Rabha,A.J. and Farooq, M. (2023) An Insight into Plant Growth-Promoting Rhizobacteria-Mediated Mitigation of Stresses in Plant.*Journal of Plant Growth Regulation. http://dx.doi.org/10.1007/s00344-022-10787-y*

3. Roy, A.; **Gogoi, N.**; Yasmin, F. and Farooq, M. (2022) The use of Algae for Algae for environmental Sustainability: Trends and future prospects. *Environmental Science and pollution Research*. 10.1007/s11356-022-19636-7

4. Hussain, B.; Umar, M.J.; Li, J. Ma, Y.; Ashraf, M. N.; Tahir, N.; Ullah, A. **Gogoi, N**. and Farooq, M(2021) Strategies for reducing cadmium accumulation in rice grains. *Journal ofCleaner Production* 10.1016/j.jclepro.2020.125557

5. Nawaz, A.; Farooq, M.; Allah, S.; **Gogoi, N**. Lal, R. and Siddique, KMH (2021) Sustainable soilmanagement for food security in South Asia. Journal of *Soil Science and Plant Nutrition*. DOI: 10.1007/s42729-020-00358-z

6. Gogoi, L., Narzari, R., **Gogoi, N**., Farooq, M., Kataki, R. (2019) Biochar Production and Application in Forest Soils-A Critical Review, *python*, 88 (4).

7. Gogoi N., Farooq, M., Barthakur, S., Baroowa, B. , Paul,S., Bharadwaj, N. , and Ramanjulu, S.(2018) Thermal stress impacts on reproductive development and grain yield in grain legumes. *Journal of Plant Biology* 61-(5): 265-291.

8. M. Farooq, **Gogoi N.,** S. Barthakur, B. Baroowa , N. Bharadwaj, S. S. Alghamdi & K.H. M. Siddique (2017). Drought Stress in Grain Legumes during Reproduction and Grain Filling. *Journal of Agronomy and Crop Science*, 1-22.

9. M. Farooq, Faisal Nadeem, **Gogoi, N**., Aman Ullah, S. S. Alghamdi, Harsh Nayyar, & K.H. M. Siddique, (2017) Heat Stress in Grain Legumes during Reproductive and Grain-Filling Phases. *Crop and Pasture Science*, DOI: 10.1071/CP17012.

10. M. Farooq, **Gogoi**, **N**., M. Hussain, S. Barthakur, S. Paul , N. Bharadwaj, S. S.Alghamdi & KH. M. Siddique, 2017. Effects, tolerance mechanisms and management of salt stress in grainlegumes. *Plant Physiology and Biochemistry* 118:199-217.

C) Edited Book:-

1. Farooq,M.;Gogoi,N. and Pisante,M. (2023). Sustainable Agriculture and the Environment. Academic Press, DOI:10.1016/C2020-0-03402-X

D) Book Review:-

1. Meena RS, **Gogoi N**, Kumar S. Alarming issues on agricultural crop production and environmental stresses (2016). *Journal of cleaner production* 1-3.
2. Ashoka P, Meena RS, **Gogoi N,** Kumar S, Green nanotechnology is a key for eco-friendly agriculture , *Journal of Cleaner Production* (2016), doi: 10.1016/j.jclepro.2016.11.117.

E) Book chapters: -

1. P Deka, M Gohain, N Bhuyan, N Gogoi, R Kataki Utilization of Biowastes in Green Chemistry, -Climate Change and Agriculture: Perspectives, Sustainability and Resilience, 2022, https://doi.org/10.1002/9781119789789.ch16.

2.Handique Sumi, Saha Ankita, Saikia, Kundil & Gogoi, Nirmali. (2022). Agriculture Wastes. 10.1002/9781119808428.ch4.

3.B Baroowa, S Paul, N Gogoi Role of Phosphorus in Imparting Abiotic Stress Tolerance to Plants, - Climate Change and Agriculture: Perspectives..., 2022 https://doi.org/10.1002/9781119789789.ch11.

4.Sarma,B,Gogoi,L;Gogoi,N. and Kataki,R. (2022) Crop plants under metal stress and its remediation In Plant Stress: Challenges and Managent in the new decades; Springer,DOI http://dx.doi.org/10.1007/978-3-030-95365-2_3.

