

## CONSIDERATIONS ABOUT THE BIODEGRADATION OF CRY1AC PROTEIN FROM BT COTTON BY RHIZOBACTERIA

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The gene for the production of the Cry1Ac protein (Bt toxin), produced by *Bacillus thuringiensis*, can be genetically engineered into crops (Bt crop) in order to protect these crops against insects. The development of such insect-resistant plants poses some environmental questions such as the possibility of dissipation of the transgenic trait into the soil. Some studies demonstrated that the new toxin exudates from the roots, is detectable and can be retained in soil, but information about its degradation is still absent. In order to explore the role of rhizobacteria associated with Bt cotton in the biodegradation of the Bt protein, transgenic cotton and its isolate had their rhizosphere bacterial population isolated and selected for its potential in the Cry protein-degradation. Two bacterial isolates, identified as *Bacillus pumilus* and *Gordonia rubripertincta* were selected for further studies on growth kinetics and possible correlation with the degradation of the Cry1Ac protein. Results show that once released in the soil, the Bt protein can be used by part of the microbial community as a nutritional source, resulting on its degradation and, possibly, modulating the competition rules for nutrients in this niche.

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