

Tuesday, 16:00 - Poster

***Bacillus thuringiensis* production and application studies in Brazil**

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Brazilian studies about *Bacillus thuringiensis* started in 1970 with a Master Science thesis. This was followed by some other thesis (four Masters, two PhD and one Free Docence thesis) that will be discussed. It was verified the possibility of producing *Bt* using, inexpensive raw material available in the country, mainly residues and wastewater from agroindustries. They were studied both processes, submerged and solid state fermentation. Also the engineering parameters of the fermentative process, in submerged fermentation, were studied and the thermobacteriological indexes z and D were determined after broth separation, in drying process, using conventional and spray dryers. The fluid behavior of the fermentative broth was studied and the rheological aspects were compared with other fluids got from fermentative processes. Two types of toxins, the endotoxin or spore-crystal complex and the exotoxin or thermostable toxin were produced, and two patents of the processes were deposited at the National Institute of Industrial Property (INPI/Brasil Br/PI 7608688 and BR/PI 8500663). The studies of application were held with agricultural pests of soyabean (*Anticarsia gemmatalis*), stored rice (*Plodia interpuctela*), using endotoxins and against some Diptera using the exotoxins. In this case is was studied *Musca domestica*, *Chrysomya sp*, *Drosophila melanogaster*, *Ceratitis capitata*, and so on. The results showed the potential of production of this powerful bioinsecticide regionally, because Brazil is a very big country, by using cheap substrates, agricultural residues and agroindustrial wastewaters whose Carbon and Nitrogen balance, as well as vitamins and mineral salts composition are sufficient to compose a culture media to be used in the process, and that can be done in submerged or solid state.

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