

ISOLATION AND CHARACTERIZATION OF SOIL MICROORGANISMS RESISTANT TO FUNGICIDE OPERA[®].

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Opera (epoxiconazole/pyraclostrobin) is one of the most used fungicide for soybean culture in Brazil and some other countries. It is persistent and can be found contaminating river, lake and underground water. Bioremediation with microorganisms has been used successfully for clean up of sites contaminated. In this study, microorganisms resistant from soil contaminated with opera were isolated, characterized and tested for opera degradation. Aliquots of soil collected at three points and two depth were homogenized with sterile 0.15 mol L⁻¹ saline (1g soil-10 mL), the supernatant diluted and inoculated on plates with selective medium contained increasing amounts of opera (4,16, 28µg). The microorganisms from 28µg-selective medium were recultured on mineral medium with opera as carbon source. Five colonies were morphological and biochemical characterized as three bacillococcus and two actinomicetes. Three of them excreted pronounced amounts of protein in the mineral medium as demonstrated by SDS-PAGE and quantified by Bradford method resulted in 130.5, 80 and 111µg mL⁻¹, respectively for 3803, 2801, 1805 strains. They were glucose, catalase and urea positive. Bacterial DNA from 1805 was purified and 16S rRNA gene amplified by PCR and using primers R16A e R16B. The sequence analysis of the 16S rRNA gene of strain 1805 compared with those available in GenBank displayed 98.8% identity with the 16S rRNA sequence of *Stenotrophomonas* sp. (GenBank accession number DQ778299).