5.Gogoi ,L; Narzari, R; Chutia,R.S.;Borkotoki, B; Gogoi, N; Kataki, R.(2021).Remediation of heavy metal contaminated soil: Role of biochar In Advances in chemical pollution, environmental management and protection; Elsevier DOI 10.1016/bs.apmp.2021.08.002.

6.Gogoi,N.M.;Baruah,B. and Gogoi,N. (2021) Ecological tools for remediation of soil pollutants In Bioremediation science from Theory to Practice; CRC Press, DOI 10.1201/9780429327643-4

7.Deka, P; Handique, S; Kalita, S. and Gogoi, N. (2021). Recycling of agro-waste for environmental and nutritional security In Input use efficiency for food and nutritional security. Springer DOI 10.1007/978-981-16-5199-1_20.

8.Bhuyan,N. Narzari,R. Gogoi,L.;Bordoloi,N.;Palsaniya,D.R. Dev,U.;Gogoi,N.; and Kataki, R. (2020).Velarization of Agricultural waste for multidimensional use In Current developments in Bio-

technology and bioengineering. Elsevier DOI 10.1016/B978-0-444-64309-4.00002-7.

9.Borah,P., Baruah, N. Gogoi L, Borkotoki, B., Gogoi, N. and Kataki,R. (2020) Biochar: A New Environmental Paradigm in Management of Agricultural Soils and Mitigation of GHG Emission*In book*: Biochar Applications in Agriculture and Environment Management. DOI: 10.1007/978-3-030-40997-5_11.

10.Hiloidhari, M., Bhuyan, N., **Gogoi, N**., Seth, D., Garg, A., Singh, A., Prasad, S., and Kataki, R. (2020) Agroindustry wastes: biofuels and biomaterials feedstocks for sustainable rural development. Technology, Advances, Life Cycle Assessment, and Economics, 357- 388, https://doi.org/10.1016/B978-0-12-818996-2.00016-8

11Gogoi, N*., Sarma, B., Mondal, SC., Kataki, R., Garg, A., (2019) Use of Biochar in Sustainable Agriculture. Innovations in Sustainable Agriculture, 501-528

12.Farooq, M; Sanaullah, M.; Nadeem, F; **Gogoi, N**. Arshad, M.S. and Lal, R.(2018). Soil degradation and climate change in South Asia. In book: Soil and Climate (CRC press). 323-358.

13.Gogoi, N*., Baruah, K, K., and Meena, S, R., 2018. Grain Legumes: Impact on Soil Health and Agroecosystem. In book: Legumes for Soil Health and Sustainable management.(Springer) DOI: 10.1007/978-981-13-0253-4_16.

14.Narzari, R., Bordoloi, N., Chutia, R.S., Borkotoki, B., **Gogoi N**, Bora, A. and Kataki, R. (2015) Biochar-an overview on its production, properties and potential benefits. In: Biology, Biotechnology and Sustainable Development. H. Choudhury (Edtrs.), Research India Publications, New Delhi, India (ISBN: 978-93-84443-19-1).

15.Handique, S. and **Gogoi N**. (2013). Solid waste management and conservation of MSW into organic compost. In Organic Farming and Vermiculture. Lingaraj Patro (Edtrs.), MP Publishers & Distributors, New Delhi, India (ISBN 978-81-89972-84-4).

16.Baruah, K.K., Das, K. and **Gogoi N**. (2005). Vegetation recovery in flood degraded wasteland of Majuli. In Science and technology for Regional Development: Case for North East India. Dolui, S.K. and Mahanta, C. (Edtrs.), Tezpur University and IIT, Guwahati, pp.20-26

17.Baruah, K.K., Nath, B.C. and **Gogoi N**. (2001). Physiological and biochemical traits of rice(*Oryza sativa* L.) genotypes associated with tolerance of iron toxicity. *In*: Plant Nutrition: food security and sustainability of agro ecosystems through basic and applied research. Edtrs. Horst, W.J. *et al*. Kluwer (London) pp. 476-478.

