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Algal Diversity in Rice Fields of Southern Assam, North-East India

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Abstract: Algal diversity in two rice fields of different surrounds in Hailakandi district, southern Assam, North-East India has been explored. The study documents the algal community structure in response to seasonal variation of physicochemical parameters of the water in the rice fields. A total of 92 algal species belonging to 53 genera under five classes has been recorded. The highest algal diversity was in the rice field at Mukamtilla, with tea garden as surround in pre-monsoon season (2.33). The species *Oscillatoria sancta, O. willei*, *O. earlei, O. limosa, Spirogyra mirabilis, Oedogonium* sp. and *Zygnema pectinatum* were the most dominant algae. The habitat was acidic with a significant variation among the seasons. The dissolved silica content of ricefield water was the most important environmental variable affecting the algal community structure. The species *Oscillatoria sancta*, *O. willei* and *O. earlei* were positively while *Oedogonium* sp. and *Zygnema pectinatum* were negatively correlated with the dissolved silica content.

***Keywords*:** Algal diversity, Physicochemical parameter, Rice field, Hailakandi