The Use of Algalization by Inoculating Nostoc Commune Algae as an Important Resource for the Sustainable Management, Agricultural Systems and Environment Conservation

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The purpose of this research was to use algalization based on the inoculation of Nostoc commune as in important resource for the sustainability of agricultural systems and environmental conservation. The problem was to evaluate the possible positive relationship between the presence of Nostoc commune and the germination of Eryngium foetidum L. seeds as well as the presence of possible differences in the physical-chemical properties of the soil inoculated with the algae. The hypothesis established was that the Nostoc would play a significant ecological role by facilitating the germination process of the seeds and their survival. The experiment design for the research was based on field work complemented with laboratory work. The soil samples studied, with and without Nostoc, were analyzed at the Department of Agriculture's Agrological Laboratory. Field work included identifying the algae and inoculating it into the soil in a greenhouse. Germination trays with the soil material being studied, some with the bioderm algae and others without, were used to plant the seeds. The observations were made during the first harvest. The results showed that Nostoc not only increased the N levels in the inoculated soil, but also served as a source of organic material and favored better retention of humidity. It is concluded that Nostoc is can be used as a bio fertilizer due to its biological nitrogen fixation (BNF). Inoculation constitutes a truly promising aspect in responsible soil management and environmental sustainability.

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