Endophyte from sweet potato(*ipomoea batatas*) for green synthesis and sustainability

By Pratibha Kulkarni
MSc (Microbiology) Osmania University Hyderabad Alumni

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Abstract :

The present scenario of Climatic change & its impact on the bio ecosystem is enormous. This is attributed to many industrial technogenic and geogenic activities.

One such techno-genic activity is the use of agrochemicals post green revolution which led to the loss of soil and water quality with toxic pollutants. Efforts are required to explore natural & effective methods to improve bio-eco system sustainability.

An experimental tank was created with fish as a source of endophyte for organic aquaculture for its anti-pathogenic effects. The endophyte was identified by 16 s sequence due to chitinase and keratinase. The plant was observed for its growth factors in water and in soil by the growth of healthy tuber free bacterial or fungal diseases

The use of endophyte bacteria in plants helps in the mitigation of such pollutants at a faster rate than what each can do individually. The sweet potato plant is resilient. easily propagated crop growing well in infertile and nitrogen poor soils with good cellulolytic and pectinolytic property. Isolation and inoculation of plant growth-promoting endophyte can contribute to an economically efficient crop production system by reducing the use of chemical pesticides or fertilizer. This review highlights the use of endophyte from sweet potato with it's UV & cold tolerance, Drought resistance, plant growth hormones with better carbon and heavy metal sequestration.

Keywords: Climatic change, Mitigation measures, Sweet potato(*Impoea batatas*), Endophyte, *Bacillus cereus*