

ABSTRACT

This research study assesses the effectiveness of probiotic microorganisms as a biocontrol agent against *Aspergillus flavus* in fish feed. *Bacillus subtilis* and *Saccharomyces cerevisiae* were selected for their antifungal activity assessment. Their chemical profiling was done by the use of standardized biochemical experiments. Well diffusion and minimum inhibitory concentration scrutinizes were done for checking their antifungal activity. The computation of aflatoxin reduction was done by High-Performance Liquid Chromatography (HPLC) which demonstrates the mycotoxin absorption and detoxification abilities of these biocontrol agents. The results verify that *Bacillus subtilis* and *Saccharomyces cerevisiae* are highly effective for mitigating the aflatoxins. Their supplementation in fish feed enhance the feed safety by reducing the mycotoxin related health risk in aquaculture resulting in improved sustainability and productivity

Keywords: *Bacillus subtilis*, *Saccharomyces cerevisiae* , Fish Feed Safety, Mycotoxin Mitigation,

HPLC, Aflatoxin B₁,