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Dr. Jayarama Reddy
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Department of Botany
St. Joseph's College, Bengaluru, India

leaves (6.66 and 8.00) at 30 and 60 DAS respectively. The root length (14.30 cm), fresh and dry roo weight (0.55 and 0.20 g) and reduced nematode parameters minimum number of galls per root syste (17.33), nematode population and gall index (696.33 and 3.0) at 60 DAS respectively. The combinatic treatments with neem cake + carbofuran 3G proved best followed by a bio-control agent and recorded tl increased growth parameters and reduced nematode parameters. This study shows that organic gre amendments and bio-control agents will help to reduce nematode population and aid in sustainal production.

Microbial control of toxin producing cyanobacterium *Microcystis aeruginosa* in a hypereutropic lake

Pathmalal M. Manage
Department of Zoology, University of Sri Jayewardenepura, Gangodawila, SriLanka
Email:pathmalalmanage@sjp.ac.lk

Abstract

The dynamics of cyanophages and algicidal bacteria which infect the bloom forming cyanobacteri *Microcystis aeruginosa* were followed in the Beire Lake (a hypereutrophic lake) from September 2(to August 2009. Densities of *M. aeruginosa* range between 4.0 x 10^5 and 1.9 x 10^7 cells ml^{-1}, wl those of algicidal bacteria were between 4.0 and 5.1 x 10^2 PFU ml^{-1} and of cyanophages between < x10^2 PFU ml^{-1} and 7.1x10^3 PFU ml^{-1}. A significant relationship was found between the density algicidal bacteria and of *M. aeruginosa* ($r = 0.81$, $n = 69$, $p < 0.001$) suggesting that the dynamics of algicidal bacteria may regulate the abundance of *M. aeruginosa*. Occasional peaks of cyanophages den were detected in October, June and August when sharp declines in *M. aeruginosa* cell densities were observed. Densities of cyanophages became undetectable when the abundance of *M. aeruginosa* low, suggesting the density dependent infection of *M. aeruginosa* bycyanophages. Thus, the pre study suggests that infections of both algicidal bacteria and cyanophages are important biological ag which decompose a bloom of *M. aeruginosa* in freshwater environment.

A freshwater gliding bacterium, *Alcaligenes denitrificans*, was isolated from the Beire lake dt the study period. This bacterium caused cell lysis and death of some cyanobacterial species, but sh no algicidal effects on the species of chlorophyceae tested. *M. aeruginosa*, *M. viridis* and *M. wesenb* were susceptible to the bacterial attack and the growth-inhibiting effect of the bacterium was signif on *M. aeruginosa*, particularly when the alga was in the exponential growth phase. When *A. denitrifi* was inoculated at low densities (10^3 cells ml^{-1}) together with *Microcystis* species, the bacte proliferated to 10^8 cells ml^{-1} and caused algal cell lysis. *M. aeruginosa* died when *A. denitrificans* added to the algal culture but not when only the filtrate from the bacterial culture was added. suggests that extracellular products are not inhibitory to *M. aeruginosa* and that only direct co between *A. denitrificans* and *M. aeruginosa* was lethal. Thus, the study suggest that *A. denitrif* plays an important role influencing the growth of *Microcystis* and contributes to the death of *Micro* in freshwater environments.

The effect of microflagellates on the decay of viruses was studied *in vitro* using fractionated water. We found cons iderable decay of VLPs in the 5.0μ m filtrate relative to the 0.2 to 0.8μ m fil