

PESTICIDAL EFFECT ON RICE FIELD CYANOBACTERIA IN PERAMBALUR, TAMIL NADU

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Abstract: Pesticidal effect was studied on rice field Cyanobacteria - *Anabaena cylindrica* in Perambalur, Tamil Nadu. In the present study lower concentrations of Dithane M45 and Malathion (5 ppm, 10 ppm and 15 ppm) stimulated the algal growth and their higher concentrations inhibited the algal growth when compared to control. It was clearly observed in chlorophyll a and phycobilin content of pesticides treated cells. But the increase in concentrations of both Pesticide did not affect the nitrogen fixing activity, because there was no significant decrease in nitrogen contents of cells in different treatments. Ammonia excretion by the algae was gradually decreased in 5ppm - 50ppm of Dithane M45 treated cells when compared to control. While maximum ammonia excretion was observed in 5ppm of Malathion treated cells when compared to other concentrations. The application of Cyanobacteria in rice field can increase the soil fertility and reduce the use of chemical pesticides for crop improvement.

Keywords: Ammonia excretion, cyanobacteria, chlorophyll a, nitrogen fixation, rice field, pesticides, phycobilins

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