

A STUDY ON THE PRODUCTION OF BACILLUS THURINGIENSIS ON DIFFERENT CULTURE MEDIA, FOR INSECT CONTROL

D.M.F.Capalbo and I.O.Moraes, EMBRAPA-CNPDA, Jaguariúna-SP, 13820, Brazil

Bacillus thuringiensis has highly specific insecticidal activity and holds considerable advantage over chemical controls which often have long residual action and may be toxic to nontarget organisms. In order to carry out large-scale field trials with that bioinsecticide, its sufficient local supply must be available. This study was undertaken to determine a suitable fermentation medium composition and optimal conditions for large-scale, low-cost production of B. thuringiensis. Submerged fermentation process was proposed utilizing liquid agroindustrial residues like sugar-cane molasses, coconut water, liquid residue from beer industry and the wastewater from cassava flour industry. Temperature, aeration and agitation were controlled. Analysis of pH, optical density and microscope observations were accomplished for bacterial growth evaluation. The results attained indicated the viability of residues utilization in Brazil. The yields of toxic units obtained for each medium under study indicated that economic aspects of the residue availability will be the main key for regional production of this bioinsecticide.