F) Papers in proceedings of Conferences:-

1. Gopal,P., Ratnam, R.,Farooq,M.Garg,A. **Gogoi, N**.(2018) Influence of biochar obtained from invasive weed on infiltration rate and cracking of soils:An integrated experimental and artificial intelligence approach. In:Proceedings of the 8th International Congress on Environmental Geotechnics.1: 351-358. Published by Springer, Singapore.

2. **Gogoi N.,** Baruah, K.K., Gupta, P.K. and Das, K.K. (2001). Methane emission from irrigated rice ecosystems of Assam: Differences due to cultivar and soil characteristics. *In:* Role of Plant Physiology for sustaining quality and quantity of food production in relation to environment. Edtrs. Chetti M.B. *et al*. ISPP, pp. 16-19.

MEMBERSHIP OF ACADEMIC SOCIETIES/ JOURNAL EDITORIAL BOARD

- ❖ Member of Editorial Board of the journal "Carbon management" (Taylor and Francis),

from 2022 onwards.

- ❖ Members of Editorial Board of the Journal "Scientific Report" from 2024 onwards
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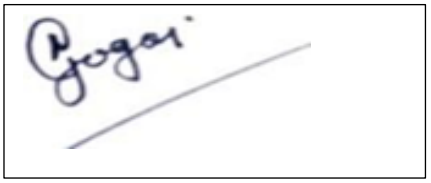
REVIEWERS OF JOURNAL

1. Agronomy for sustainable development
2. Archives of Agronomy and Crop Science
3. Cogent Food and Agriculture (Taylor and Francis)
4. Journal of Earth Science and Climate Change
5. Journal of Cleaner Production
6. Plant Physiology and Molecular Biology
7. Journal of Soil Science and Plant Nutrition
8. Science of the Total Environment
9. Pedosphere

PROJECTS ASSOCIATED

Sl. No.	**Title of the project**	**Funding agency**	**Date of start /Cost**	**Role as**
1.	Impact of Climate change with reference to low rainfall on sustainable productivity of pulse crops in Assam	University Grant Commission (UGC) (MRP)	1st February, 2011 for 3 years **Rs.11,18,300.00 15,658.52 (USD)**	Principal Investigator
2.	Evaluation of carbon sequestration and enhancing carbon sinks in rice based agroecosystems of Assam	Department of Science and Technology (DST) (Govt. of India)	1st April, 2012 for 3 years **Rs.62,42,751.00 87,411.45 (USD)**	Co-Principal Investigator
3.	Production of biochar from various bio wastes and its soil application for sustainable soil management and mitigation of GHG emission	University Grant Commission (UGC) (MRP)	1st April, 2013 for 3 years **Rs.12,95,800.00 18,143.88 (USD)**	Co-Principal Investigator

4.	Soil plant atmosphere study in relation to net CO_2 flux from terrestrial ecosystem of Assam	Ministry of EarthScience, Govt. of India	September, 2012 initially for 6 years **Rs.54,89,000.00 76,857.37 (USD)** Again extended for another 5 years April, 2019 to March, 2024 **Rs.47,90,000.00 67,069.92 (USD)**	Principal Investigator
5.	Strengthening Education, research and innovation forclimate smart crops in India	Erasmus$^+$ capacity building in higher education	March, 2019 for three years(extended till September,2022 due to Covid) **105,428.75 Euros**	Co-Principal Investigator
6.	Climate Change Impacts and Adaptation for a Climate Resilient North East India	Department of Science and Technology (DST) sponsored Centre for Excellence (COE) under National Mission for Sustaining the Himalayan Ecosystem (NMSHE)	March, 2020 for five years **Rs. 6.35 Crore** **849,228.84 (USD)**	Co-Principal Investigator
7.	Harnessing Endophytes andArbuscular Mycorrhizal Fungi from Citrus microbiome for plantand soil health management in NorthEast India	Department of Biotechnology, Govt. of India	February,2021 for three years **Rs.2082120.00** **25156.86 (USD)**	Principal Investigator
8.	Exploring Knowledge of Medieval Assam: Multidisciplinary IKS Kendram at Tezpur University	Indian Knowledge System Division of Ministry of Education @ AICTE	December,2022 for two years **Rs. 30,84,000** **37261.91(USD)**	Co-Principal Investigator



(Nirmali Gogoi)